Network for a Healthy California

Impact/Outcome Evaluation Project

(Statewide Aggregated Data)

FFY 2012

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Section B. Final Report Summary for Evaluations.

Provide the information requested below for any significant evaluation efforts (costing greater than $400,000) that were completed during the previous year.

In FFY 2004, and pre-dating the current federal requirements, the *Network* asked contractors receiving over $500,000 in Federal Share to conduct outcome or impact evaluation to proactively demonstrate fiscal responsibility. The term "outcome" refers to evaluation conducted to assess change among individuals exposed to an intervention. The term "impact" refers to evaluation conducted to assess change in a group exposed to an intervention and a group not exposed to the intervention or an alternative intervention. Twelve contractors participated in the first year and in FFY 05 the *Network* lowered the participation threshold to $350,000 in Federal Share which resulted in a peak participation of 48 in FFY 07 and most recently to 40 in FFY 12. The 40 contractors in FFY 12 represented nearly $50 million in Federal funds. The total cost of the evaluations conducted by these 40 contractors was approximately $566,301 with a maximum of $82,467 for any single contractor, well below the USDA's reporting requirement for impact evaluation. In FFY 2008 USDA guidance specified "If any proposed SNAP-Ed evaluation activity exceeds $400,000 in a State in any year, it is highly recommended that the State agency include an impact assessment that meets the criteria described in the FNS Principles of Sound Impact Evaluation found at: www.fns.usda.gov/oane/menu/Published/NutritionEducation/Files/EvaluationPrinciples.pdf

1. Name of Project or Social Marketing Campaign

If multiple projects or campaigns were part of a single impact evaluation, please list them all.

ABC USD	School/District
Alameda County Health Care Services Agency	Local Health Department
Alameda County Office of Education (Coalition)	County Office of Education
Alhambra USD	School/District
Alisal Union School District	School/District
Berkeley USD	School/District
California State University, Chico Research Foundation -SCNAC	College/University
Compton USD	School/District
Contra Costa County Health Services	Local Health Department
Del Norte USD	School/District
East Los Angeles College	College/University
El Monte City School District	School/District

Fresno County Office of Education	County Office of Education
Hawthorne School District	School/District
Health Education Council	Local Food and Nutrition Education Project (non-profit)
Humboldt County Office of Education	County Office of Education
Huntington Beach Union High School District	School/District
Long Beach Unified School District	School/District
Long Beach, City of, Department of Public Health	Local Health Department
Los Angeles County Office of Education	County Office of Education
Los Angeles Trade-Technical College	College/University
Los Angeles Unified School District	School/District
Merced Office of Education	County Office of Education
Monrovia Unified School District	School/District
Monterey County Health Department	Local Health Department
Montebello Unified School District	School/District
Newport-Mesa Unified School District	School/District
Orange County Health Care Agency	Local Health Department
Orange County Superintendent of Schools - Coalition	County Office of Education
Pasadena Unified School District	School/District
Riverside, County of, Health Care Services Agency	First 5 Children and Families Commission
San Bernardino County Superintendent of Schools	County Office of Education
San Francisco Unified School District	School/District
Santa Ana Unified School District	School/District
Shasta County Health and Human Services Agency, Public Health Branch	Local Health Department
Shasta County Office of Education	County Office of Education
Tulare County Office of Education	County Office of Education
Ukiah Unified School District	School/District
University of California, Cooperative Extension of Alameda County	University of California Cooperative Extension
Ventura Unified School District	School/District

2. Key Evaluation Impact(s)

Identify each impact being assessed by the evaluations. For example are SNAP-Ed participants more likely than non-participants to report they intend to increase their fruit and vegetable intake? Or do a greater proportion of SNAP-Ed participants choose low-fat (1% or skim) milk in the school cafeteria compared to non-participants?

The primary outcome for the impact/outcome evaluation project was fruit and vegetable consumption. Additional outcomes are listed in Table 1.

Table 1: Impacts Assessed by the Evaluation and Number of Contractors Measuring Each	
Fruit and vegetable consumption (40)	Access to fruit and vegetables (30)
Other food/beverage consumption (38)	Physical Activity (30)
Other dietary habits (38)	Food Security (8)
Perceived parental consumption (30)	Self-rating of dietary habits (8)

3. Evaluation participants.
Describe the population being evaluated and its size. For example, all (1200) kindergarten students at public schools in one school district.

Forty contractors in seven channels collected data from a total of 12,064 individuals (Table 2). Most of the contractors provided nutrition education in schools whether or not they were in the school channel (Table 3). Overwhelmingly, both adult and youth contractors worked in schools, with most of this work occurring during the school day. Among all age groups, 90% of interventions were conducted at school sites, either during the school day, after school, or a combination of both. Of these interventions in school sites, 78% were conducted exclusively during the school day. In addition to school sites, contractors providing nutrition education to adults also worked in shelters, elderly service centers, public housing, and Head Start sites.

Table 2: Number of Matched Surveys, Intervention and Control, for All Contractors			
Channel of Impact/Outcome Evaluation Contractor	Number of Matched Surveys-Intervention	Number of Matched Surveys-Control	Total
School/District (19)	5,475	452	5,927
College/University (3)	379	0	379
County Office of Education (9)	1,964	528	2,492
Local Health Department (6)	2,308	35	2,343
First 5 Children and Families Commission (1)	100	62	162
University of California Cooperative Extension (1)	82	0	82
Local Food and Nutrition Education Projects (1)	679	0	679
Total (40)	10,987	1,077	12,064

Table 3: Number Youth and Adult Intervention/Control Sites				
	Youth Intervention Sites	Youth Control Sites	Adult Intervention Sites	Adult Control Sites
At School - School Day	171	29	29	1
At School - After School	19	0	11	0
At School - School Day & After School	1	0	24	0
Shelters	0	0	7	4
Elderly Service Sites	0	0	5	0
Public Housing	0	0	3	0
Head Start	0	0	1	0
Other	0	0	12	0

4. Assignment to intervention and control or comparison conditions

a. Describe the unit of assignment to intervention and control groups.
For example, an intervention focused on kindergarten students may assign school districts, individual schools, classrooms, or individual student to intervention and control groups.

Most frequently, the site (e.g. the particular school setting) was the unit of assignment. Impact was assessed by measuring change in individuals that had a pre-test and a post-test.

b. Describe how assignment to intervention and control groups was carried out.
Be explicit about whether or not assignment was random. For example, ten kindergarten classrooms were randomly assigned to intervention and control groups.

Three contractors **randomly sampled** participants, and the remaining thirty-seven contractors recruited participants using **convenience sampling** methods.

c. Describe how many units and individuals were in the intervention and control groups at the start of the intervention.

A total of 12,064 individuals participated in the 40 evaluations. Of these, 10,987 received the contractor-specific intervention and 1,077 were in a control group selected by the contractor. Table 4 shows the individuals by age group.

- Intervention: 10,987 (91%)
- Control: 1,077 (9%)

Table 4: Individuals By Age And Condition Of Assignment

Age Category	Intervention Group Participants	Control Group Participants	Total
Youth, 8-13 years	9,302	887	10,189
High School, 14-17 years	884	118	1,002
Adult 18+ years	801	72	873
Total	10,987	1,077	12,064

5. Impact Measure(s)

For each evaluation impact, describe the measure(s) used. Descriptions should indicate if the focus is on knowledge, skills, attitudes, intention to act, behavior or something else. Each measure should also be characterized in terms of its nutritional focus, e.g. low fat food preparation, number of whole grain servings consumed, ability to accurately read food labels. Finally indicate if impact data were collected through observation, self-report, or another method.

Table 5 shows the tools used to measure the change in fruit and vegetable consumption, the number of contractors that used the tool and the number that showed a statistically significant difference.

Table 5. Measures of Fruit and Vegetable Consumption and Physical Activity for Adults, Teens, and Youth

Measures of Fruit and Vegetable Consumption for Adults[*] (author)	**Number of Contractors Using the Tool (Number with Significant Results for Fruits & Vegetables Combined)**
• *Food Behavior Checklist* (*FBC*)[1,2,3] and *Fruit and Vegetable Checklist* (*FVC*)[4]	10(7)
Measures of Fruit and Vegetable Consumption for Youth	
• *Network High School Survey* (i.e. *Youth Risk Behavior Survey* (*YRBS*)[6,7,8,9,10]	2(2)
• *Network Youth Survey* (i.e. *SPAN*, but coded differently)[5,6,7,8,9]	30(14)

a. Describe the points at which data were collected from intervention and control group participants.

For example, these points may include pre-test or baseline, midway through the intervention, post-test as intervention ends or follow-up some weeks or months after the intervention ends.

For most contractors, the pre-test took place before the beginning of intervention and post-tests took place after the last intervention session. The span of time between pre-test and post-test varied widely between contractors. For some it was just five weeks and for others, mostly schools, it was a full 9 months.

[*] The number of contractors in Table 4 adds up to 42 because one contractor's (Health Education Council) results were not aggregated due to use of a different survey and thus, are not reflected here; Del Norte USD, Alameda County Health Care Services Agency, and Monrovia USD conducted impact/outcome evaluation with 2 age groups each.

6. Results

Compare intervention and control groups at each measurement point, by individual measure. Report the number of intervention and the number of control group participants measured at each point. Describe any tests of statistical significance and the results.

Fruit and Vegetable Consumption-Adults

The *Food Behavior Checklist* (*FBC*) and *Fruit and Vegetable Checklist* (*FVC*) were used to measure adult consumption of fruit and vegetables of 10 contractors. Both the FBC and the FVC use identical questions to measure fruit and vegetable-related behaviors. These surveys were validated with low-income populations in California making them a fitting measure of consumption for this evaluation. In FFY 12, contractors only used the *FBC* and *FVC* measuring consumption in cups. Contractors provided data using the *FBC* and *FVC* from 873 total individuals from intervention and control groups. Results showed that 801 individuals receiving an intervention reported an increase of 0.68 cups of total fruits and vegetables as compared to a decrease of 0.28 cups in 72 control subjects (Table 6). The increase in each fruit and vegetables alone, and total consumption of fruits and vegetables combined were statistically significant for the intervention group ($p<0.001$). The intervention group also showed significant improvement in eating fruits and vegetables as a snack, eating more than one kind of fruit a day, eating more than one kind of vegetable a day, eating two or more vegetables at their main meal, and eating or drinking citrus fruits or juices ($p<0.001$). Because contractors were asked to focus on increasing intervention sample sizes in FFY 11 and FFY 12, control samples have decreased, thus making the control an ineffective comparison group.

Table 6. *FBC* and *FVC* Combined Fruit and Vegetable Results, Intervention and Control

	N	Pre-test	Post-test	Difference	p-value
Intervention					
Total Consumption (cups)	804	2.54	3.22	0.68	<0.001
Fruit	807	1.22	1.59	0.37	<0.001
Vegetable	808	1.32	1.63	0.31	<0.001
Control					
Total Consumption (cups)	72	2.55	2.27	-0.28	0.032
Fruit	72	1.28	1.06	-0.22	0.008
Vegetable	79	1.26	1.21	-0.05	0.472
Intervention					
Eat FV as Snacks	820	2.75	3.08	0.33	<0.001
Eat >1 Kind of Fruit Each Day	795	2.56	2.91	0.35	<0.001
Eat >1 Kind of Veg Each Day	786	2.67	3.02	0.35	<0.001
Eat 2+ Veg at Main Meal	788	2.53	2.88	0.35	<0.001
Eat/Drink Citrus Fruit or Juice	813	0.80	0.84	0.04	<0.001
Control					

Eat FV as Snacks	79	2.90	2.67	-0.23	0.012
Eat >1 Kind of Fruit Each Day	71	2.45	2.41	-0.04	0.665
Eat >1 Kind of Veg Each Day	70	2.39	2.30	-0.09	0.334
Eat 2+ Veg at Main Meal	69	2.26	2.12	-0.14	0.086
Eat/Drink Citrus Fruit or Juice	79	0.82	0.85	0.03	0.596

Fruit and Vegetable Consumption-Youth

A total of 30 contractors collected fruit and vegetable consumption data from 10,189 youth using the *Network Youth Survey*. Two contractors collected fruit and vegetable consumption data from 1,002 teens using the *Network High School Survey*. The *Network Youth Survey* utilizes fruit and vegetable questions from the *School Physical Activity and Nutrition Project* (*SPAN*). In FFY 12, it was noted that 18 of the 32 contractors using the *Network Youth Survey* or *Network High School Survey* showed decreases in juice consumption. While this may be due to *Network Rethink Your Drink Efforts*, it was decided that juice should not be combined with fruits and vegetables to produce a combined measure of fruit, vegetables, and juice, given different contractors may be communicating different messages. This will be discussed further in the summary section of this report. Results from the *Network Youth Survey* show that youth receiving an intervention had a 0.38 increase in times per day they ate fruits and vegetables ($p<0.001$) (Table 7). Increases in fruit alone and vegetables alone were also significant ($p<0.001$). Juice consumption was down 0.06 times per day, which was a significant decrease ($p=0.004$) (not shown). Results for youth in the control group showed a non-significant decrease in total fruits and vegetables and fruits and vegetables alone ($p=0.069$, $p=0.189$, $p=0.153$). Juice consumption for this group decreased by 0.41 times per day ($p=0.012$).

Table 7. *Network Youth Survey* Combined Fruit and Vegetables Results, Intervention and Control

	N	Pre-test	Post-test	Difference	p-value
Intervention					
Total Consumption (times)	8,658	3.57	3.95	0.38	<0.001
Fruit	8,674	1.89	2.12	0.23	<0.001
Vegetable	8,666	1.68	1.83	0.15	<0.001
Control					
Total Consumption (times)	889	3.26	3.42	0.16	0.069
Fruit	893	1.71	1.78	0.07	0.189
Vegetable	891	1.56	1.64	0.08	0.153

Fruit and Vegetable Consumption-High School

The *Network High School Survey* utilizes six fruit and vegetable consumption questions from the *Youth Risk Behavior Survey* (*YRBS*). Data from high school students receiving the intervention (n=884) show that fruit and vegetable consumption measures alone and combined were significantly impacted (p=.002, p=0.001, and p<0.001) (Table 8). Similar to results from the *Network Youth Survey*, juice consumption among teens also declined (0.05 times/day), though not significantly (not shown). Among the control group (n=118), no significant changes were observed. In fact, for the combined fruit and vegetable measure, students reported eating the same at post-test as pre-test (Table 8).

Table 8. Network High School Survey Combined Fruit and Vegetable Results, Intervention and Control

	N	Pre-test	Post-test	Difference	p-value
Intervention					
Total Consumption (times)	884	5.78	6.28	0.50	<0.001
Fruit	885	2.08	2.26	0.18	0.002
Vegetable	885	3.70	4.02	0.32	0.001
Control					
Total Consumption (times)	118	5.55	5.55	0.00	1.000
Fruit	118	2.19	2.12	-0.07	0.623
Vegetable	118	3.36	3.43	0.07	0.735

One contractor, Health Education Council, used the *School Physical Activity and Nutrition Project* (*SPAN*) questionnaire with a different set of response choices than were used on the *Network Youth Survey*. Because they were the only contractor to use this instrument in FFY 12, their results cannot be combined with other contractors. Their sample of 679 intervention participants showed a total fruit and vegetable increase of 0.09 times/yesterday, however this was not significant (p=0.524).

Social, Environmental, and Behavioral Factors

Some contractors measured changes in cognitive, social and environmental factors using different modular surveys offered in the *Network* Compendium of Surveys. The *Network Youth Survey*, *Network High School Survey* and the *Food Behavior Checklist* offered questions about food and beverage consumption, other than fruits and vegetables, and food preparation practices. Contractors could pick and choose the sets of questions that matched their interventions and administer a survey with those questions. In FFY 12, all contractors utilized one of four surveys: *Network Youth Survey*, *Network High School Survey*, *Food Behavior Checklist* and *Fruit and Vegetable Checklist*. Due to this standardization, fewer contractors opted to utilize optional modules measuring these factors, and as a result, data for knowledge, self-efficacy, outcome expectations, norms, and socialization-encouragement could not be aggregated.

Social Factors

In FFY 12, the only social factor contractors consistently measured was perceived parent consumption (Table 9). Thirty contractors used the 2-item parent consumption factors that were part of the *Network Youth Survey* and *Network High School Survey*. For youth, results showed significant increases in perceived parent fruit and vegetable consumption for the intervention group, and only in perceived parent consumption of vegetables for the control group. No significant changes were observed for the high school students.

Table 9. Changes Observed in Parent Consumption- Youth

	N	Pre-test	Post-test	Difference	p-value
Intervention					
How often do your parents eat fruit?	5,926	2.23	2.26	0.03	0.007
How often do your parents eat vegetables?	6,033	2.27	2.32	0.05	<0.001
Control					
How often do your parents eat fruit?	661	2.16	2.16	0.00	0.905
How often do your parents eat vegetables?	624	2.26	2.33	0.07	0.048

Table 10. Changes Observed in Parent Consumption- High School

	N	Pre-test	Post-test	Difference	p-value
Intervention					
How often do your parents eat fruit?	678	2.13	2.14	0.01	0.778
How often do your parents eat vegetables?	708	2.24	2.26	0.02	0.318
Control					
How often do your parents eat fruit?	96	2.03	2.17	0.14	0.129
How often do your parents eat vegetables?	95	2.04	2.14	0.10	0.251

Access to Fruit and Vegetables

A total of 9,116 youth and 992 high school intervention students answered questions about access to fruit, and 8,692 youth and 972 high school students answered questions about access to vegetables. The questions were: At your *home* do you have fruits / vegetables to eat? The four response categories ranged from *never* to *always*, with an '*I don't know'* option, with scores ranging from 0-2. For youth in the intervention group, access to both fruits and vegetables increased significantly ($p<0.001$) (Table 11). Youth in the control group saw a 0.06 increase for access to vegetables, and this change was also significant ($p=.002$). For high school students, no significant changes were observed in the control or intervention groups for access to fruits or vegetables (Table 12).

Table 11. Changes Observed in Access to Fruits and Vegetables- Youth					
	N	**Pre-test**	**Post-test**	**Difference**	**p-value**
Intervention					
At your home, do you have fruit to eat?	8,235	1.72	1.75	0.03	<0.001
At your home, do you have vegetables to eat?	7,887	1.63	1.69	0.06	<0.001
Control					
At your home, do you have fruit to eat?	881	1.70	1.70	0.00	0.776
At your home, do you have vegetables to eat?	805	1.65	1.71	0.06	0.002

Table 12. Changes Observed in Access to Fruits and Vegetables-High School					
	N	**Pre-test**	**Post-test**	**Difference**	**p-value**
Intervention					
At your home, do you have fruit to eat?	876	1.73	1.73	0.00	0.781
At your home, do you have vegetables to eat?	860	1.68	1.70	0.02	0.148
Control					
At your home, do you have fruit to eat?	116	1.78	1.81	0.03	0.551
At your home, do you have vegetables to eat?	112	1.71	1.71	0.00	0.843

Physical Activity

The 2-item physical activity survey from the *Network Youth Survey* and *Network High School Survey* asked: 'Check the days you exercised or took part in physical activity that made your heart beat fast and made you breathe hard for at least 60 minutes' and 'Check the days you play outdoors for at least 30 minutes'. Response categories ranged from 0-7. At pre-test, youth respondents receiving interventions reported being physically active for 60 minutes 3.47 days this past week, and 3.99 days at post-test ($p<0.001$) (Table 13). The same youth reported a 0.54 day increase in playing outdoors at post-test ($p<0.001$). Though youth in the control group saw slight increases in days spent physically active, changes were not significant. High school students receiving an intervention saw a 0.30 and 0.19 day increase, respectively, in the two physical activity variables ($p<0.001$ and $p=0.032$) (Table 14). Students in the control group did not show a significant change in physical activity.

Table 13. Changes Reported in Days with Physical Activity- Youth					
	N	**Pre-test**	**Post-test**	**Difference**	**p-value**
Intervention					
Physical Activity ≥60 Minutes	8,554	3.47	3.99	0.52	<0.001
Play Outdoors ≥30 Minutes	8,526	3.31	3.85	0.54	<0.001
Control					
Physical Activity ≥60 Minutes	902	3.04	3.18	0.14	0.092
Play Outdoors ≥30 Minutes	871	2.84	3.00	0.16	0.051

Table 14. Changes Reported in Days with Physical Activity- High School					
	N	Pre-test	Post-test	Difference	p-value
Intervention					
Physical Activity ≥60 Minutes	851	3.51	3.81	0.30	<0.001
Play Outdoors ≥30 Minutes	848	3.06	3.25	0.19	0.032
Control					
Physical Activity ≥60 Minutes	115	2.74	2.85	0.11	0.485
Play Outdoors ≥30 Minutes	114	2.54	2.46	-0.08	0.678

Consumption of Other Foods, Food Security, and Eating Habits- Adults

The *FBC* measures dietary practices other than consumption of fruits and vegetables, and adults receiving intervention showed improvement in many of these areas. At post-test, adults reported drinking significantly more milk and significantly less soda and fruit drinks, sports drinks, and punch (p=0.001, p<0.001, and p<0.001) (Table 15). Results showed more adults were using milk on their cereal, eating fish, and using food labels at post-test (p=0.007, p=0.002, and p<0.001). Intervention participants also rated their overall eating habits 0.79 of a point higher on a 1-10 scale at post-test (p<0.001). At post-test, adults reported they ran out of food by the end of the month less often (p=0.028). No significant changes were observed among adults in the control group.

Table 15. Changes Observed in Other FBC Measures- Adults					
	N	Pre-test	Post-test	Difference	p-value
Intervention					
Drink Fruit Drinks, Sports Drinks, Punch	510	2.01	1.82	-0.19	<0.001
Drink Soda	503	1.80	1.64	-0.16	<0.001
Drink Milk	496	2.72	2.85	0.13	0.001
Drink or Use Milk on Cereal Past Week	507	0.79	0.83	0.04	0.007
Take Skin off Chicken	518	2.93	2.99	0.06	0.223
Eat Fish Past Week	493	0.58	0.65	0.07	0.002
Use Food Labels	488	2.40	2.84	0.44	<0.001
Run Out of Food by End of Month	485	1.91	1.83	-0.08	0.028
Rate Eating Habits	477	5.72	6.51	0.79	<0.001
Control					
Drink Fruit Drinks, Sports Drinks, Punch	35	2.11	2.17	0.06	0.571
Drink Soda	34	1.97	2.03	0.06	0.661
Drink Milk	34	2.41	2.35	-0.06	0.661
Drink or Use Milk on Cereal Past Week	34	0.82	0.91	0.09	0.083
Take Skin off Chicken	35	2.17	2.26	0.09	0.556
Eat Fish Past Week	35	0.4	0.43	0.03	0.800
Use Food Labels	34	2.15	2.18	0.03	0.768
Run Out of Food by End of Month	34	1.71	1.59	-0.12	0.353
Rate Eating Habits	34	6.29	6.26	-0.03	0.935

Consumption of Other Foods & Trying New Fruits and Vegetables- Youth and High School
The *Network Youth Survey* and the *Network High School Survey* also surveyed consumption of foods other than fruits and vegetables, as well preference for trying new fruits and vegetables. Both youth and high school students in intervention groups reported eating more yogurt, yogurt drinks, and, cottage cheese (p=.020 and p<.001) (Table 16 and 17). Youth and high school students also reported less punch, sports drinks, and fruit-flavored drink and sweets consumption at post-test (p<0.001 and p<0.001). Intervention youth ate more cheese, drank more water, and ate fewer French fries at post-test (p<0.001, p<0.001, and p=.023). High school intervention participants reported consuming significantly more milk and less soda at post-test (p=0.005 and p<0.001). Youth and high school students exposed to an intervention reported an increase in liking to try new fruits, and high school students reported an increase in liking to try new vegetables (p<0.001 and p=0.027). The youth control group reported a significant increase in yogurt, yogurt drink, and cottage cheese consumption and a decrease in consumption of sweets (p=0.001 and p<0.001). The high school control group reported an increase in hot and cold cereal consumption (p=0.005).

Table 16. Changes Observed in Consumption of Other Foods and Trying New Fruits and Vegetables- Youth

	N	Pre-test	Post-test	Difference	p-value
Intervention					
Cheese	8,167	0.83	0.94	0.11	<0.001
Milk	8,663	1.45	1.47	0.02	0.083
Yogurt, Yogurt Drink, Cottage Cheese	8,163	0.40	0.42	0.02	0.020
Hot or Cold Cereal	8,665	0.75	0.76	0.01	0.076
French Fries or Chips	8,670	0.75	0.73	-0.02	0.023
Water	8,522	3.50	3.58	0.08	<0.001
Punch, Sports Drinks, Fruit-Flavored Drinks	8,594	0.9	0.84	-0.06	<0.001
Soda	8,628	0.58	0.57	-0.01	0.225
Sweets	8,639	0.81	0.70	-0.11	<0.001
Eat Breakfast	8,548	0.85	0.86	0.01	0.394
Like to Try New Fruits	8,121	1.36	1.39	0.03	<0.001
Like to Try New Vegetables	8,078	1.08	1.08	0.00	0.744
Control					
Cheese	652	0.73	0.83	0.10	0.024
Milk	890	1.43	1.40	-0.03	0.396
Yogurt, Yogurt Drink, Cottage Cheese	652	0.31	0.41	0.10	0.001
Hot or Cold Cereal	894	0.62	0.66	0.04	0.164
French Fries or Chips	891	0.81	0.78	-0.03	0.418
Water	824	3.37	3.43	0.06	0.281
Punch, Sports Drinks, Fruit-Flavored Drinks	887	0.92	0.92	0.00	0.952
Soda	886	0.68	0.75	0.07	0.052
Sweets	886	0.85	0.70	-0.15	<0.001
Eat Breakfast	876	0.85	0.86	0.01	0.678
Like to Try New Fruits	640	1.35	1.36	0.01	0.567

Like to Try New Vegetables	636	1.01	1.01	0.00	0.905

Table 17. Changes Observed in Consumption of Other Foods and Trying New Fruits and Vegetables - High School

	N	Pre-test	Post-test	Difference	p-value
Intervention					
Cheese	892	0.85	0.88	0.03	0.417
Milk	885	1.19	1.28	0.09	0.005
Yogurt, Yogurt Drink, Cottage Cheese	885	0.18	0.27	0.09	<0.001
Hot or Cold Cereal	884	0.47	0.45	-0.02	0.402
French Fries or Chips	893	0.67	0.61	-0.06	0.057
Water	893	3.47	3.40	-0.07	0.175
Punch, Sports Drinks, Fruit-Flavored Drinks	882	0.92	0.74	-0.18	<0.001
Soda	885	0.73	0.60	-0.13	<0.001
Sweets	882	0.68	0.57	-0.11	<0.001
Eat Breakfast	893	0.69	0.70	0.01	0.546
Like to Try New Fruits	893	1.34	1.42	0.08	<0.001
Like to Try New Vegetables	893	1.03	1.07	0.05	0.027
Control					
Cheese	118	1.07	0.84	-0.23	0.023
Milk	118	1.10	1.03	-0.07	0.331
Yogurt, Yogurt Drink, Cottage Cheese	118	0.19	0.22	0.03	0.529
Hot or Cold Cereal	118	0.29	0.48	0.19	0.005
French Fries or Chips	118	0.64	0.64	0.00	1.000
Water	118	3.22	3.14	-0.08	0.567
Punch, Sports Drinks, Fruit-Flavored Drinks	117	0.84	0.76	-0.08	0.337
Soda	116	0.47	0.54	0.07	0.319
Sweets	116	0.66	0.52	-0.14	0.106
Eat Breakfast	118	0.71	0.70	-0.01	0.863
Like to Try New Fruits	118	1.19	1.26	0.07	0.140
Like to Try New Vegetables	118	0.85	0.80	-0.05	0.222

Summary

In sum, data were collected from 12,064 individuals by 40 contractors in seven intervention channels. Contractors working with adults measured fruit and vegetable and other food and beverage consumption, food security, and self-rating of eating habits. Contractors working with youth and teens measured fruit and vegetable consumption and other food and beverage consumption, physical activity, perceived parent consumption, and access to fruits and vegetables.

The results show that contractors increased fruit and vegetable consumption significantly in the youth and adult populations, and for the first time since adopting the *Network High School Survey,* there were significant improvements among teens.

Combined results from the *FBC* and *FVC* showed adults increased fruit and vegetable consumption by over two-thirds of a cup per day. The *Network Youth Survey* showed an increase of 0.38 times yesterday, a 0.11 time per day improvement from FFY 11 results. Most remarkably, results from the *Network High School Survey* show that fruit and vegetable consumption increased by 0.50 times per day, and nearly two-thirds of that was due to increased vegetable consumption. Past data has indicated it is more difficult to create change that improves vegetable consumption. In FFY 12, we saw control group sizes decline, and this was most notable in the adult population. This is due in part to *Network* encouragement of contractors to increase intervention sample sizes. It is anticipated that contractors are more comfortable with collecting larger sample sizes in FFY 13, and as a result, *Network* staff will encourage contractors to increase control sample sizes once again.

The interventions implemented could reasonably be expected to change only some of the factors that were measured. For the youth population, the results showed statistically significant change for access to fruits and vegetables, parent consumption of fruits and vegetables, physical activity, consumption of yogurt, cheese, sweets, sugar-sweetened beverages, water, and trying new fruits. Among high school students, there were significant findings for yogurt, milk, sugar-sweetened beverage, and sweets consumption, and trying new fruits, availability of fruits and vegetables, parent consumption of fruits and vegetables, and physical activity. Adults significantly improved on each fruit and vegetable measure asked, along with consumption of sugar-sweetened beverages, milk, and fish, use of food labels, food security, and self-rating of eating habits.

Just over half of contractors said they specifically emphasized a reduction in sugar-sweetened beverages through *Rethink Your Drink* materials and nine said they used Dairy Council resources. As reducing sugar-sweetened beverage intake becomes a priority area for the *Network*, data show juice consumption is decreasing among youth and teens, indicating *Rethink Your Drink Messages* may also effectively decrease juice consumption. For this reason, and because the American Academy of Pediatrics recommends children consume only 8-12 ounces of juice a day, the *Network* feels it is no longer appropriate to combine pre-post measures of fruits and vegetables with juice. FFY 12 data showed decreased consumption of fruit drinks, sports drinks, punch, and soda, and increases in milk among adults. Among youth, water consumption increased and punch, sports drinks, and fruit-flavored drinks decreased. Among teens, consumption of punch, sports drinks, fruit-flavored drinks, and soda decreased.

While very positive, these results do not capture the full impact of *Network*-funded nutrition education. The changes reported here resulted from varied interventions implemented in settings where contractors have little control over conditions that influence fruit and vegetable consumption. Advertising, the extent of availability of high quality fruit and vegetables in schools and homes, and policies that favor the consumption of calorie dense foods are among those that limit the impact of the

nutrition education delivered by *Network*-funded contractors. In FFY 13 when changes in the school meal program help reinforce nutrition education, we anticipate seeing yet more positive change.

7. Reference

Provide a contact for additional details and a reference to any other report of the evaluation.

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References

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Network-funded contractor:	Southwest LA Workgroup
Contract number:	
Information provided by :	ABC Unified School District, Hawthorne School District & Lawndale Elementary School District/LA Trade Tech
Telephone:	562-926-5566; 310-349-0744; 213-763-7377
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Section 1

1. Project Description and Goals

Project Name:	Caught Eating Healthy
Target Population:	6th Grade Students
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The Caught Eating Healthy program involved training teachers to provide nutrition education lessons in conjunction with positive reinforcement as a means of increasing student consumption of fruits and vegetables during the school day, specifically during snack time. LIA project leaders met briefly with teachers on a monthly basis to get feedback and review the materials for the upcoming month. This helped keep teachers on track and provided an opportunity for ongoing support and problem solving.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

N/A

In 1-2 paragraphs, please provide a description of standardized training:

Project Coordinators trained teachers to utilize HOTM materials including student workbooks, tasting trio recipes, and other materials. Teachers were also instructed on how to administer the Caught Eating Healthy program.

In 1-2 paragraphs, please provide a description of standard administration of data

Survey administrator instructions were given to individuals who administered the pre- and post-tests. Instructions included avoiding a Monday for pre- and post-test administration dates.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

HOTM workbooks, incentive charts, and taste test stickers were provided to classrooms participating in the Impact Evaluation effort.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 450 grade students who participated in Caught Eating Healthy will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Individual

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample
How many matched surveys?	431
How many sites?	5
How many classrooms?	15

b. Control:	Convenience Sample
How many matched surveys?	149
How many sites?	3
How many classrooms?	5

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey	
Goal 2/Objective 2	0	

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	6

	Intervention			Control		
Pre-test:	10/1/2011	to	10/31/2011	10/31/2011	to	10/1/2011
Start of Intervention Date	11/1/2011			NA		
End of Intervention Date	4/20/2012			NA		
Post-test:	4/23/2012	to	4/30/2012	4/23/2012	to	4/30/2012
Follow-up:	NA	to	NA	NA	to	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	Paper and pencil survey	

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

The current study resulted in a greater significant increase in consumption of breakfast (p-Value=0.000) compared to that of the control group (p-Value=0.672). Unlike the results from the previous year, the current study was successful in decreasing total consumption of unhealthy dietary behaviors (p-Value=0.021). Specifically, consumption of punch, sports drinks, and fruit-flavored drinks resulted in an 84% decrease from pre-test to post-test means (p-Value=0.019); thus, demonstrating a positive impact due the intervention. Most notably, a greater significant increase in overall trying new foods was observed in the intervention group compared to the control group (p-Value=0.000 and p-Value=0.037, respectively). Moreover, the control group resulted only in an increase in trying new foods where it was not specific to trying new fruits and vegetables whereas the intervention group resulted in an increase in both trying new fruits (p-Value=0.000) and trying new vegetables (p-Value=0.000). Increases in total healthy foods consumption did not prove significant in the current study. Healthy dietary behaviors such as fruit and vegetable consumption, milk consumption and water consumption was observed to have negative differences from pre-test to post-test means, however, these differences did not prove significant (p-Value=0.507, p-Value= 0.166, p-Value= 0.064, respectively) in the current study.

It is important to note that only two out of three districts involved in the study measured for fruit and vegetable consumption at snack time; therefore, findings may have proven significant if data was collected from all three districts. Additionally, the control group received youth surveys that did not include questions regarding fruit and vegetable consumption at snack time; therefore data was not obtained.

Overall, participants were observed to significantly increase breakfast consumption, trying new foods, specifically fruits and vegetables, as well as to decrease unhealthy dietary behaviors such as punch, sports drinks and fruit-flavored drinks. The current intervention of nutrition education in the classroom, HOTM taste tests and positive reinforcement of eating fruit and vegetables proves effective in creating healthier school environments.

All findings were generated by a two-tailed student t-test with a p-Value less than 0.05 considered statistically significant.

The best outstanding moments all three districts shared was the boost in participation and anticipation in tally reporting by students due to the monthly competition. Teachers shared that students were always excited to hear which classroom had the highest participation in order to "beat" the other classrooms. Additionally, an outcome evaluation was provided to all teachers involved in the intervention group to assess the process of the study as well as their role as a administrator of the study. Results indicated teachers are highly satisfy with the methodology of the study, however, results did indicate teachers are rushed for time and feel that this is the number one barrier to improving the success of the study.

b. Description of how evaluation results will be used:

The positive findings from the current study along with past year's results will be used to demonstrate the need to provide nutrition education and promotion in the classroom to administrators, teachers and parents. Emphasis will be placed on the low cost and ease of nutrition education implementation in the classroom by teachers as well as the support available from the Network staff.

7. Point of Contact

Name:	ABC Unified School District, Hawthorne School District & Lawndale Elementary School District/LA Trade Tech
Phone Number:	562-926-5566; 310-349-0744; 213-763-7377
Email Address:	Judith.Dunaway@abcusd.k12.ca.us; JBrown@hawthorne.k12.ca.us; Christine.Elhaj@gmail.com

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

Food Preferences Survey	
Knowledge surveys various available; identify scale(s) from Compendium:	0
Norms surveys for children various available; identify scale(s) from Compendium:	0
Outcome Expectations for Fruits and Vegetables (Reynolds)	
Outcome Expectations for Fruits and Vegetables (Baranowski)	
Physical Activity Preferences for Children and Adults	
Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

We did conduct classroom observations to make sure teachers were delivering the lesson as demonstrated during the monthly

teacher meetings.

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.87	0.95	0.09	0.104
4. Milk	1.60	1.52	-0.07	0.166
5. Yogurt or cheese	0.34	0.40	0.06	0.130
6. Cereal	0.64	0.62	-0.01	0.756
8. Vegetables	1.56	1.71	0.15	0.054
9. Fruit	1.93	1.92	-0.01	0.896
10. Juice	1.26	1.20	-0.06	0.439
11. Water	3.59	3.46	-0.14	0.064
15. Breakfast	0.64	0.89	0.25	0.000
Total: fruit & vegetable (no juice)	3.68	3.82	0.14	0.260
Total: fruit, vegetable, juice	5.29	5.40	0.11	0.507
Total: healthy foods (Q3-6, 8-11)	12.32	12.37	0.04	0.861
Fruits and Vegetables at Snack Time	0.85	0.88	0.03	0.604
8a. Vegetable snack	0.32	0.32	0.00	0.912
9a. Fruit snack	0.54	0.56	0.03	0.487
Less Healthy Dietary Behaviors				
7. French fries or chips	0.74	0.67	-0.07	0.136
12. Punch, sports drinks, fruit-flavored drinks	0.81	0.68	-0.12	0.019
13. Soda or soft drinks	0.54	0.55	0.02	0.708
14. Cookies, cakes, other sweets	0.64	0.57	-0.06	0.153
Total: less healthy foods (Q7, 12-14)	2.72	2.47	-0.26	0.021
Trying New Foods	2.09	2.49	0.40	0.000
16. Trying new fruits	1.16	1.42	0.26	0.000
17. Trying new vegetables	0.93	1.07	0.14	0.000
Home Access	3.50	3.49	-0.01	0.859
18. Fruits to eat at home	1.80	1.79	-0.01	0.754
19. Vegetables to eat at home	1.69	1.69	0.00	0.933
Perceived Parental Consumption	4.67	4.50	-0.17	0.092
20. How often parents eat fruit	2.27	2.19	-0.08	0.172
21. How often parents eat vegetables	2.31	2.28	-0.03	0.637
Physical Activity	7.91	7.26	-0.65	0.005
22. Days of 60 minutes moderate/vigorous	4.18	3.77	-0.41	0.001
23. Days of 30 minutes outdoor play	3.74	3.50	-0.24	0.069

Demographics

Average Age	11.1

Gender	
Males	219
Females	221

Youth Survey Results - Control

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.81	0.81	0.00	1.000
4. Milk	1.66	1.68	0.03	0.815
5. Yogurt or cheese	0.25	0.39	0.15	0.046
6. Cereal	0.41	0.50	0.09	0.277
8. Vegetables	2.13	2.15	0.03	0.879
9. Fruit	2.04	2.14	0.09	0.548
10. Juice	1.03	0.91	-0.11	0.460
11. Water	3.86	3.80	-0.06	0.696
15. Breakfast	0.87	0.89	0.02	0.672
Total: fruit & vegetable (no juice)	4.17	4.29	0.12	0.662
Total: fruit, vegetable, juice	5.20	5.21	0.01	0.979
Total: healthy foods (Q3-6, 8-11)	12.14	12.41	0.27	0.587
Fruits and Vegetables at Snack Time	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
8a. Vegetable snack	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
9a. Fruit snack	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Less Healthy Dietary Behaviors				
7. French fries or chips	0.77	0.55	-0.22	0.017
12. Punch, sports drinks, fruit-flavored drinks	0.40	0.58	0.18	0.052
13. Soda or soft drinks	0.36	0.30	-0.06	0.509
14. Cookies, cakes, other sweets	0.80	0.56	-0.24	0.015
Total: less healthy foods (Q7, 12-14)	2.33	1.99	-0.34	0.179
Trying New Foods	2.14	2.40	0.26	0.037
16. Trying new fruits	1.30	1.44	0.14	0.055
17. Trying new vegetables	0.83	0.97	0.13	0.087
Home Access	3.53	3.71	0.18	0.063
18. Fruits to eat at home	1.78	1.83	0.04	0.448
19. Vegetables to eat at home	1.74	1.88	0.14	0.016
Perceived Parental Consumption	4.71	5.08	0.37	0.007
20. How often parents eat fruit	2.23	2.38	0.15	0.099
21. How often parents eat vegetables	2.50	2.62	0.12	0.158
Physical Activity	7.08	6.93	-0.15	0.749
22. Days of 60 minutes moderate/vigorous	3.74	3.54	-0.20	0.453
23. Days of 30 minutes outdoor play	3.30	3.39	0.09	0.747

Demographics

Average Age	11.0
Gender	
Males	60
Females	60

Network-funded contractor:	Alameda County Health Care Services Agency - 10-10085
Contract number:	10-10085
Information provided by :	Darlene Fujii/Annette Laverty/Rachel Paras
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1. Project Description and Goals

Project Name:	Healthy Living Champions for Change
Target Population:	18-70
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The Healthy Living Champions for Change Councils provided year-round, foundation in nutrition education in a stimulating and supportive atmosphere providing opportunities for community capacity building and community engagement. Council staff provide education to parents, seniors, and the general adult community including transitional aged young adults (ages 18-24) in school settings, community based organizations and senior centers.

The Councils inspired and empowered members to make healthier choices for themselves, their families, and their communities. Nutrition education included Harvest of the Month cooking demonstrations, support and supervision of school based safety patrols, promotion of daily physical activity, reinforcing the in-classroom nutrition education messages Importance of Breakfast, Screen Free Week, Be Sugar Savvy/Rethink Your Drink, and Oakland Eats Garden Fresh, and promotion of the Oakland Farm to School Network school-based produce markets. In addition, members completed the East Bay Regional Parks Trails Challenge, organized and coordinated volunteers for salad bars. Members also participated in our Cooking for Health Academy, a capacity building and community engagement series devoted to nutrition education and food safety. Lastly, members at six of our school based Council locations took part in Cx3, Communities of Excellence in Nutrition, Physical Activity and Obesity Prevention.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Each of our 90-minute nutrition education HLC4C sessions consist of nutrition education and a component of physical activity. Nine times throughout the year, parent, senior and other adult participants are engaged with PA from the Network approved, Power Up in 10 and Shape of Yoga.

In 1-2 paragraphs, please provide a description of standardized training:

Our Healthy Living Champions for Change team is comprised of Registered Dietitians, Program Managers, Community Health Outreach Workers, and Nutrition Assistants. This group meets biweekly to plan and review upcoming sessions and to develop education materials, discuss strategies to recruit, train, and support the Councils.

Healthy Living Champions for Change coordinators used the Network's Harvest of the Month family newsletters. Classroom based curricula such as Be Sugar Savvy, Importance of Breakfast, Screen Free week, Oakland Eats Garden Fresh and other monthly lessons were adapted for members and discussed during bi-monthly team meetings to ensure consistency of program materials and content and to reinforce the classroom messages. Members are provided the same information as their children and are encouraged to reinforce the information and put it to practice at home.

In 1-2 paragraphs, please provide a description of standard administration of data

The Food Behavior Checklist was administered to parents, seniors and other adults in English or Spanish using the Network protocol. For parents who spoke Cantonese, Vietnamese or another Asian language, the surveys were translated using simultaneous translation methods.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

While our education component and HOM feature is standardized, our model of community engagement is needs based. Each Council goes through a standardized issue/area assessment and identifies topics that their council wishes to address.

For example, this year, five of our longer standing school-based councils, participated in the Cx3 initiative. Training was standardized and modeled after the Network provided training.

For the educational component, Healthy Living Champions for Change coordinators used the Network's Harvest of the Month family newsletters. Classroom based curricula such as the Be Sugar Savvy, Importance of Breakfast, TV Turn Off week, and other monthly lessons were adapted for parents and discussed during bi-monthly team meetings to ensure consistency of program materials and content.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 100 adults who participated in Healthy Living Council Champions for Change will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? 0

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	115
How many sites?	16
How many classrooms?	16

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Food Behavior Checklist (cups)
Goal 2/Objective 2	0

Were any other measures used?	0

b. Describe the points at which data were collected.
For a given participant, no pre-test was given after intervention started; participants had between 5 and 8 lessons.

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	0-3
How many lessons from the intervention occurred *after* pre-tests?	9

	Intervention	Control
Pre-test:	9/4/2012 to 12/31/2012	
Start of Intervention Date	9/17/2012	NA
End of Intervention Date	5/25/2012	NA
Post-test:	5/28/2012 to 6/8/2012	
Follow-up:	0/0/0000 to 0/0/0000	

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

...self-administered with individual guidance. Pre surveys were given at the time of entry into program which may have occurred prior to first meeting when intervention began.

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

This program year, aggregate data shows that participants reported a positive, significant change in "self rating of eating habits" (p=value of .01). Statistical significance is measured with a p-value < .05. Although the data shows no significant change in the overall measures of fruit and vegetable consumption or physical activity, there are still impacts. Participants did see a decrease in SSB consumption (FBC Q4). Also, there was an increase in fruit eaten per day (FBC Q6). Data shows participants reported not running out of food before month end as they did at pre-test time (FBC Q15). Fruit consumption improved overall, and slight improvements in 30 minutes of continuous activity 3x/week were reported although not statistically significant.

Qualitative Findings

In addition to our health education interventions, this year, our programming model was centered on community capacity building. Although the Network tool does not measure this, through process evaluations, observations and anecdotal evidence, we believe we have made significant strides. For instance, members representing 11 of 19 of our school-based HLC Champions for Change groups participated in community engagement activities.

Community Change:
HLC4C parents who exhibited leadership qualities or have been involved with C4C's for several years were asked to participate in a pilot Cooking For Health Academy with the intent of having them showcase their skills and knowledge gained about the featured Harvest of the Month at their school site and with their peers. Over the course of five sessions and six months, residents exceeded this expectation. At C4C's with Cooking For Health Academy participants, staff played more of an advisory role while parent members showcased their unique presentation styles while highlighting the recipes and safe food handling each month. Nutrition Services and the East Bay Regional Parks District (EBRPD) had an ongoing partnership which presented a community-wide opportunity for Cooking For Health Academy involvement. At the end of the six months, almost half of the cohort staffed the Alameda County Nutrition Services booth at the EBRPD Healthy Parks Healthy People event which is actually a is a worldwide campaign to encourage healthy active outdoors fun in parks and open space. Participants prepared healthy drink options and explained benefits of water versus sugar sweetened beverage consumption supporting the Rethink Your Drink campaign at this event.

Individual Change Impacting School Change:
An HLC C4C parent (Olga J.) who two years ago, helped organize a petition to bring a salad bar to Bridges Academy Elementary School has been passionate in ensuring that fresh fruits and vegetables are available for all students. This year, she took on a leadership role to recruit, train and schedule parent volunteers to work the salad bar. She designed a recruitment flyer, maintained the calendar, made countless phone calls and motivated parents to volunteer. She also trained parents as leaders to train other volunteers. Though her work she has also cultivated relationships with the cafeteria food service worker and the school principal. She has created a team of dedicated parents. Without Olga's leadership and parent support, the salad bar at this school would close.

Responding to Community Requests:
From Oakland to Livermore: An HLC C4C parent (Luisa B.) from one our of shorter term schools (less than 3 years) in Oakland is one of our promotoras. She has always held a leadership role at the C4C enthusiastically participating and volunteering to prep food and working with the school to arrange logistics for the C4C. This summer, we received a request to conduct a food demonstration and provide nutrition education for parents at one our schools in southern Alameda County. Luisa stepped up to the challenge, worked with our staff to create the agenda and nutrition talking points, to deliver a successful presentation.

b. Description of how evaluation results will be used:

Staff will use these results to inform lesson planning for interventions that will begin in the fall. We intend to review the curriculum from which the Network survey is based to determine areas where we can re-engage with long-time members and focus with new members. These results will also inform our selection of the Harvest of the Month recipes that will be featured during the Healthy Living Champions for Change meetings. For example, part of a lesson plan could focus on lean protein sources as there was no significant change in respondents' answers to questions about consuming fish and skinless chicken.

The challenges of consistent attendance also continue to impact our ability to have higher numbers of matched pre and post tests for the evaluation even though we serve well over 500 residents through our HLC's. Many members were recruited in the second or third session, well after the pre-intervention pre-test was administered therefore we were not able to capture behavior changes. In our upcoming year, we will pre-test members upon entry with hopes of increasing our matched participants.

7. Point of Contact

Name:	Darlene Fujii
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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. N/A

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* N/A

c
- [ ] Food Behavior Checklist
- [ ] Fruit and Vegetable Checklist
- [ ] Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

No

Matched C4C Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.92	2.98	0.06	0.493
Q2. Drink sports drinks or punch (1-4)	1.93	1.95	0.02	0.703
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.25	0.28	0.02	0.441
Q4. Drink regular soda (1-4)	1.72	1.60	-0.11	0.091
Q5. Consumed milk in past week (0=N; 1=Y)	0.25	0.25	0.00	1.000
Q6. Fruit eaten per day (0-3)	1.38	1.49	0.11	0.091
Q7. Vegetables eaten per day (0-3)	1.42	1.49	0.07	0.234
Q8. Different kinds of fruit daily (1-4)	2.62	2.70	0.08	0.314
Q9. Different kinds of vegetable daily (1-4)	2.93	2.93	0.00	1.000
Q10. Drink milk (1-4)	3.12	3.03	-0.08	0.175
Q11. Take skin off chicken (1-4)	3.27	3.17	-0.10	0.128
Q12. Consumed fish in past week (0=N; 1=Y)	0.37	0.40	0.03	0.641
Q13. 2 or more vegetables at main meal (1-4)	2.76	2.88	0.12	0.112
Q14. Read nutrition facts when shopping (1-4)	2.78	2.82	0.04	0.640
Q15. Run out of food before month end (1-4)	2.22	2.04	-0.18	0.077
Q16. Self-rating of eating habits (1-10)	6.48	6.84	0.36	0.010
Q17. 30 mins. continuous activity 3x per wk (0=N; 1=Y)	0.83	0.89	0.06	0.202

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.08	1.16	0.09	0.059
Veggies (Q 7, 9,13) (Range 0-3)	1.53	1.58	0.05	0.358
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.24	3.38	0.14	0.103

Demographics			
Hispanic			
yes	274	**Gender**	
no	59	Males	26
Race		Females	340
American Indian or Alaskan Native	6		
Asian	5		
Black or African American	48		
Native Hawaiian or Other Pacific Islander	0		
White	71		

Network-funded contractor:	Alameda County Health Care Services Agency - 10-10085
Contract number:	10-10085
Information provided by :	Jenny Wang/Annette Laverty/Rachel P. Paras
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Date:	8/10/2012
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1. Project Description and Goals

Project Name:	Healthy Kids for Life
Target Population:	Ages 6-14/K - 8
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	Importance of Breakfast, Oakland Eats Garden Fresh, Be Sugar Savvy, Screen Free Week

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Alameda County Nutrition Services nutrition education intervention included: monthly Harvest of the Month taste testing in the classroom, teacher and family newsletters, Harvest of the Month activity workbooks, seasonal Harvest of the Month posters, Eat Breakfast and Make It Healthy (Importance of Breakfast intervention), Sugar Savvy/Rethink Your Drink intervention, Screen Free week intervention, Oakland Eats Garden Fresh intervention. In addition, select classrooms, about seven elementary schools, received the Harvest of the Month Toolkit intervention. In addition, our middle school staff prepares materials and present lessons directly or co-teaches the lesson with the school staff.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

The physical activity (PA) intervention involves the use of laminated PA cards for teachers to use both in & out of the classroom. The front of the card has a picture of the PA and the back is a description of how to do the PA plus a nutrition tip. At the bottom, separated by grades K-2 & 3-5, are two examples on how to incorporate movement into a lesson. The PA is especially easy to use for memorization tasks or naming types of grammar, such as nouns or adjectives. The use of the PA cards varies depending on a teacher's needs. One card can be used in between a lesson, a few to re-energize during a test, or the whole set between lessons or outside during recess. The cards are developed so students can lead the PA, leaving the teacher to observe and help students. Some examples of how teachers have used them are as follows: 1) Laurel Elementary school teachers posted the PA cards outside around the playground to encourage students to complete the whole set and 2) at Allendale Elementary School, one teacher used some of the cards as an energizer, PA break during a test exam.

In 1-2 paragraphs, please provide a description of standardized training:

All classroom teachers were given identical nutrition education materials. Teachers from seven elementary schools received the Harvest of the Month toolkit. Site coordinators for the Harvest of the Month after school program were provided identical nutrition education materials and attended a 3-hour professional development conducted by Nutrition Services' staff and the Oakland Unified School District's after school manager. Nutrition Services' staff corresponded with teachers on an ongoing, as needed basis which included email, phone correspondence and regular, monthly attendance at principal/teacher staff meeting to communicate standards, respond to questions about interventions and upcoming programs.

In 1-2 paragraphs, please provide a description of standard administration of data

For the administration of the Network Youth Surveys, classroom teachers and after school staff followed Network provided protocols (ex. not administering the pre or post test on a Monday). They read the survey aloud to students prior to the start of any interventions. Nutrition Services' staff provided talking points to teachers and after school program staff in support of administering the survey instrument.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

The Nutrition Services school team supports classroom teachers who implement the nutrition education, taste testing, and interventions. Across all schools/classrooms, staff provides all standardized materials. Staff also uses the same messaging to articulate the intervention so that teachers both hear and read the same teaching and learning points. This process supports standardized implementation across all schools/classrooms. Furthermore, staff meets with teachers annually at the beginning of the year to orient teachers to the program and provide a year overview. School team staff then announces the quarterly interventions and provide reminders on an ongoing, as needed basis.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 100, matched 4th and 5th grade students who participated in Healthy Kids for Life will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	1630
How many sites?	37
How many classrooms?	72

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	0

Were any other measures used? 0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	0-3
How many lessons from the intervention occurred *after* pre-tests?	13

	Intervention	Control
Pre-test:	9/12/2012 to 10/25/2012	
Start of Intervention Date	10/3/2012	NA
End of Intervention Date	5/18/2012	NA
Post-test:	5/21/2012 to 6/8/2012	
Follow-up:	1/0/1900 to 1/0/1900	

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

...self-administered with classroom level guidance. Pretests given at time of program onset. For example, after school intervention began later in the academic year.

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

The intervention group consisted of students grades K through 8 representing 23 elementary and 14 middle schools. The analysis includes 1630 matched pre and post test surveys of 5th and 7th graders. We use the Network Youth Survey demonstrating the following results: 1) healthy dietary behaviors: there was a significant increase in consumption of cheese, milk, vegetables and fruit. Data also shows positive change in total fruit and vegetable consumption (no juice), fruit and vegetable consumption (juice), and healthy foods overall. 2) less healthy dietary behaviors: this group also demonstrated decreased consumption in french fries or chips. 3) trying new foods: this group did not demonstrate a change in behavior to trying new fruits or new vegetables. 4) home access: data shows that students in this group demonstrate overall home access to fruit and vegetables with significant changes in vegetables to eat at home. 5) perceived parental consumption: overall, data shows students perceive their parents as consuming more fruits and vegetables although not necessarily reflected in these categories separately. 6) physical activity: the data shows that students both exercised 60 minutes as well as played outdoors 30 minutes per day. Data shows significant change in overall physical activity as well. We did not see statistically significant change in sugar sweetened beverage consumption. One potential reason for this is that for approximately, 60% of schools, the post test was taken prior to the last intervention which was Sugar Savvy.

Qualitative Findings:
Classroom and Teacher Change: We are lucky to work with several Champion teachers in Oakland who recognize the positive impact of health education and good nutrition in their classrooms. One teacher in particular, Mrs. Kinsley at Sobrante Park Elementary, certainly falls into this category and leads by example. Her kindergarten students are no strangers to fruits and vegetables in the classroom as Mrs. Kinsley enthusiastically participates in the Harvest of the Month program and even cooks in her classroom and brings produce from home. In addition, she and her students have started a vegetable garden from which they get to sample delicious, locally grown fare.

A teacher at Laurel had not conducted much PA and recently started using the CD we gave them a couple years ago. She shared that she did not use it at first because she was stuck in her routine and it took work to change (she was being really honest!). She tried using it once. Her students loved it so much she started using it regularly because the students kept asking for it! She then used it as an incentive for the students to behave or do work.

At the middle school level, one of our staff Dietitians led a school-day nutrition and cooking/after-school running club at Edna Brewer middle school, in partnership with a community non-profit called Running for a Better Oakland (RBO). Fifteen students were recruited to participate in the program and trained to complete the Oakland Half-Marathon in March of 2012. The students met twice a week for three months. During the school week they met for 90 minutes of nutrition education and included 6 classes with workbooks and videos. After school, students were led on a training run around school campus, with the Dietitian and help of a few RBO volunteers. Additionally, students met every Saturday for a training run with a larger group of students from Oakland public schools, also affiliated with RBO. In this model, the PA was led by volunteers (non Network funded).

Training runs began with shorter mileage and increased to 12 mile practice runs over the three months, both after school and on Saturdays. Twelve students completed the program and successfully ran the Oakland Half Marathon. Teachers and parents alike commented on the positive, transformational changes observed in many of these students, ranging from improved academic, class behavior and participation, as well as self esteem, confidence and body image. Next year the goal is to possibly expand this model to other middle

schools and to model it as more of a peer health education program with a recurring physical activity component. The intention is to have the returning (veteran) students teach nutrition to the incoming students to improve sustainability and capacity of the program for the long term.

Professional development: Throughout the history of our program, year after year, we have offered professional development and summer school nutrition education opportunities for OUSD, but never had much interest. Last year, we were pleased that OUSD reached out to us to offer nutrition education training to OUSD teachers and nurses, so they in turn can teach nutrition to students during summer school. That pilot was such a success that this summer, OUSD requested this model again, training a new batch of teachers to rotate through all the different grade levels at 11 summer school programs. This is a wonderful way for a handful of teachers to build capacity, inspiration, and confidence in teaching nutrition.

Another way that our program built capacity was through professional development with OUSD's Nutrition Service workers and managers. Three years ago, through subcontracting and partnering with a food service Registered Dietitian Liaison, we established a strong enough connection with OUSD's Nutrition Service Department to be allocated some time at quarterly meetings to present some nutrition education. As we observed the benefits of getting food service workers on board with promoting the nutrition message, we increased the professional development frequency to monthly presentations. This has resulted in daily messaging by the food service workers, encouraging students to select fruits and vegetables for better health at the point of service. And with the help of some stickers as incentives, students really are selecting healthier options.

Our OUSD Teacher on Special Assignment focusing on Garden Based Nutrition Education came on board at the end of March 2012, and already has invigorated the OUSD gardens with new life literally and figuratively. In the short time since his arrival, he convened the OUSD Garden Council for networking and resource sharing. He surveyed all district gardens and made connections with garden educators -- offering donated seeds, seedlings, cuttings, and vegetable plants. He reached out to High School students, trained and coached them, so they can co-lead professional development trainings for garden educators. With all the energy we are getting from our Oakland Eats Garden Fresh intervention, this intentional garden connection by the district garden coordinator was the last piece of the puzzle.

Community Change: The Harvest of the Month after school pilot intervention was a success for our partnership with the OUSD after school community. Nutrition Services and the Oakland Unified School District's Afterschool program manager staff were both enthused about the initiative. In the fall of 2012, only four sites were participating in this pilot intervention, but over the course of four months, from February 2012 through May 2012, ten elementary afterschool programs (serving approximately 1,000 Oakland youth) participated. Parents and families of these youth were secondary recipients of the intervention since family taste tests were an integral part of the curriculum.

b. Description of how evaluation results will be used:

Evaluation results will inform program planning and materials use for the 2012-2013 academic year. We will continue to assess the Harvest of the Month after school pilot sites and possibly expand the model and level of intensity. In addition to the Network Youth Survey, we administer a qualitative teacher survey. Results will also help us determine the method of delivery for the quarterly interventions.

7. Point of Contact

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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. N/A

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* None

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

- [ ] Food Preferences Survey
- [ ] Knowledge surveys various available; identify scale(s) from Compendium: 0
- [ ] Norms surveys for children various available; identify scale(s) from Compendium: 0
- [ ] Outcome Expectations for Fruits and Vegetables (Reynolds)
- [ ] Outcome Expectations for Fruits and Vegetables (Baranowski)
- [ ] Physical Activity Preferences for Children and Adults
- [ ] Self-Efficacy surveys for children various available; identify scale(s) from Compendium: 0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

None

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

No

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.67	0.77	0.10	0.000
4. Milk	1.26	1.34	0.08	0.002
5. Yogurt or cheese	0.34	0.35	0.01	0.738
6. Cereal	0.70	0.72	0.01	0.534
8. Vegetables	1.67	1.78	0.12	0.004
9. Fruit	1.98	2.15	0.17	0.000
10. Juice	1.36	1.35	-0.01	0.777
11. Water	3.58	3.60	0.02	0.589
15. Breakfast	0.82	0.81	-0.02	0.131
Total: fruit & vegetable (no juice)	3.65	3.93	0.28	0.000
Total: fruit, vegetable, juice	5.00	5.27	0.27	0.003
Total: healthy foods (Q3-6, 8-11)	11.57	12.06	0.49	0.000
Less Healthy Dietary Behaviors				
7. French fries or chips	0.78	0.73	-0.05	0.033
12. Punch, sports drinks, fruit-flavored drinks	0.85	0.83	-0.02	0.561
13. Soda or soft drinks	0.56	0.57	0.02	0.554
14. Cookies, cakes, other sweets	0.71	0.69	-0.02	0.401
Total: less healthy foods (Q7, 12-14)	2.89	2.82	-0.08	0.244
Trying New Foods	2.38	2.36	-0.02	0.540
16. Trying new fruits	1.35	1.33	-0.01	0.400
17. Trying new vegetables	1.03	1.03	0.00	0.831
Home Access	3.41	3.47	0.06	0.009
18. Fruits to eat at home	1.72	1.72	0.01	0.603
19. Vegetables to eat at home	1.68	1.73	0.05	0.000
Perceived Parental Consumption	4.62	4.71	0.09	0.039
20. How often parents eat fruit	2.24	2.29	0.05	0.065
21. How often parents eat vegetables	2.35	2.38	0.04	0.124
Physical Activity	5.94	6.58	0.65	0.000
22. Days of 60 minutes moderate/vigorous	3.05	3.38	0.33	0.000
23. Days of 30 minutes outdoor play	2.89	3.21	0.32	0.000

Demographics

Average Age	10.7
Gender	
Males	1168
Females	1145

Network-funded contractor:	Alameda COE (Coalition) Hayward - 10-10160
Contract number:	10-10160
Information provided by :	Chris Boynton, Ed.D.
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Section 1

1. Project Description and Goals

Project Name:	ACOE Nutrition and Physical Activity Intervention
Target Population:	High School
Primary Curriculum Used:	Choice, Control and Change
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

ACOE Nutrition Education Intervention

The Champions for Change Program administered by ACOE provides students with greater access to fruits and vegetables through nutrition and garden-based learning activities, cooking demonstrations, and afterschool internships. The primary goal of the program is to increase fruit and vegetable consumption among students (and their families) by improving their attitude towards and knowledge of healthy food preparation and consumption. The two targeted interventions include (1) the Fresh Crew internships connected to the school gardens at Tennyson High School (4th year) and San Lorenzo High School (3rd year); and (2) the Healthy Living Classes given at San Lorenzo High School (3rd year).

In 1-2 paragraphs, please provide a description of the physical activity intervention:

ACOE Health Physical Activity Lesson Plans

The ACOE-designed physical activity lesson plans were created to assist health teachers meet California Heath Content Standards for physical activity in high schools. The lessons include a three-day program in which students are responsible for planning and participating in their own physical activity program. On day one, for example, students create a mapped walking course of their school campus and then complete their walk using a pedometer to record their steps. On day two, students experience the difference between moderate and vigorous physical activity, and then participate in several activities to track the level of intensity of each activity. On day three, students are asked to create their own personal physical activity goals and to develop an action plan to carry out their goals. All lesson plans include hand-outs and teacher instructions for quick implementation.

In 1-2 paragraphs, please provide a description of standardized training:

We create a standardized training through the use of professional learning communities. All teachers meet to examine the lessons to be taught, make adjustments and then order materials. Also, teachers order and are delivered the materials they need to teach the lesson. This ensures that the evaluation has standardized training, and delivery of materials.

In 1-2 paragraphs, please provide a description of standard administration of data

Survey data were collected at two intervention sites, San Lorenzo High School and Tennyson High School, and a third site, Hayward High School, which served as the control group. The survey was first administered in October 2011 (to the intervention groups) and December 2011 (to the control group), then approximately 25 and 18 weeks later, respectively, in April 2012.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

In order to create standardized implementation of nutrition education across all classrooms we use the locus of Harvest of the Month to introduce nutrition competencies. From the prior year's focus groups, the team decides what competencies to highlight and those are incorporated into the units. The lessons are finalized and materials ordered. This ensures equity among the students for the programs offered.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 100 9th-12th grade students who participated in ACOE Nutrition and Physical Activity Intervention will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

By Sept 30, 2012, a sample of 100 9th-12th grade students who participated in ACOE Nutrition and Physical Activity Intervention will report an increase in physical activity

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

By Sept 30, 2012, a sample of 100 9th-12th grade students who participated in ACOE Nutrition and Physical Activity Intervention will report a decrease in consumption of sugar sweetened beverages.

IOE Objective 3 (Other) Optional:

By Sept 30, 2012, a sample of 100 9th-12th grade students who participated in ACOE Nutrition and Physical Activity Intervention will report an increase in Hope Scale scores measuring self-efficacy, agency and goal attainment

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Schools

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample	
How many matched surveys?	163	
How many sites?	2	
How many classrooms?	8	
b. Control:	Other (Specify in next field)	Specify Other: Purposive control group
How many matched surveys?	68	
How many sites?	1	
How many classrooms?	2	

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	Network Youth Survey

Were any other measures used?	Children's Hope Scale (six items)

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	12

	Intervention			Control		
Pre-test:	10/1/2011	to	10/17/2011	12/2/2011	to	12/6/2011
Start of Intervention Date	11/1/2011			NA		
End of Intervention Date	1/30/2012			NA		
Post-test:	4/10/2012	to	4/11/2012	4/12/2012	to	4/13/2012
Follow-up:	1/0/1900	to	1/0/1900	1/0/1900	to	1/0/1900

c. Describe how the data were collected.

Intervention:	Paper and pencil survey (pre-test) and computer-assisted (post-test)
Comparison/control:	Paper and pencil survey (pre-test) and computer-assisted (post-test)

d. How were the surveys administered?

...read aloud to classroom (pre-test) and individual assistance (post-test)

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Champions for Change Network High School Study Findings, ACOE (2011-12)

Introduction

This section presents data from the Network Youth Survey collected at two intervention sites, San Lorenzo High School and Tennyson High School, and a third site, Hayward High School, which served as the control group. The survey was first administered in October 2011 (to the intervention groups) and December 2011 (to the control group), then approximately 25 and 18 weeks later, respectively, in April 2012. The Children's Hope Scale, a six-item dispositional scale for measuring self-efficacy, was also appended to the Network Youth Survey. (A description of the Hope Scale, its questions, and evidence for its validity and reliability are presented in the results section of this report.) This reports describes individual survey items as well as all statistically significant findings related to Impact/Outcome Objective 1 (increased fruit and vegetable consumption), Objective 2 (increased physical activity), and Objective 3 (increased Hope Scale scores). Interpretation of these findings is presented in the results section. Due to rounding, some figures presented may not sum precisely.

Pretest-Posttest Findings

Valid pretest and posttest surveys were matched using student identification numbers for each high school site and yielded the following sample sizes: 78 students at San Lorenzo (intervention), 85 at Tennyson (intervention), and 68 at Hayward (control). Thus, there were a total of 163 matched student surveys in the intervention group and 68 matched surveys in the control group.

Demographics

The mean age of students in the intervention group (n=163) was 15.3 years compared to 14.7 for the control group (n=68), and 77 out of 163 (47%) were boys in the intervention group compared to 18 out of 68 (27%) in the control group.

Healthy Dietary Behaviors

Total healthy foods consumption increased between pretest and posttest for both the intervention and control groups from 9.40 to 9.71 (+0.31) and 8.98 to 9.94 (+0.95), respectively. Both groups increased their total fruit, vegetable, and juice consumption from 3.68 to 3.90 (+0.22) for the intervention group and 3.48 to 4.23 (+0.74) for the control group. While both groups also increased their fruit and vegetable (no juice) intake from 2.51 to 2.86 (+0.36) for the intervention group and 2.47 to 2.94 (+0.47) for the control group, the increase for the intervention group was statistically significant (p=0.025).

Item 3: The intervention group increased its cheese consumption from 0.83 to 0.95

(+0.12), while the control group decreased its cheese consumption slightly from 0.89 to 0.85 (-0.05).

Item 4: Both groups increased their milk consumption from 0.98 to 1.07 for the intervention group (+0.09) and 1.13 to 1.26 for the control group (+0.13).

Item 5: While the control group increased its average yogurt or cheese intake from 0.21 to 0.28 (+0.07), the increase for the intervention group--from 0.16 to 0.39 (+0.23)--was statistically significant (p=0.00).

Item 6: The intervention group decreased slightly its consumption of cereal from 0.47 to 0.44 (-0.02), compared to an increase for the control group from 0.46 to 0.61 (+0.16).

Item 8: Mean vegetable intake for both groups increased: the intervention group increased its average from 1.26 to 1.36 (+0.10), and the control group from 1.16 to 1.36 (+0.19).

Item 9: Average fruit consumption increased for both groups: the control group increased from 1.27 to 1.55 (+0.28), and the intervention group increased from 1.25 to 1.51 (+0.26) which was statistically significant (p=0.016).

Item 10: Whereas fruit juice consumption increased for the control group from 0.99 to 1.28 (+0.29), it decreased for the intervention group—from 1.17 to 1.03 (-0.13).

Item 11: Both groups reported a decrease in water consumption from 2.97 to 2.93 (-0.04) for the control group, and 3.28 to 2.95 (-0.33) for the intervention group which was statistically significant (p=0.012).

Item 15: Intervention group breakfast consumption remained constant for pretest and posttest reporting (0.72), while the control group increased its mean slightly from 0.62 to 0.69 (+0.07).

Less Healthy Dietary Behaviors

The intervention group decreased considerably its consumption of less healthy foods from 2.69 to 2.28 (-0.41) which was found to be statistically significant (p=0.007). In contrast, the control group increased considerably its intake of less healthy foods from 2.70 to 3.70 (+1.00) which was statistically significant (p=0.003).

Item 7: The intervention group reported decreased consumption of French fries or chips from 0.68 to 0.62 (-0.06) while the control group increased its intake of those same foods from 0.73 to 0.90 (+0.16).

Item 12: Control group students also increased their consumption of punch, sports drinks or other fruit-flavored drinks from 0.64 to 0.78 (+0.13). In contrast, intervention group students decreased their consumption considerably of the same beverages from 0.76 to 0.53 (-0.23) which was statistically significant (p=0.003).

Item 13: Control group students also reported a statistically significant increase in their consumption of regular (not diet) soda or soft drinks from 0.46 to 1.24 (+0.78, p=0.000). In contrast, intervention group students reported a decrease in their consumption of the same beverages from 0.53 to 0.49 (-0.04).

Item 14: Both groups reported a decrease in their intake of cookies, cakes and other sweets which for the intervention group declined from 0.73 to 0.65 (-0.08) and for the control group from 0.77 to 0.76 (-0.02).

Trying New Foods

Both groups reported higher averages in trying new foods: the intervention group increased from 2.38 to 2.54 (+0.15), and the control group from 2.36 to 2.46 (+0.10).

Item 16: When asked about trying new fruits, the intervention group mean increased from 1.38 to 1.47 (+0.09), and the control group mean increased from 1.42 to 1.48 (+0.06).

Item 17: Both groups reported increased frequency for trying new vegetables: the intervention group increased from 1.00 to

1.07 (+0.07), and the control group increased from 0.94 to 0.99 (+0.04).

Home Access

Access to fruits and vegetables at home decreased for both groups: the intervention group mean decreased from 3.41 to 3.39 (-0.02), and the control group average decreased from 3.60 to 3.48 (-0.11).

Item 18: Students in the intervention group reported no change in their access to fruits to eat at home (1.70), while students in the control group reported a slight decrease from 1.74 to 1.69 (-0.05).

Item 19: Students in both the intervention and control groups reported a decrease in their access to vegetables to eat at home from 1.69 to 1.68 (-0.01) and 1.88 to 1.80 (-0.08), respectively.

Perceived Parental Consumption

Student perception of parental consumption of fruits and vegetables at home decreased slightly for the intervention group from 4.18 to 4.15 (-0.02), but increased for the control group from 4.54 to 4.71 (+0.17).

Item 20: Students in the intervention group reported a decrease in their perception of parental consumption of fruits from 2.05 to 1.95 (-0.11), while the control group reported an increase from 2.28 to 2.34 (+0.06).

Item 21: Students in both groups reported an increase in the frequency of parental vegetable consumption. The intervention group increased from 2.11 to 2.17 (+0.06), and the control group increased from 2.21 to 2.27 (+0.06).

Physical Activity

Both groups reported statistically significant increases in the amount of physical activity they engaged in during the prior week. For the intervention group, their pretest mean of 6.11 increased to a posttest mean of 7.18 (+1.06, p=0.001). For the control group, their pretest mean of 5.05 increased to a posttest mean of 6.46 (+1.41, p=0.014).

Item 22: Students in both groups reported statistically significant increases in the number of days they engaged in at least 60 minutes of moderate/vigorous activity in the prior week. The intervention group mean increased from 3.69 to 4.07 (+0.38, p=0.038), and the control group mean increased from 2.75 to 3.48 (+0.73, p=0.042).

Item 23: Students in both groups also reported statistically significant increases in the number of days they engaged in at least 30 minutes of outdoor play during the prior week. The intervention group mean increased from 2.43 to 3.07 (+0.65, p=0.000), and the control group mean increased from 2.22 to 3.03 (+0.81, p=0.017).

Hope Scale

Intervention group students reported a slight increase in their cumulative score from a pre-test mean of 18.53 to a post-test mean of 18.58 (+.05), while control group students reported a decrease from their cumulative pre-test mean of 19.16 to a post-test mean of 18.02 (-1.15). While intervention students reported increases on four out of six items on the Hope Scale, control group students reported decreases on all six items.

The intervention group mean decreased slightly for Q1. “I think I am doing pretty well” from 3.11 to 3.04 (-0.06), whereas the control group mean dropped significantly from 3.26 to 2.85 (-0.42, p=0.008).

The intervention group mean also decreased slightly for Q2. “I can think of many ways to get the things in life that are most important to me” from 3.10 to 3.04 (-0.06). The control group mean for the same item declined from 3.34 to 3.19 (-0.16).

For Q3. “I am doing just as well as other kids my age,” intervention group students reported an increase from 3.16 to 3.18 (+0.02), while control group students reported a statistically significant decrease from 3.38 to 3.03 (-0.35, p=0.028).

For Q4. “When I have a problem, I can come up with lots of ways to solve it,” the mean for intervention group students increased from 3.02 to 3.06 (+0.04), while the mean for control group students decreased slightly from 2.98 to 2.97 (-0.02).

For Q5. “I think the things I have done in the past will help me in the future,” the mean for intervention group students increased from 3.13 to 3.21 (+0.07), while the mean for control group students decreased from 3.09 to 3.05 (-0.05).

For Q6. “Even when others want to quit, I know that I can find ways to solve the problem,” the mean for the intervention group increased from 2.95 to 3.16 (+0.21), while the control group mean decreased from 3.15 to 2.29 (-0.23).

Results

Related to Objective 1 (increased fruit and vegetable consumption):

Both groups increased their healthy dietary behaviors as measured by differences in pretest and posttest means, but only the intervention group’s reported increase in total fruit and vegetable (no juice) consumption was statistically significant ($p<0.05$). Furthermore, the intervention group decreased significantly its consumption of less healthy foods ($p<0.01$). In contrast, the control group’s reporting of less healthy dietary behaviors increased significantly ($p<0.01$) including increased consumption of soda and soft drinks which was found to be statistically significant ($p<0.001$).

Related to Objective 2 (increased physical activity):

Both groups reported statistically significant increases in the amount of physical activity they engaged in during the prior week as measured by number of days spent on at least 60 minutes of moderate/vigorous exercise and days including at least 30 minutes of outdoor play. For the intervention group, their pretest mean of 6.11 increased to a posttest mean of 7.18 (+1.06, $p=0.001$). For the control group, their pretest mean of 5.05 increased to a posttest mean of 6.46 (+1.41, $p=0.014$).

Related to Objective 3 (increased Hope Scale scores):

The Hope Scale questions appended to the Network High School Survey included the following six items: (1) I think I am doing pretty well; (2) I can think of many ways to get the things in life that are most important to me; (3) I am doing just as well as other kids my age; (4) When I have a problem, I can come up with lots of ways to solve it; (5) I think the things I have done in the past will help me in the future; (6) Even when others want to quit, I know that I can find ways to solve the problem. The odd numbered items in the scale (1, 3, and 5) measure agency while the even numbered items (2, 4 and 6) assess pathways. “Agency” refers to one’s determination to meet goals, and “pathways” refers to one’s ability to generate the means of obtaining the goals (Snyder, et al. 1991). Responses are made using a six-point scale: (1) none of the time; (2) a little of the time; (3) some of the time; (4) a lot of the time; (5) most of the time; (6) all of the time. The Children’s Hope Scale has been tested widely with children and youth aged 8-19 including Hispanic youth (Edwards, Ong & Lopez, 2007; Snyder, et al. 1997), and presents strong research-based evidence for its validity and reliability (Steed, 2002). As a measure of self-efficacy and psychological strength, hope researchers have consistently found that low hope levels among youth are associated with poor mental health and lower academic achievement (Duncan-Andrade, 2009; Gilman, Dooley & Florell, 2006).

Related to the Hope Scale objective, intervention group students reported a slight increase in cumulative post-test mean scores although the difference was not statistically significant. Control group students, in contrast, reported decreased post-test results on all six items of the Hope Scale. Moreover, the control group reported statistically significant declines on two out of three

questions that measure agency: Q1 (-0.42, p=0.008) and Q3 (-0.35, p=0.028).

Discussion

The ACOE nutrition and physical activity program appears to be meeting its primary objectives at the intervention sites where the curriculum has been implemented. Pre- and post-survey results indicate the intervention group increased fruit and vegetable consumption, physical activity, and Hope Scale scores as compared to their peers in the control group. At both intervention sites, ACOE delivered its nutrition and physical activity program through various classes including Spanish, Health, PE and ELD, as well as internship programs such as Fresh Crew and the Profreshionals Leadership program. In 2011-12, a nutrition and physical fitness program called HealthCorp was also implemented at all three high school sites. HealthCorp's presence may have contributed to some of the positive outcomes presented in this report; however, as the program was implemented at all three sites, it served more as a constant rather than an extraneous variable that could explain the results.

Qualitative Findings

When asked about any school-wide or community changes resulting from ACOE's work at the intervention sites, one of the lead teachers stated she "definitely sees more parent participation at the high schools" as the opportunities for families to get involved has increased markedly. For example, she mentioned the four school-wide events hosted by one of the high schools this past year including a Healthival where 30 local groups were invited to celebrate health in the community. Another lead teacher talked about anecdotal information shared by student interns and how what they're learning at school is affecting their families' dietary behaviors. One student shared that when she stopped drinking soda because of what she learned in her health class, and asked her mom to stop buying it at home, her entire family stopped drinking soda. Another lead teacher recounted the story of a student who had questions about the relationship between protein intake and energy which she addressed by suggesting the family consume more healthy sources of protein. Based on conversations with the student, the lead teacher found out the student's family started adding more plant-based protein into their diet after which the family noticed an increase in their energy levels. Lead teachers also remarked that they have seen increased interest in leadership opportunities at their school sites as evidenced by more students applying for internship positions due, as one lead teacher put it, "to great word of mouth [about the program]." According to her, the program received twice as many applications for the intern spots available.

References

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Gilman, R., Dooley, J., & Florell, D. (2006). Relative levels of hope and their relationship with academic and psychological indicators among adolescents. Journal of Social & Clinical Psychology, 25(2), 166-178.

Snyder, C.R., Harris D., Anderson, J.R., Holleran, S.A., Irving L.M., Sigmon S.T. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. Journal of Personality and Social Psychology, 60, 570–585.

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b. Description of how evaluation results will be used:

2011-12 evaluation results indicate the program is meeting its objectives. Key challenges identified qualitatively through focus group and interview data collected from lead teachers at the intervention sites will be the basis for an action plan (2012-13) to increase communication among stakeholders at the sites. For example, problems organizing the wellness councils and lack of communication between program staff and cafeteria management were identified as major areas for improvement in terms of promoting healthy dietary behaviors school-wide.

7. Point of Contact

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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

Hope Scale for Children (six items)

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

No

Youth Survey Results (Intervention)

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.83	0.95	0.12	0.168
4. Milk	0.98	1.07	0.09	0.235
5. Yogurt or cheese	0.16	0.39	0.23	0.000
6. Cereal	0.47	0.44	-0.02	0.678
8. Vegetables	1.26	1.36	0.10	0.314
9. Fruit	1.25	1.51	0.26	0.016
10. Juice	1.17	1.03	-0.13	0.221
11. Water	3.28	2.95	-0.33	0.012
15. Breakfast	0.72	0.72	-0.01	0.887
Total: fruit & vegetable (no juice)	2.51	2.86	0.36	0.025
Total: fruit, vegetable, juice	3.68	3.90	0.22	0.288
Total: healthy foods (Q3-6, 8-11)	9.40	9.71	0.31	0.316
Less Healthy Dietary Behaviors				
7. French fries or chips	0.68	0.62	-0.06	0.444
12. Punch, sports drinks, fruit-flavored drinks	0.76	0.53	-0.23	0.003
13. Soda or soft drinks	0.53	0.49	-0.04	0.554
14. Cookies, cakes, other sweets	0.73	0.65	-0.08	0.261
Total: less healthy foods (Q7, 12-14)	2.69	2.28	-0.41	0.007
Trying New Foods	2.38	2.54	0.15	0.100
16. Trying new fruits	1.38	1.47	0.09	0.104
17. Trying new vegetables	1.00	1.07	0.07	0.175
Home Access	3.41	3.39	-0.02	0.754
18. Fruits to eat at home	1.70	1.70	0.00	1.000
19. Vegetables to eat at home	1.69	1.68	-0.01	0.862
Perceived Parental Consumption	4.18	4.15	-0.02	0.821
20. How often parents eat fruit	2.05	1.95	-0.11	0.123
21. How often parents eat vegetables	2.11	2.17	0.06	0.415
Physical Activity	6.11	7.18	1.06	0.001
22. Days of 60 minutes moderate/vigorous	3.69	4.07	0.38	0.038
23. Days of 30 minutes outdoor play	2.43	3.07	0.65	0.000

Nutrition Education Site

Spanish class	19
Health class	88
Physical Education class	35
English Language Development	0
HealthCorps	0
Beginning internship (Fresh Crew)	6

Demographics

Average Age	15.3
Gender	
Males	77
Females	86

Results – Hope Scale

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Total Score	18.53	18.58	0.05	0.902
Q1	3.11	3.04	-0.06	0.557
Q2	3.10	3.04	-0.06	0.588
Q3	3.16	3.18	0.02	0.844
Q4	3.02	3.06	0.04	0.762
Q5	3.13	3.21	0.07	0.566
Q6	2.95	3.16	0.21	0.066

Youth Survey Results (Control)

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.89	0.85	-0.05	0.725
4. Milk	1.13	1.26	0.13	0.289
5. Yogurt or cheese	0.21	0.28	0.07	0.460
6. Cereal	0.46	0.61	0.16	0.212
8. Vegetables	1.16	1.36	0.19	0.321
9. Fruit	1.27	1.55	0.28	0.173
10. Juice	0.99	1.28	0.29	0.179
11. Water	2.97	2.93	-0.04	0.845
15. Breakfast	0.62	0.69	0.07	0.301
Total: fruit & vegetable (no juice)	2.47	2.94	0.47	0.161
Total: fruit, vegetable, juice	3.48	4.23	0.74	0.083
Total: healthy foods (Q3-6, 8-11)	8.98	9.94	0.95	0.122
Less Healthy Dietary Behaviors				
7. French fries or chips	0.73	0.90	0.16	0.174
12. Punch, sports drinks, fruit-flavored drinks	0.64	0.78	0.13	0.282
13. Soda or soft drinks	0.46	1.24	0.78	0.000
14. Cookies, cakes, other sweets	0.77	0.76	-0.02	0.915
Total: less healthy foods (Q7, 12-14)	2.70	3.70	1.00	0.003
Trying New Foods	2.36	2.46	0.10	0.396
16. Trying new fruits	1.42	1.48	0.06	0.418
17. Trying new vegetables	0.94	0.99	0.04	0.568
Home Access	3.60	3.48	-0.11	0.266
18. Fruits to eat at home	1.74	1.69	-0.05	0.370
19. Vegetables to eat at home	1.88	1.80	-0.08	0.228
Perceived Parental Consumption	4.54	4.71	0.17	0.322
20. How often parents eat fruit	2.28	2.34	0.06	0.569
21. How often parents eat vegetables	2.21	2.27	0.06	0.569
Physical Activity	5.05	6.46	1.41	0.014
22. Days of 60 minutes moderate/vigorous	2.75	3.48	0.73	0.042
23. Days of 30 minutes outdoor play	2.22	3.03	0.81	0.017

Nutrition Education Site

Spanish class	2
Health class	44
Physical Education class	9
English Language Development	0
HealthCorps	7
Beginning internship (Fresh Crew)	0

Demographics

Average Age	14.7
Gender	
Males	18
Females	50

Results – Hope Scale

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Total Score	19.16	18.02	-1.15	0.106
Q1	3.26	2.85	-0.42	0.008
Q2	3.34	3.19	-0.16	0.406
Q3	3.38	3.03	-0.35	0.028
Q4	2.98	2.97	-0.02	0.940
Q5	3.09	3.05	-0.05	0.809
Q6	3.15	2.92	-0.23	0.137

FFY12 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Alhambra USD - 10-10074
Contract number:	10-10074
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Section 1

1. Project Description and Goals

Project Name:	Alhambra Unified School District Healthy Parents Healthy Community
Target Population:	18-63
Primary Curriculum Used:	Healthy Parents Healthy Communities (contractor developed)
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

This nutrition education series was designed to provide skills-based learning with nutrition information and cooking for Asian parents of the children we serve in our school district. Alhambra adapted "Healthy Parents Healthy Communities" parent nutrition series to be more culturally appropriate for the Asian community. The parent nutrition series included five lessons per intervention site, each lesson 60 minutes in length. The format for each lesson incorporated an education component (15-20 minutes), hands on activity (10-15 minutes), physical activity (5-10 minutes) and recipe preparation (25-30 minutes). Session 1 "What's On Your Plate" provided education on MyPlate. The hands on activity incorporated MyPlate, and meal planning. A recipe demonstration was provided on preparing an Stir Fry Lettuce Wrap. Session 2 "What's In Your Cup" provided education on sugar-sweetened beverages and food labels. The hands on activity incorporated label reading. Parents participated in recipe preparation of Fruit Flavor Water and Banana Berry Smoothie. Session 3 "What's In Your Shopping Cart" provided education on healthy shopping. The hands activity incorporated a mock super market with a supermarket scavenger hunt and food label comparisons. Parents prepared a Zesty Asian Chicken Salad. Session 4 "What's For Breakfast" provided education on Breakfast and calcium rich foods. The hands on activity incorporated building a healthy breakfast. Parents prepared a Tofu Veggie Scramble Wrap. Session 5 "What's On Your Menu" provided education on lean proteins and fats. The hands on activity incorporated "May I Take Your Order" and parents learned to order healthy food options when eating out. Parents prepared a Stir Fry Fish with Sweet Pea served with brown rice.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Each session included 5-10 minutes of physical activity utilizing resources which included Power Play! Power Cards, Power Up in 10 and/or Shape of Yoga. Physical activity was introduced at the start of each session.

In 1-2 paragraphs, please provide a description of standardized training:

Alhambra, in collaboration with other school districts (Monrovia, El Monte, Rosemead, ABC and LA Trade Tech) revised "Healthy Parents Healthy Community" five parent nutrition education lessons; incorporating principles from MyPlate. Educators from each of these districts used a "best practices" approach to determine the techniques to effectively deliver the content information. Lessons were modeled by each educator to provide a standardized approach in delivering the lessons.

In 1-2 paragraphs, please provide a description of standard administration of data

Data was collected using pre and post assessment surveys (Food and Behavior Checklist) administered by the educators. In addition, data was collected using pre-post-follow up assessment "additional questions" surveys utilizing the Fruit and Vegetable Inventory, and questions regarding calcium rich foods intake and ordering vegetables when at a restaurant.

Educators/translators read each question aloud to the participants and provided clarification wherever needed for the pre and

post assessment survey (Food and Behavior Checklist) and pre and post additional questions. The follow-up survey additional questions were mailed to the parent's home address with a self-addressed envelope for returning completed surveys.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Standardized lesson formats approved by the Network for a Healthy California were used. In an effort to be consistent, the same educator(s) at each site provided the 5 lessons and administered collection of data. Lessons were modeled by each educator to provide a standardized approach in delivering the lessons.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 75 adults who participated in Alhambra Unified School District Healthy Parents Healthy Community will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Schools

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	76
How many sites?	4
How many classrooms?	0

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Food Behavior Checklist (cups)
Goal 2/Objective 2	

Were any other measures used?	Fruit and Vegetable Inventory (self efficacy questions to measure fruit and vegetable consumption) in addition to questions regarding calcium rich foods intake and ordering vegetables when eating out.

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	5

	Intervention			Control
Pre-test:	2/15/2012	to	6/2/2012	to
Start of Intervention Date	2/15/2012			NA
End of Intervention Date	6/30/2012			NA
Post-test:	3/14/2012	to	6/30/2012	to
Follow-up:	4/18/2012	to	7/23/2012	to

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	

d. How were the surveys administered?

...some other method (please specify)

Specify Other: pre-post surveys read aloud, followup survey mailed to parents home

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

The Healthy Parents Healthy Communities parent nutrition series was provided for 104 parents. A total of 76 matched pre-post surveys for parents completing the 5 week series. Surveys used to measure behavior change included The Fruit and Vegetable (cups) Behavior Checklist and selected questions from the Fruit and Vegetable Inventory to assess fruit and vegetable consumption and self efficacy to purchase and plan meals with them. Additional questions were also included to assess intake of calcium rich foods and ordering vegetables when eating out. For the 76 parent participants, there was a statistically significant increase in overall fruit and vegetable consumption from 3.74 to 4.45 ($p<0.000$), which encompassed the following; eating fruits and vegetables as snacks from 2.64 to 2.93 ($p<0.007$), consumed citrus fruit or juice from 0.61 to 0.78 ($p<0.011$), fruit eaten per day from 1.07 to 1.47 ($p<0.000$), vegetables eaten per day from 1.48 to 1.72 ($p<0.003$), ate different kinds of fruit daily from 2.59 to 2.80 ($p<0.059$), ate different kinds of vegetables daily from 2.76 to 3.09 ($p<0.000$), ate 2 or more vegetables at their main meal from 2.75 to 2.93 ($p<0.026$).

In addition, there was statistically significant increases in participants' self efficacy for the following: eating fruits and vegetables as snacks ($p<0.000$), buying more vegetables ($p<0.001$), planning meals or snacks with more fruit ($p<0.001$), planning meals with more vegetables ($p<0.001$), eating calcium rich foods ($p<0.000$), and ordering vegetables when eating out ($p<0.002$). Beverage consumption decreased with sports drink /punch from 1.68 to 1.64 ($p<0.650$) and regular soda from 1.51 to 1.43 ($p<0.159$), with an increase in milk consumption from 2.28 to 2.55 ($p<0.001$). Lean protein consumption was evidenced by participants consuming more fish 0.91 to 0.92 ($p<0.741$) and removing the skin from chicken from 2.74 to 3.09 ($p<0.010$). Participants significantly increased the frequency of reading nutrition facts labels when shopping from 2.39 to 3.04 ($p<0.026$). Overall, self rating of eating habits increased from 5.57 to 6.32 ($p<0.000$).

Followup surveys were mailed to parents 4 weeks after the completion of the interventions. The follow up survey was the same as the pre/post additional question survey. The follow up results continued to show a significant difference in all these areas with the exception of eating fruits and vegetables as snacks. There was a continued increase in fruit and vegetable consumption with meals and when ordering out; as well as eating calcium rich foods. The results are as follows: (pre-test, post-test, follow up, respectively) eat fruits/vegetables as snacks: 1.71, 1.96, 1.86, buy more vegetables:1.74, 1.93, 1.98, plan meals or snacks with more fruit: 1.75, 1.95, 1.95, plan meals with more vegetables: 1.80, 1.97, 2.00, eat calcium rich foods: 1.13.1.67, 1.81, order vegetable dish at a restaurant: 1.47, 1.75, 1.83.

Last year's Healthy Valley Healthy Communities IOE provided the nutrition education series but for a wide population of English, Spanish and Chinese speaking parents. Taking the data from last year's IOE and isolating just the data for the 14 chinese parent participants in measuring their self efficacy; there was an increase in their consumption of eating fruits/vegetables as snacks from 1.86 to 1.95 ($p<0.162$), no change in buy more vegetables when shopping, increase in planning meals/snacks with fruits from 1.90 to 2.00 ($p<0.162$) and an increase in planning meals/snacks with fruits from 1.90 to 1.95 ($p<0.576$). Comparing last year's self efficacy data to this year's self efficacy data, increase consumption of eating fruits/vegetables as snacks from 1.71 to 1.96 ($p<0.000$), increaase in buying more vegetables from 1.74 to 1.93 ($p<0.001$), increase in planning meals with fruits from 1.75 to 1.95 ($p<0.001$) and increase in planning meals with more vegetables from 1.80 to 1.97 ($p<0.001$). There was a more statistically significant increase in self efficacy for all areas in this year's Healthy Parents Healthy Communities as compared to last year's data. I would contribute the difference to the adaptation of the nutrition education to be more culturally appropriate for the Asian community, incorporating foods and recipe preparation that are familar to their culture; as well as realias used in the hands on activities.

At the conclusion of our nutrition series, we asked parents to volunteer if they would consider being

interviewed after the completion of the interventions. I was curious to note any behavior changes that resulted from attending the series.

Parent Biyan shares, "I don't drink much milk. I try to buy more soy milk and eat more the Chinese green vegetables and tofu. My husband eats a lot of meat at dinner. I cook with more vegetables and less meat. When we go to the restaurant, we only order one dish with vegetables. Now we order 2 dishes with vegetables."

Parent Osker shared, "Before when I go to the market, I just grab the food. Now I look at the nutrition facts label. I look at the sodium and fat content so I can choose a healthier one for me and my family."

On a broader level, I have seen healthier items being brought in from home for classroom parties. There are more fruits/salads being provided by students and parents at school functions. In addition, the efforts of our Nutrition Advisory Councils' "Rethink Your Drink' campaign has made an impact with less sugar sweetened beverages being brought to school by students.

As a result of the collaborative work of the Healthy Valley Collaborative's "Healthy Parents Healthy Communities" nutrition education series, we were able to provide a workshop at a LA Regional Network meeting and share our toolkit of resources for 20 participants.

b. Description of how evaluation results will be used:

Data from parents attending the Healthy Parents Healthy Community parent nutrition education series demonstrated a statistically significant increase in fruit and vegetable consumption, increased self efficacy in preparing and incorporating fruits/vegetables with their snacks and meals. At the end of the interventions, parent participant increased their self rating of eating habits which may be contributed to their increase knowledge, behavior changes and increase cooking skill from recipes prepared. The additional activity of hands on activities and recipe preparation was an integral component for parent engagement and skill building. This may support the data which clearly shows a larger increase in self efficacy measurement for this year as compared to last year's data.

Evaluation results will be shared to support the validity of our survey instrument and nutrition education series. Lessons learned were supported by the positive interaction and parent participation this year with adaptation of the series for the Asian population. Parents shared they would replicate the recipes at home for their families.

As a result of the collaborative work of the Healthy Valley Collaborative LIAs, we were able to share these lesson strategies with other Network LIAs at a Los Angeles Regional Collaborative workshop, and provided a Healthy Parent Healthy Communities toolkit for 20 participants.

7. Point of Contact

Name:	Judy Huffaker
Phone Number:	626.308.2212
Email Address:	huffaker_judy@ausd.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.	Alhambra USD Healthy Parents Healthy Community Poster, Society for Nutrition Education and Behavior PreConference, July 14, 2012

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

0

c

X	Food Behavior Checklist
	Fruit and Vegetable Checklist
X	Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

Garnweidner MSc, Lisa Maria, Terrangni PhD, Laura, Sverre Pettersen PhD, Kjell, Mosdol PhD, Annhild. Perceptions of the Host Country's Food Culture among Female Immigrants from Africa and Asia: Aspects Relevant for Cultural Sensitivity in Nutrition Communication. Journal for Nutrition Education and Behavior, 2012; 44:335-342.

Results

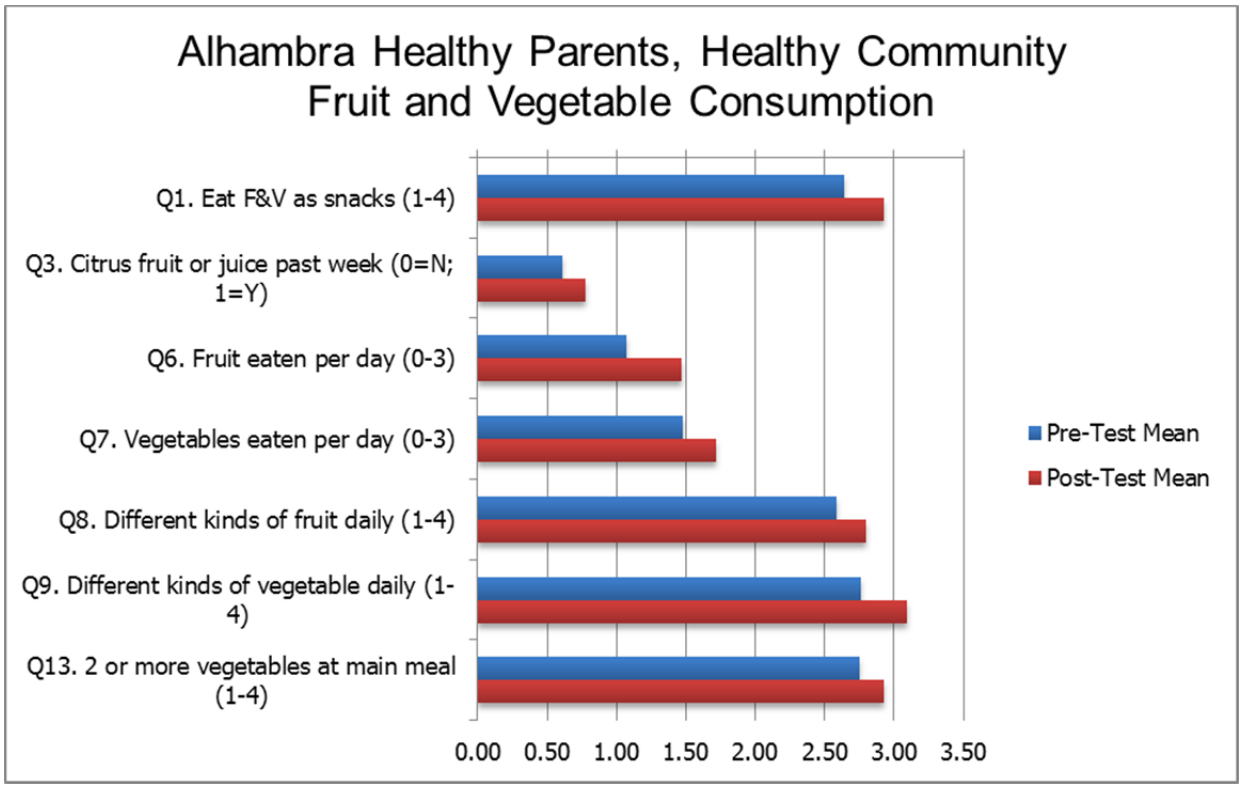
Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.64	2.93	0.29	0.007
Q2. Drink sports drinks or punch (1-4)	1.68	1.64	-0.04	0.650
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.61	0.78	0.17	0.011
Q4. Drink regular soda (1-4)	1.51	1.43	-0.08	0.159
Q5. Consumed milk in past week (0=N; 1=Y)	0.61	0.83	0.22	0.000
Q6. Fruit eaten per day (0-3)	1.07	1.47	0.39	0.000
Q7. Vegetables eaten per day (0-3)	1.48	1.72	0.24	0.003
Q8. Different kinds of fruit daily (1-4)	2.59	2.8	0.21	0.059
Q9. Different kinds of vegetable daily (1-4)	2.76	3.09	0.33	0.000
Q10. Drink milk (1-4)	2.28	2.55	0.28	0.001
Q11. Take skin off chicken (1-4)	2.74	3.09	0.36	0.01
Q12. Consumed fish in past week (0=N; 1=Y)	0.91	0.92	0.01	0.741
Q13. 2 or more vegetables at main meal (1-4)	2.75	2.93	0.18	0.026
Q14. Read nutrition facts when shopping (1-4)	2.39	3.04	0.65	0.000
Q15. Run out of food before month end (1-4)	1.63	1.89	0.26	0.019
Q16. Self-rating of eating habits (1-10)	5.57	6.32	0.76	0.000

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.48	1.86	0.38	0.000
Veggies (Q 7, 9,13) (Range 0-3)	1.67	1.91	0.24	0.000
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.74	4.45	0.71	0.000

Demographics			
Hispanic			
yes	0	**Average Age**	51.9
no	76	**Gender**	
Race		Males	17
American Indian or Alaskan Native	0	Females	59
Asian	76		
Black or African American	0		
Native Hawaiian or Other Pacific Islander	0		
White	0		

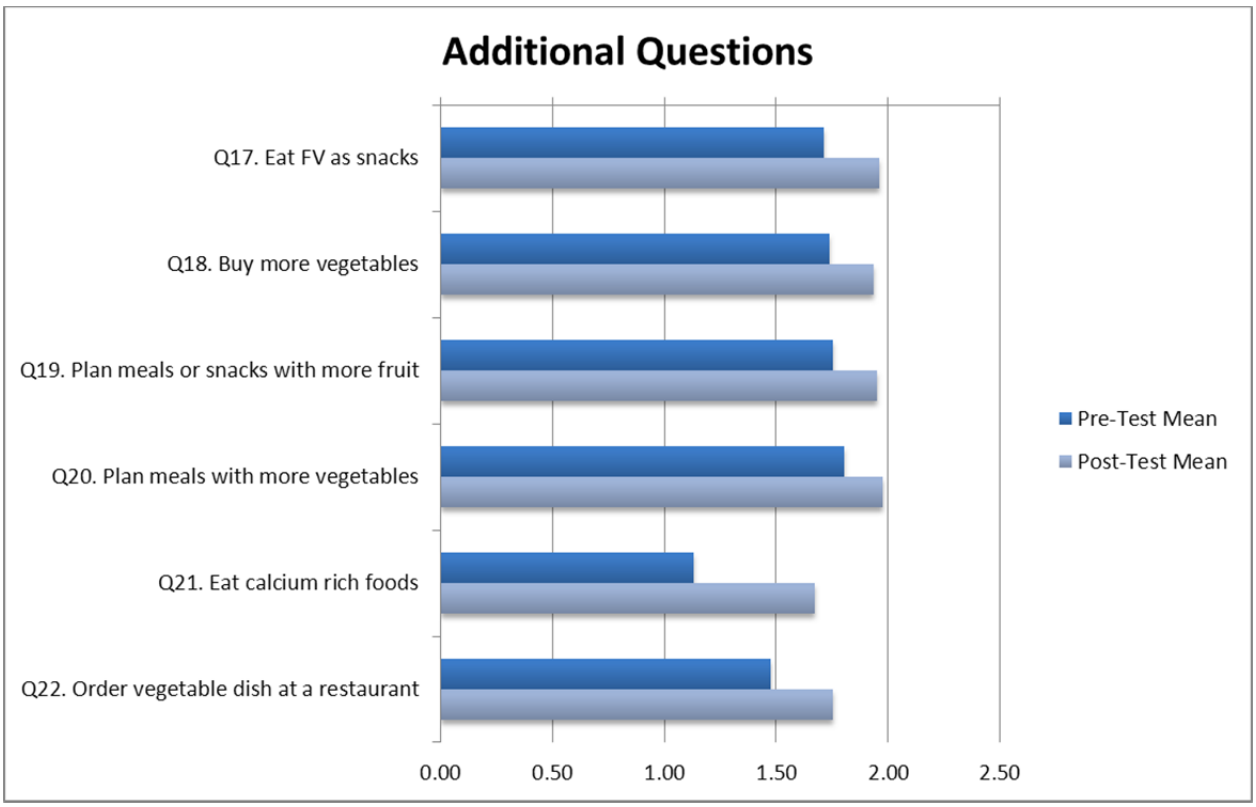
Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.64	2.93	0.29	0.007
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.61	0.78	0.17	0.011
Q6. Fruit eaten per day (0-3)	1.07	1.47	0.39	0.000
Q7. Vegetables eaten per day (0-3)	1.48	1.72	0.24	0.003
Q8. Different kinds of fruit daily (1-4)	2.59	2.8	0.21	0.059
Q9. Different kinds of vegetable daily (1-4)	2.76	3.09	0.33	0.000
Q13. 2 or more vegetables at main meal (1-4)	2.75	2.93	0.18	0.026



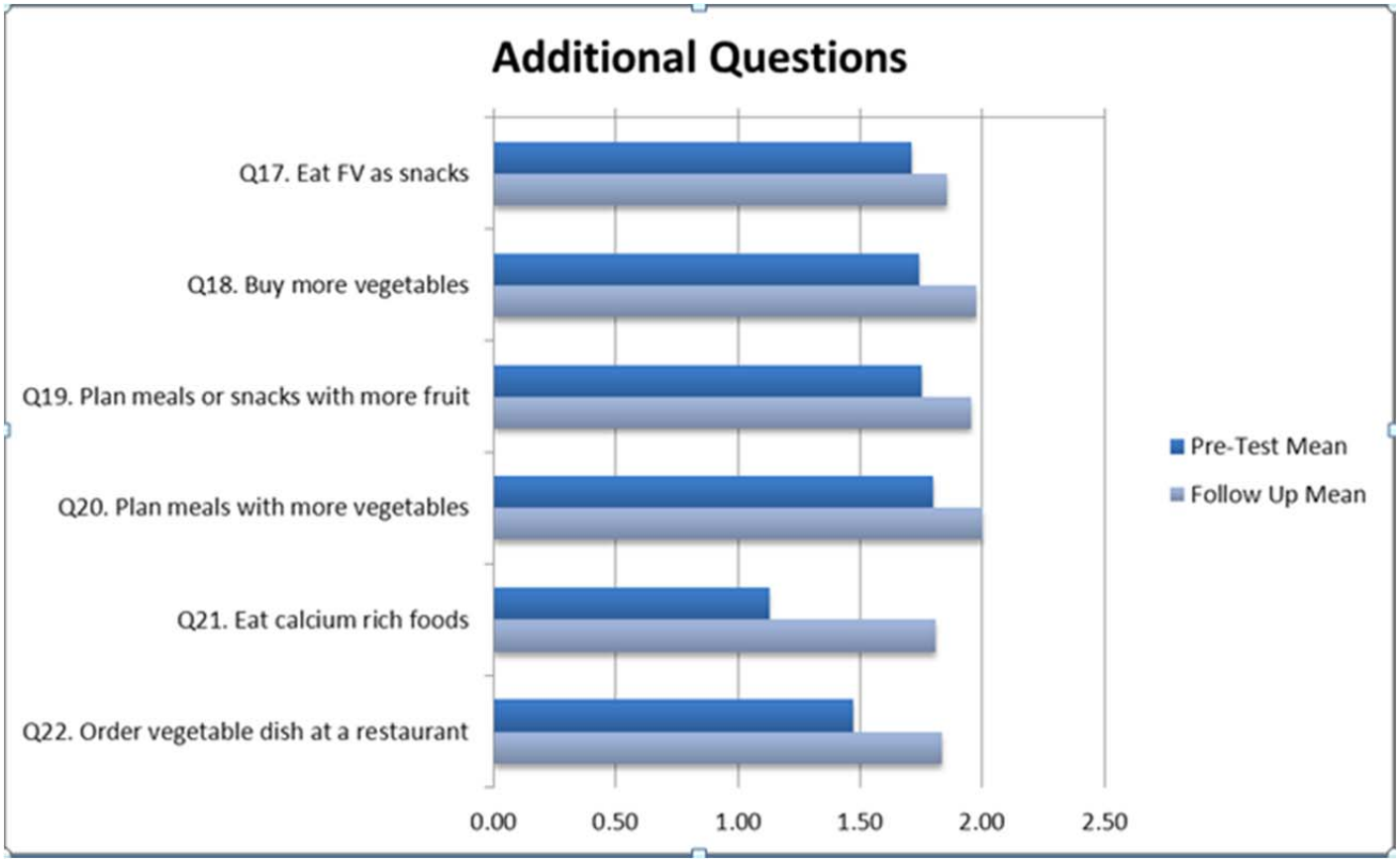
Alhambra Unified School District Healthy Parents Healthy Community IOE 2012
Results: Additional Parent Ed Questions

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Self-Efficacy Questions				
Q17. Eat FV as snacks	1.71	1.96	0.25	0.000
Q18. Buy more vegetables	1.74	1.93	0.2	0.001
Q19. Plan meals or snacks with more fruit	1.75	1.95	0.2	0.001
Q20. Plan meals with more vegetables	1.8	1.97	0.17	0.001
Q21. Eat calcium rich foods	1.13	1.67	0.54	0.000
Q22. Order vegetable dish at a restaurant	1.47	1.75	0.28	0.002



Alhambra Unified School District Healthy Parents Healthy Community IOE 2012
Results: Additional Follow up Parent Ed Questions

	Pre-Test Mean	Follow Up Mean	Difference	P-Value
Self-Efficacy Questions				
Q17. Eat FV as snacks	1.71	1.86	0.15	0.031
Q18. Buy more vegetables	1.74	1.98	0.24	0.010
Q19. Plan meals or snacks with more fruit	1.75	1.95	0.2	0.010
Q20. Plan meals with more vegetables	1.8	2	0.2	0.005
Q21. Eat calcium rich foods	1.13	1.81	0.68	0.000
Q22. Order vegetable dish at a restaurant	1.47	1.83	0.36	0.009



Network-funded contractor:	Alisal Union School District - 09-11210
Contract number:	09-11210
Information provided by :	Petra Martinez-Diaz
Telephone:	831-753-5770 ext. 3281
Date:	6/15/2012
Email:	petra.martinez@alisal.org

Section 1

1. Project Description and Goals

Project Name:	Garden Based Nutrition Education
Target Population:	4th grade
Primary Curriculum Used:	Nutrition to Grow On
Secondary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Our intervention involved a complete nutrition education program with the addition of garden based nutrition education to 200, 4th grade students. They had the opportunity to plant, harvest and enjoy fruits or vegetables from their school gardens. We followed the garden-based nutrition education lessons in Nutrition to Grow On. Students received a minimum of 7 Garden based nutrition lesson.

Some of the topics that were covered are plant parts, plant care and identification, nutrients, harvesting, farm to school and growing healthy snacks.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

All intervention students participated in a monthly physical activity based nutrition class. The activities were taken from Network approved physical activity curriculum such as Harvest of the Month, CATCH or SPARK,

In 1-2 paragraphs, please provide a description of standardized training:

Training on the intervention and the instrument used for measurements was done at staff meetings where all staff received the same information. Teachers were given a list of themes, and the Nutrition to Grow On curriculum. Also, all teachers were given physical activity lesson training.

For the Pre and Post evaluations, we went through the testing instrument and decided on the best presentation. All evaluations were presented in the same manner.

In 1-2 paragraphs, please provide a description of standard administration of data

The evaluations were conducted by Network Nutrition educators. All were given a window of time for administration, but all pre-evaluations were completed before the start of intervention classes. All post-evaluations were completed in the last week of nutrition class.

Nutrition education lessons take about 30 minutes but for the evaluation we allowed more time, so we were sure that all students understood each question.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Our intervention was very similar across all classrooms because our nutrition educators planned together and used the same lesson plans. All students received the same themes and in the same order.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 200, 4th grade students who participated in Garden Based Nutrition Education will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

By Sept 30, 2012, a sample of 200, 4th grade students who participated in Garden Based Nutrition Education will report an increase in physical activity.

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

By Sept 30, 2012, a sample of grade students who participated in Garden Based Nutrition Education will report

IOE Objective 3 (Other) Optional:

By Sept 30, 2012, a sample of grade students who participated in Garden Based Nutrition Education will report

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Random Sample

How many matched surveys?	247
How many sites?	8
How many classrooms?	10

b. Control:

How many matched surveys?	0
How many sites?	0

How many classrooms? 0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	Network Youth Survey

Were any other measures used? None

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention	Control
Pre-test:	8/30/2011 to 9/9/2011	NA
Start of Intervention Date	9/12/2011	NA
End of Intervention Date	5/15/2012	NA
Post-test:	5/15/2012 to 6/1/2012	NA
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Our results show increases in healthy behaviors. The two significant areas are the decrease in juice consumption and increase in breakfast consumption. There were also less significant increases in the amounts of consumption of fruits and vegetables.

Less healthy behaviors decreased across the areas that were evaluated. The most significant was the decrease in consumption of sweets, such as cakes and cookies.

The results also show an increase in the availability of fruits and vegetables in the home and an increase in the perceived amount of fruits and vegetables that parents are consuming.

In the area of physical activity, students showed a very healthy increase in minutes of activity.

We are pleased with the results but we expected more of an increase in fruit and vegetable consumption. Students might have been affected during the pre-test by trying to get an "A" on their test and responding answers they thought would please the teacher. Also the pre-test was given in two classrooms on a Monday. This makes it difficult for students to remember what they ate.

We have seen evidence that our program is making a difference in our students. They tell us that they are eating fruits and vegetables that they haven't eaten before. Parents are also telling us that they children are requesting that they buy fruits and vegetable they have tried as part of their HOTM taste testing classes.

One example of changes in our students that stands out is a classroom that nutrition education scheduled for Friday afternoons. One week the classroom teacher told them that they had earned a reward party and that it would have to be scheduled during nutrition education time. Students all voted unanimously to cancel the party and to have their regular nutrition education lesson instead. They said they would rather learn about nutrition than eat unhealthy food during a party.

Another noteworthy success was seen during a cooking demonstration for parents. There were several parents new to the cooking demonstration classes and while parents were learning about our Network program, one of the parents that had already been attending classes shared that she started going to classes because her children always talk about the program. She started following the Network information on MyPyramid/MyPlate and doing some physical activity daily and she lost over 30 pounds. She said she was eating more than before, but that she was focusing on eating more fruits and vegetables, no sugary drinks and less food with no nutritional value. Another parent claimed that she was experiencing the same situation and was also losing weight. Both parents highly recommended the Network cookbooks and our cooking demonstrations.

b. Description of how evaluation results will be used:

We will try to time our interventions more closely so that all classrooms in the intervention begin on the same day. We tried to do this year but each school is a little different and beginning and ending

at the same dates was difficult.

Also, we will expose students to new fruits and vegetables and we always ask if they liked the item. We might also help them make the connection that they like trying new fruits and vegetables. Since we use the Harvest of the Month, most items are not new. This year we tried to use more varieties such as long stemmed strawberries or blood oranges instead of the usual. Students reported no increase in their inclination to try new fruits and vegetables, but all students tried new variety of HOTM items. The question might have different results if students are asked if they have tried new fruits or vegetables.

7. Point of Contact

Name:	Petra Martinez-Diaz
Phone Number:	831-753-5770 ext. 3281
Email Address:	petra.martinez@alisal.org

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.77	0.86	0.09	0.335
4. Milk	1.37	1.45	0.07	0.312
5. Yogurt or cheese	0.54	0.54	0.00	1.000
6. Cereal	0.85	0.84	-0.02	0.805
8. Vegetables	1.66	1.76	0.09	0.481
9. Fruit	1.92	1.94	0.02	0.864
10. Juice	1.68	1.19	-0.49	0.041
11. Water	2.92	2.94	0.02	0.868
15. Breakfast	0.80	0.88	0.08	0.010
Total: fruit & vegetable (no juice)	3.59	3.70	0.12	0.567
Total: fruit, vegetable, juice	5.26	4.90	-0.36	0.308
Total: healthy foods (Q3-6, 8-11)	11.73	11.49	-0.24	0.632
Less Healthy Dietary Behaviors				
7. French fries or chips	0.81	0.74	-0.07	0.338
12. Punch, sports drinks, fruit-flavored drinks	0.87	0.74	-0.13	0.073
13. Soda or soft drinks	0.56	0.51	-0.05	0.433
14. Cookies, cakes, other sweets	0.98	0.74	-0.24	0.001
Total: less healthy foods (Q7, 12-14)	3.22	2.70	-0.52	0.006
Trying New Foods	2.48	2.34	-0.14	0.112
16. Trying new fruits	1.28	1.26	-0.02	0.798
17. Trying new vegetables	1.19	1.09	-0.11	0.069
Home Access	3.28	3.51	0.23	0.002
18. Fruits to eat at home	1.67	1.79	0.12	0.011
19. Vegetables to eat at home	1.58	1.70	0.11	0.017
Perceived Parental Consumption	4.40	4.75	0.34	0.009
20. How often parents eat fruit	2.20	2.30	0.10	0.178
21. How often parents eat vegetables	2.13	2.33	0.19	0.011
Physical Activity	6.28	8.91	2.63	0.000
22. Days of 60 minutes moderate/vigorous	3.22	4.44	1.22	0.000
23. Days of 30 minutes outdoor play	3.06	4.45	1.40	0.000

Demographics

Average Age	8.9
Gender	
Males	127
Females	120

Network-funded contractor:	Berkeley USD - 09-11211
Contract number:	09-11211
Information provided by :	Marie Joiner, Leah Sokolofski, & Mia Villanueva
Telephone:	510-644-6710
Date:	7/31/2012
Email:	leahsokolofski@berkeley.net

Section 1

1. Project Description and Goals

Project Name:	BUSD Family Nutrition Program
Target Population:	18-59
Primary Curriculum Used:	contractor-developed, PM approved lessons
Secondary Curriculum Used:	0.E+00

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The BUSD Family Nutrition Program consists of a free series of five classes that are offered to parents/families of students enrolled at Network funded school sites. The nutrition education curriculum for the class, approved by Program Manager Susan Mattingly, contains five lessons, which utilize hands-on cooking activities to convey key nutrition education concepts. The lesson topics include: Salads – focusing on fruits and vegetables, Soups – focusing on cooking low sodium foods, Whole Grains – focusing on cooking and eating whole grains, Healthy Snacks – focusing on low sugar snacks, and Cooking with Kids – focusing on healthy cooking and eating for the whole family. Classes include Spanish-language interpretation.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

N/A

In 1-2 paragraphs, please provide a description of standardized training:

N/A: One instructor leads all of the intervention.

In 1-2 paragraphs, please provide a description of standard administration of data

Non-teaching staff leads survey collection, with a pre-test at the beginning of the first class and a post-test at the end of the last class. A follow-up survey was sent by mail 3 weeks after the last class, with an instructional letter asking for the survey to be returned within 2 weeks in a pre-stamped, pre-paid letter.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All series of classes were taught the same curriculum by the same instructor. All classes were held in the same classroom at Willard Middle School, centrally located with easy access to public transportation and ample parking. All classes were held on the same day of the week for 5 weeks (Tuesday series, Wednesday series, or Friday series).

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of Adults who participated in BUSD Family Nutrition Program will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used?	Other (Specify in next field)	Specify Other: Pre-Test, Post-Test, and Follow-up after Post-Test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	individual	

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample	
How many matched surveys?	57	
How many sites?	9	
How many classrooms?	10	
b. Control:		
How many matched surveys?	0	
How many sites?	0	
How many classrooms?	0	

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Food Behavior Checklist (cups)	
Goal 2/Objective 2	0	

Were any other measures used?	We used five additional survey questions to evaluate the intervention: four knowledge questions and one behavior question. The four knowledge questions are directly related to the curricular content of the classes (fruit and vegetable consumption, sodium intake, whole grains, and healthy beverage choices). The behavior question addresses cooking together as a family.

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	5

	Intervention			Control		
Pre-test:	10/4/2011	to	4/18/2012	1/0/1900	to	1/0/1900
Start of Intervention Date	10/4/2011			NA		
End of Intervention Date	5/16/2012			NA		
Post-test:	10/25/2011	to	5/16/2012	1/0/1900	to	1/0/1900
Follow-up:	11/22/2011	to	6/6/2012	1/0/1900	to	1/0/1900

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Food Behavior Checklist (FBC): Key Findings from Pre- to Post-Intervention Surveys

Analysis of the Food Behavior Checklist results shows multiple behaviors with significant increase from pre-intervention to post-intervention surveying.

Results pertaining to our goal of increasing fruit and vegetable consumption among participants showed statistical significance. In particular, participants reported an average increase in vegetable consumption of .2 cups per day and in fruit consumption of .32 cups per day [see questions 6 & 7 of FBC PrePost Results tab]. Other questions pertaining to fruit and vegetable consumption also showed a statistically significant increase, including Q1 - consumption of fruit and vegetables as snacks, Q8 - variety of fruits consumed daily, and Q13 - number of vegetables eaten at main meal. The cumulative P-values were significant in the group of questions pertaining to vegetable consumption and the group pertaining to fruit/vegetable consumption. They were not significant for the group pertaining to fruit, due in part to the negligible difference in Q3 - citrus consumption [see collective results for Fruits (Q3, 7, 8); Veggies (Q6, 9, 13), and Fruit and Veggies (Q1, 3, 6-9, 13) in FBC PrePost Results tab]. The only questions related to fruit and vegetable consumption without significant increase were Q3, as mentioned above, and Q9 - variety of vegetables consumed daily. Q9 did show a slight, though not significant, increase.

Besides fruit and vegetable consumption, five questions show significant change. There was a significant increase in Q14 - reading Nutrition Facts label when shopping and Q11 - taking skin off chicken. Additionally, there was a significant increase in Q16 - self rating of eating habits, with an average increase of 1 point on a 10-point scale. There was a significant decrease in Q2 - drinking fruit drinks, sports drink or punch (although no significant decrease in Q4 - drinking regular soda), and Q15 - food security. Food security was not a lesson topic, and anecdotal evidence indicates the possibility that participants misinterpreted the question as a measure of how often they purchased fresh food. The statistical increase may reflect an increased understanding of the question with subsequent administration rather than an actual change in behavior.

Similar to previous years, some survey questions that addressed topics not covered in the classes did not show statistically significant changes. The parent/family nutrition lessons did not focus on milk consumption (Q5 and Q10) or fish consumption (Q12).

Food Behavior Checklist (FBC): Key Findings from Follow Up Surveys

As a follow up measure, participants completed the FBC survey again approximately one month after the completion of the intervention and post-intervention survey. The following key findings discuss both pre-intervention and follow-up survey comparisons, as well as post-intervention and follow-up survey comparisons. The return rate of 60% should be considered when reviewing the results. When comparing pre-intervention survey to follow-up survey results, although fewer questions had a significant increase, many questions related to fruit and vegetable consumption (Q6, 7, 8, 9) maintained their significant growth, as well as the fruit and vegetable questions collectively [see results for Fruits (Q3, 7, 8); Veggies (Q6, 9, 13), and Fruit and Veggies (Q1, 3, 6-9, 13) in FBC PreMail Results tab]. Additionally, Q16 - self-rating of eating habits, continues to show a significant increase, as well as Q14 - reading Nutrition Facts label when shopping.

When comparing post-intervention survey to follow up survey results, there is no significant change. However, this should not be interpreted to mean that the participants maintained their growth. The t-test cannot be used to measure whether two data sets are significantly the same, it can only measure whether two data sets are significantly different. In the future, a different tool is recommended to measure maintenance of results.

Additional Knowledge Questions: Key Findings from Pre- to Post-Intervention Surveys

We added five additional questions to supplement the FBC (contractor-developed and approved). The purpose of the additional questions was to help determine the impact that the classes had on participant knowledge in specific areas of nutrition discussed in class and/or whether or not they could apply the knowledge to make healthy choices (See attached file: SurveyQuestions with Demog questions.pdf).

Similar to last year, survey results showed a statistically significant increase in participants' ability to identify whether a product contains whole grain by using a product ingredient label [see question 3 of Knowledge 1-4 PrePost Results tab].

The other three knowledge questions, which addressed recommended daily amount of fruit and vegetable consumption (Knowledge Question 1), recommended daily amount of salt (Knowledge Question 2), and identifying the healthiest juice by comparing juice product information (Knowledge Question 4), did not show statistically significant changes. As we have seen in previous years, this may have been due to the wording of the question and a lack of clarity for participants. In the future, we recommend revising or eliminating these additional questions from the survey. Question 5, which asked participants how likely they were to cook at home with their children, did not show statistical significance.

Additional Knowledge Questions: Key Findings from Follow Up Surveys

From the pre-intervention survey to the follow-up survey, there was a significant increase on question 3 - ability to identify whole grain. However, there was also a significant decrease from the post-intervention to follow-up survey. This may indicate that the increase in participants' ability to identify a whole grain product by using the product ingredient label was still present but smaller. Questions 1, 2, 4, and 5 did not show statistical significance. However, these findings are questionable, because as stated above, the t-test cannot be used to measure whether two data sets are significantly the same. Therefore, a different tool is recommended to measure maintenance of results.

Now in its fifth year, the Parent/Family Nutrition Program classes continue to receive positive feedback and recognition from families and employees district-wide. We offer classes year round, promote and publicize the classes in our annual newsletter, and utilize multiple methods of outreach (including school newsletters, take-home flyers, and attending more school events). This year, our district's Office of Family & Community Partnerships, which works to build school, home and community partnerships, was in the midst of reorganization. While family engagement offerings were somewhat limited district-wide, our classes not only offered a way for parents/families to link healthy eating at school and home, but also promoted parental involvement in their child's education. Overall, our presence is helping us meet our objective of increasing fruit and vegetable consumption amongst district families by giving them a hands-on experience similar to what their child receives during the school day.

b. Description of how evaluation results will be used:

The results tell us that the BUSD Parent/Family Nutrition Education classes are helping us meet our goals of increasing fruit and vegetable consumption, decreasing sugar sweetened beverage consumption, and increasing knowledge of identifying whole grain products amongst class participants. Many of these results maintained approximately one month after the series ended. However, the data also informs us that there is room for improvement in our evaluation process.

The added component this year of a follow-up mail survey could be improved. Initial mailings had low return rates until they were accompanied by a phone call. If considering follow-up measures in the future, there should be more frequent contact with participants, possibly by phone or email, to achieve a higher return rate.

There are now four years of data indicating an increase in participant fruit and vegetable consumption

after the completion of the series. It is likely that we will see similar findings in future FBC survey results in regards to behavior change. This year's follow-up mail survey was an attempt to measure a different aspect – sustainability of behavior change. For next year, we will measure behavior change with a different or improved tool or focus on qualitative evaluation to capture what participants are gaining from the series.

7. Point of Contact

Name:	Marie Joiner, Leah Sokolofski, & Mia Villanueva
Phone Number:	510-644-6710
Email Address:	leahsokolofski@berkeley.net

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c

X	Food Behavior Checklist
	Fruit and Vegetable Checklist
	Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Network-funded contractor:	California State University, Chico, Research Foundation (SCNAC)) - 10-10093
Contract number:	10-10093
Information provided by :	Cindy Wolff
Telephone:	(530) 898-5288
Date:	July 31st, 2012
Email:	cwolff@csuchico.edu

1. Project Description and Goals

Project Name:	HOTM promotes fruit and vegetable selections and consumption among low-income elementary school students
Target Population:	age range: 5- 11 or grade range: 1-6
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	MyPlate and in-class additional food tasting activities

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The majority of the nutrition education intervention was derived from the Harvest of the Month (HOTM) curriculum. The HOTM curricula included taste testings, posters with health benefits and images of the HOTM item incorporated into various recipes, educator newsletters, Farmer of the Month (FOTM) newsletters, student workbooks, HOTM themed and garden enhanced nutrition education. The HOTM produce items for the monthly tastings included: tomato, butternut squash, persimmons, potatoes, dried fruit, cabbage, peas, and asparagus. An additional six tastings in the classroom were used to support the promotion of these HOTM items.

Other nutrition education activities included MyPlate lessons including portion sizes and moderation, whole grain and fiber lessons, nutrition education display boards and activities, Re-Think Your Drink lessons and drinking water in place of sweetened beverages, and Eat your Colors Week. Students and teachers also received food-themed student work books and other education materials to promote fruit and vegetable consumption. Nutrition education was integrated into Health, Mathematics, Science, English, Physical Education, History and Social Science.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Multiple opportunities were provided to students for structured physical activity.

In 1-2 paragraphs, please provide a description of standardized training:

SCNAC Site Assistants (part-time Network-funded staff who also work part-time for district) gave monthly trainings to teachers on the foundations of nutrition and the HOTM program, how the curriculum addresses the California health education content standards, and methods for increasing physical activity.

In 1-2 paragraphs, please provide a description of standard administration of data

Researchers were trained on data collection procedures for school lunch digital photography of student selections and consumption from the salad and entrée bar in the cafeteria. Four, single, whole day assessments of school lunch photography pre and post-intervention were conducted using a standardized visual rating plate waste method. Digital photos of lunch trays were taken at the point-of-selection (POS) and again after the meal period ended. The trays were assigned to students with distinct identification numbers that were later matched before and after meal consumption. The amount of waste were determined by comparing the amounts of food items selected and how much of those items

remained at the end of the meal. Matched images were saved in an electronic file along with student demographic information provided by school district records.

In addition to the digital photos data collection method, production records from each participating school were collected and analyzed. Production data included: type and quantity of food initially prepared, served, and left over. Production records were completed by foodservice staff/kitchen managers at each school by either number of servings or by weight. SCNAC researchers converted the weights to servings for data entry and analysis. The total number of students served was determined by the total number of entrees served. The total number of fruit and vegetables servings selected was determined by the difference between the number of portions prepared and the number of portions left over. Thus, school cafeteria production records were used to verify/refute the digital photo method findings.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Standardized menu items, including those in the salad bar, were provided in all the elementary schools with food selections meeting the mandates of the National School Lunch Program (NSLP). The Chico Unified School District elementary schools participating in this study use the offer vs. serve method which gives students the choice to select fruits and vegetables from the salad bar as part of their lunch. They are also offered a choice of entrees and white or chocolate milk.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 400 grade students who participated in the HOTM program will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Elementary school

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience sample of schools: Students' f/v selection and consumption was matched pre to post.

How many matched surveys?	719
How many sites?	3
How many classrooms?	47

b. Control: Convenience sample of schools: Students' f/v

	selection and consumption was matched pre to post.
How many matched surveys?	440
How many sites?	2
How many classrooms?	41

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Other- Fruit and vegetable selections and consumption.
Goal 2/Objective 2	

Were any other measures used?	Digital photography of cafeteria lunch trays to capture pre and post selection/consumption.

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	1
How many lessons from the intervention occurred *after* pre-tests?	13

	Intervention			Control		
Pre-test:	10/4/2011	to	10/21/2011	10/14/2011	to	10/4/2011
Start of Intervention Date	10/22/2011			NA		
End of Intervention Date	5/4/2012			NA		
Post-test:	5/8/2012	to	5/18/2012	4/17/2012	to	4/26/2012
Follow-up:						

c. Describe how the data were collected.

Intervention:	Observation (digital photography)
Comparison/control:	Observation (digital photography)

d. How were the surveys administered?

NA

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Our HOTM Evaluation consists of the following:
Selection and consumption of school lunch fruits and vegetables (plate waste)
School foodservice food production records
Focus group at each of the three intervention schools
Survey of participating students
This report will address the first three components of our impact evaluation. The survey evaluation will be reported in a separate impact evaluation report.

I. Selection and Consumption of Lunch Fruits and Vegetables Using Digital Photography

Methods

This component of our HOTM impact evaluation has a non-randomized, intervention/control, pre-post design consisting of four consecutive days of digital photography documentation of school lunches for 1st-6th grade students. All five participating schools (three intervention and two control) were from Chico Unified School District (CUSD) and were participating in the National School Lunch Program. As shown in Figure 1, Student trays were systematically photographed after the selection of food items from the lunch line and again after consumption. The photographs were taken in the fall of 2011 and spring of 2012 following seven months of HOTM curriculum intervention. Entrée selection and chocolate vs. white milk and amount consumed was also measured. Milk waste was weighed and included in the "after consumption" photograph. The results for lunch entrées and milk will reported as an addendum to this report.

CUSD implements the offer vs. serve method for lunch. Students are provided the option to select or not select fruits and vegetables from the salad bar. The daily salad bar provides the three staples of broccoli, carrots and salad mix, plus a varying seasonal fruit and vegetable. Most days there are anywhere from five to eight fruit and vegetable options on the salad bar.

The three intervention schools participated in the Harvest of the Month (HOTM) program and were matched to two the demographically comparable control schools in the Chico Unified School District. The data collection period consisted of four days and initially captured a total of 1561 students. As described in Figure 2, a total of 1159 students were matched from the pre (fall) to post (spring) lunch tray photos.

Prior to the start of observations, unique numbers were printed onto reusable trays. During each lunch period, students were given these trays for identification purposes. After the students went through the serving line and made their selections, they were directed to place their trays on a table where one of two digital cameras was used to take a photo of each tray. Students then carried their trays to their seating and ate their meals. Most trays took less than 5 seconds to situate and photograph. Occasionally, a tray would have food placed such that the tray number was obscured so the researcher would have to adjust the food on the tray. Overall, there was minimal impact on the

students' normal procedures.

After students finished their meals, they were instructed by teachers and cafeteria staff to bring their trays and all their waste on them to a table where researchers would take the after picture. Research staff would take the trays and arrange the items to ensure that all the items and quantities were visible for the photographs. Individual milk cartons were weighed and included in the after picture. Afterwards, research staff would dispose of tray contents.

Since the visual estimation data were preserved in photographs, multiple researchers could view the data. Two researchers visually estimated each pair of photographs to assess the amount and type of each food selected and consumed (to a tenth of a serving). The amounts of food on a tray were compared against standard serving sizes, e.g. 21 grapes is one serving of grapes, or against visual replicas of servings, e.g. varying amounts of lettuce equal to one-fourth increments in serving size. If the estimates by the two researchers disagreed by more than 20%, a third researcher would evaluate the photos. The closest two researcher estimates within 20% of a food amount were averaged and this average was used in analysis. If none of the three researchers were within 20% of one other, the case was excluded.

A custom designed Microsoft Access program was used by researchers to match and pair photos and estimate selection and consumption. The Access program would then output a spreadsheet which was inputted into SPSS for data analysis.

Results

Table 1 describes the characteristics of the 1159 matched intervention and control 1st - 6th graders participating in this evaluation. All students had their lunch trays photographed before (pre) and following (post) the intervention. The final analysis was conducted on students who had their lunches photographed for at least three days out of the four day data collection period.
In pre observations (fall), the mean frequency of school lunch participation over the four day data collection period was significantly higher at 2.8 ± 1.0 days for intervention students compared to 2.4 ± 1.1 days for control students ($p < 0.001$). However, while intervention students' average number of days of lunch participation over the four day post period (spring) remained relatively unchanged at 2.9 ± 1.0 days, the rate for control school students lunch participation increased significantly to an average of 3.1 ± 1.0 days ($p < 0.001$). We conjecture that this increase in the rate of school lunch participation at the two control schools occurred because the school district temporarily offered different entrée menus between district schools. Over a period of a few months during our intervention, schools meeting Network eligibility criteria (low income) received the standard menu of two to three entrée options whereas non-eligible schools (non low-income) were offered five or more entrée choices. We speculate that students new to the lunch program may have higher fruit and vegetable selection patterns since the research literature shows that consumption rates tend to be higher with the introduction of new foods/settings and decrease over time. Hence, the district's temporary divergence in the menus offered to our two control schools may have negatively impacted our study results.

Fruit and Vegetable Selections

The mean number of different types of both fruit (0.74 + 0.34 vs. 0.66 + 0.40; $p = 0.015$) and

vegetables (0.77 + 0.75 vs. 0.35 + 0.55; $p < 0.001$) selected by intervention students is significantly greater than the number of different types of fruits and vegetables selected by control students, respectively. Additionally, the mean number of servings of both fruit (0.60 + 0.30 vs. 0.50 + 0.31; $p < 0.001$) and vegetables (0.56 + 0.43 vs. 0.21 + 0.28; $p < 0.001$) selected by intervention students is significantly greater than the number of servings selected by control students, respectively. These findings document that HOTM students select both a greater variety and larger serving sizes of fruits and vegetables from the school salad bar than do control students. There were, however, no significant differences in pre to post fruit and vegetable serving selections for either the intervention or control students.

Figure 3 indicates that intervention students' selection patterns of fruits and vegetables is stable during the elementary school years while selection rates for control students show a significant decline ($p = 0.037$) between 1st and 6th grades. Figure 3 also shows that, outside of 1st grade, selection rates for fruits and vegetables are significantly higher for intervention students compared to control students. First graders are new to the HOTM program and would be expected to be similar in their selection patterns to the matched control students. The HOTM program has been implemented at the intervention schools for the five years previous to the current study. The cumulative impact of this program is demonstrated by the higher selection rates for intervention students shown in Figure 3.

Independent t-test were used to compare average number of distinct types of fruit selected (oranges, apples, grapes, etc.) between grades at intervention and control schools. Intervention 2nd and 5th grade students selected significantly more distinct different fruits from the garden bar than control 2nd and 5th grade students ($p = <0.05$). Specifically, the intervention 5th graders at selected almost twice as many average distinct fruit items as control 5th graders (0.68 vs. 0.37). Sixth-grade intervention students also selected a higher (non-significant) average number of distinct fruit items from the garden bar ($p = 0.052$).

Independent t-test were also used to compare average number of distinct vegetable items (jicama, carrot sticks, celery, etc.) selected from the garden bar between grades at intervention and control schools. Intervention 2nd - 5th grade students selected significantly more distinct vegetables items from the garden bar than control 2nd -5th grade students ($p = <0.05$). Specifically, the intervention 2nd graders at selected over three times as many average distinct fruit items as control 2nd graders (1.07 vs. 0.32).

Fruit and Vegetable Consumption

Paired t-tests were used to compare the change in consumption of fruits and vegetables between intervention and control students who were observed at least three out of the four days for both pre and post observation periods. While there was no significant difference between control and intervention first graders in pre observations for both fruit and vegetable consumption, Table 2 shows that the intervention first graders increased their consumption of fruits and vegetables significantly pre to post. Intervention third and fifth graders also consumed significantly more fruits pre to post. There were no significant pre to post changes in consumption rates for control students. Not shown in table 2 is a significant increase in pre to post vegetable consumption ($p = 0.033$) for second graders at one of the three intervention schools. Additionally, two of the three intervention schools showed a significant ($P < 0.05$) 1/5th serving increase in pre to post vegetable consumption

for fifth grade. However, with the inclusion of the third intervention school, this mean change for fifth grade becomes statistically insignificant.

Using pre consumption data as a covariate, ANCOVA results revealed that intervention students consume both more fruits ($F_{1,507} = 9.36$, $p = 0.002$) and vegetables ($F_{1,507} = 46.39$, $p < 0.001$) following the intervention compared to control students.
The mean number of servings of both fruit (0.37 + 0.25 vs. 0.30 + 0.21; $p = 0.002$) and vegetables (0.26 + 0.25 vs. 0.09 + 0.16; $p < 0.001$) consumed by intervention students is significantly greater than the number of servings consumed by control students, respectively. It is notable that the number of vegetable servings consumed is approximately threefold greater for intervention students compared to control students. These results are presented graphically in Figures 6, 7, and 8.

Logistic regression analysis revealed that after controlling for pre-intervention data as a covariate, post intervention increases in consumption of fruits and vegetables differed significantly between intervention and control students. Students in intervention schools were 3.67 (2.39, 5.63) times more likely to consume more vegetables following their participation in the HOTM intervention ($p < 0.05$). In addition, students in intervention schools were 1.96 (1.19, 3.23) times more likely to consume more fruits following the HOTM intervention.

II. Production Records

The findings presented in this section are derived from production records completed by the food service staff. These forms are designed for purchasing purposes and do not address student consumption directly. These records indicate the total amount of foods served (i.e. self-selected). These data are from records compiled over the course of three academic school years; 2009 - 2012. Forty production records were analyzed for the corresponding days of lunch period digital photography data collection in intervention and control schools for the ’11-’12 academic year [4 days of digital photography observation x 5 schools (3 intervention + 2 control) x 2 observation periods (pre and post)]. Production records for the ‘10-‘11 academic year were examined for a composite of the ’09-’10 and ’11-’12 intervention and control schools. These data included 15 pre-production records and 14 post-production records for five intervention schools and two control schools. Finally, production records for the ‘09-‘10 academic year were examined for two control and two intervention schools over a ten day period.

The NSLP requires that every student receive an entrée item; therefore, the number of entrees served was used as an approximation for the number of students going through the cafeteria line. A measure was created to assess the ratio of total daily fruit or vegetable to total entrées (# of fruit servings selected per day/# of total entrees selected per day) served per day. An additional measure was calculated to assess the ratio of total daily fruit and vegetable selection to total entrees [(# of total fruit serving selected + # of total vegetable serving selected) / (# of total entrees served)] served per day.

2011-2012

Pre-production records show intervention students were selecting an average of 2.0 servings of fruits and vegetables for every entrée selected, while control students were selecting 1.4 servings.

Production records showed no significant pre to post changes in selection rates for either intervention or control students. This finding is similar to pre to post changes in selection found using digital photography. Production records show no significant differences in fall selection rates, however spring selection rates were significantly different between intervention and control student selections ($p = 0.047$). In the spring, intervention students select approximately 1.4 times as many servings of fruits and vegetables when compared to control student selections.

Pre-production records revealed that intervention students selected 0.9 servings of fruit for every entrée served. Control students selected 0.8 servings of fruit per entrée served. By the end of the year, fruit selection decreased by 0.1 servings for intervention students and stayed constant for control students. Post-production records show both intervention and control students selected approximately 0.8 servings of fruit for every entrée selected. The differences were not significant (Figure 9).

Pre-production records indicate intervention students selected 1.1 total daily servings of vegetables per entrée. Control students selected only 0.6 servings of vegetables for every entrée served. Independent t-tests reveal these ratios are significantly different (p value < 0.001). Post-production records showed that selections of daily vegetable serving per entrée did not change (Figure 10).

2009-2010

Figure 11 shows the ratio of total daily fruit selections to entrée served for intervention and control students. The vegetable selection ratio increases for intervention students (from 0.7 to 0.9) and decreases for control students (from 0.6 to 0.5). The fruit to entrée ratio decreased for intervention students (0.7-0.5) and did not change for control students (0.6-0.6). Independent t-tests demonstrate there were no significant differences in pre-production records. Post-production records indicate that intervention students selected significantly more vegetables to entrees in the ‘09-‘10 year compared to control students ($p < 0.05$) (Figure 12).

2010-2011

Production records report intervention students were selecting approximately the same ratio of total daily fruit servings to entrées over the course of the ’10-’11 school year. The control students decreased (non-significantly) from 0.7 fruit servings per entrée to 0.5 fruit servings per entrée (Figure 13).

Independent t-tests indicated intervention and control students started off the ’10-’11 academic year significantly different for vegetable servings per entrée ($p<0.001$). Control students selected 0.6 servings of vegetables per entrée and intervention students selected 0.9 servings of vegetables per entrée. Post-production records reveal that during the ’10-’11 academic year the intervention students increased vegetable selection by 0.1 servings. Conversely, the control students have stayed constant in selection (0.6) (Figure 14).

2009-2012 Summary

Figure 15 shows that fruit selection initially dropped for the intervention students from ’09-’10 (0.7-0.5). The following two academic years (spring ’10 – fall ’11) showed an upward trend for

intervention students 0.5-0.9. The final ratio of fruit selection to entrée servings was 0.8 for intervention and control students.

Figure 16 displays longitudinal averages of total vegetable selection to entrees served. Intervention students increased from 0.7 to 1.1 vegetable servings per entrée. Control student vegetable servings per entree did not change (0.6-0.6). Over the 3 academic year period, intervention students exhibited an upwards trend while control students were stagnant.

Figure 17 presents longitudinal data showing the total daily fruit and vegetable servings per entrée over the course of 3 academic years. Production records show the fruit and vegetable selection ratio significantly increased from 1.4 to 1.9 servings ($p < 0.05$) for intervention students. Control students increased (non-significantly) from 1.2 to 1.4 fruit and vegetable servings per entrée. In addition, intervention students typically exhibit an increase from year to year while control students typically decline. As of spring 2012, intervention students were selecting 40% more fruit and vegetable servings than control students.

III. Focus Group Results for Intervention Students

Qualitative data were also collected from three intervention schools participating in the Harvest of the Month Program. Focus groups included approximately 7 to 10 students, grades 4th-6th, per elementary school. Students enrolled in summer 2012 intersession were invited to participate, with the only criterion being that they participated in The National School Lunch Program. Focus groups were held on school grounds and lasted approximately 45 minutes. They were facilitated by trained staff using predetermined questionnaire guides.

Findings from the focus groups suggest that students had varying perspectives on the food items served during lunch. Students had positive feelings regarding the salad bar items, which include the fruits and vegetables; however negative feelings were associated with the entrée items and milk options served. Also, students preferred the healthiness of the salad bar items over the high caloric entrée options. Qualitative data also indicate that students' family economic status, in additional to parental food preferences, may influence availability and consumption of fresh fruits and vegetables at home. Lastly, data suggest that students were pleased with the Harvest of the Month Program; they expressed enjoying the opportunity to try new fruits and vegetables and acquiring knowledge surrounding locally grown produce through books and recipe cards.

Perspectives on Food Items

Children were asked to describe their perspectives on fruits and vegetables available to them during school lunch. All participants felt positive towards fruits and vegetables, were able to describe and name their favorite fruits and vegetables, and also indicated the desire for more fruits and vegetables to be available in both variety and quantity. The lack of availability and variety of fruits and vegetables in the cafeteria was identified as a barrier to consumption. When asked about the quantities of fruits and vegetables students are allowed to take, one child stated:

"And they make, like, a limit on what you can get… I mean, I think they should let us take more because not a lot of kids like fruits and vegetables so the fact that we want more should actually be kind of cool, and they should let us."

Some common themes regarding children's perspectives on fruits and vegetables included that these foods are healthy and good for you, fresh, and tasty. Also, children felt safer consuming produce from the school garden or local farmers' markets, due to their distrust of processed foods. One child noted:

"The garden's more healthier. You don't know what they do in the factory…and the foods and stuff might be sprayed"

In relation to their views on the farmers' market, a child mentioned:

"That's where my family gets a lot of their vegetables because we know where it came from"
This supported the children's views on the importance of knowing the origin of their food.
A majority of the children identified the importance of high quality, good tasting foods served to them for school lunch. Participants expressed disappointment in the quality of entrée items served, with many of them describing these foods as greasy, cold, salty, soggy and stale. The children identified entrée options as "disturbing" and that they "bother me a lot." One child objected:

"We have to pay for our lunches, so we should get good things, not gross things."

However, the children acknowledged the possible limitations of serving food to large numbers of students during the school year by comparing it to the summer school lunches. The children unanimously agreed the summer school lunches were better and reasoned this to be true because:

"There's less days…there is way less people…so it's a lot easier to make good food."

The children were asked to describe their typical milk selection and consumption patterns. Taste was identified as a key determinant of milk consumption during school lunch. Many of the children felt adverse feelings towards the milk served at school due to the fact that they viewed the milk offered as being quite different from the milk they consumed at home. One child commented:

"I never drink the milk from school."

Other characteristics of the milk offered at school included watery, warm, weird tasting, and the chocolate milk tasting more disgusting compared to the white milk. However, the children expressed these characteristics might be due to the milk being served in cardboard cartons.
External Influences on Food

When the students were asked about the opinions of their peers regarding fruit and vegetable consumption, the overwhelming response was that fruits and vegetables were often viewed as being "uncool." One student remarked:

"A lot of the kids don't like vegetables or anything like at all, and so I think it's kind of cool when you hang out with somebody that likes the same things you do, even when it's as simple as fruits and vegetables."

This peer pressure may be experienced more strongly among the older students, as is evidenced by

another student stating:

“Especially like sixth grade, not all people like vegetables because, you know, you have to be all cool and stuff.”

The variable amount of fruits and vegetables consumed may also reflect the influence of the different families. Some families were more likely to buy a variety of produce for the children, such as potatoes, tomatoes, carrots, peas, mangos, grapes strawberries, apples and watermelon.

For other students parental fruit and vegetable preferences may have impacted overall purchasing of produce for the entire family. Students expressed how they asked their parents to purchase different varieties of fruits and vegetables, some of which they were exposed to at school, but based on parental tastes, this dictated if the item was bought:

“Then I wanted [my dad] to buy me but then he hates pineapple, and he thinks I won’t be able to eat a whole pineapple on my own.”

Due to economic concerns, some families were limited in their ability to purchase fresh fruits and vegetables overall, but financial means also influenced where purchasing was done, whether it be the local supermarkets, discount stores, or the farmers’ market, due to economic concerns. One student said:
“I ask them to buy pineapple but they never do because they’re not on sale.”

When asked specifically if their families purchased produce at farmers’ market, another student replied they did not because:

“We don’t have a lot of money for that. Well, like, my family can’t really afford the more expensive, healthier veggies and fruits.”

Another student had similar economic concerns and stated:

“Most of the time we can’t really afford the fresh [produce] so we get the frozen ones.”

Perspectives of School Environment on Food

Students expressed their concern over the poor quality and palatability of food served to them for school lunch, and also felt they could not openly express their concerns to those who provided the meals. Because the children felt they could not explicitly express their concerns, many felt the only recourse was to either eat less of the entrée or to skip the entrée entirely. As one student stated:

“Nobody really talks to the lunch ladies other than to tell them what they, what we want because they’re kind of rude.”

Other students chose to eat more salad bar items in an attempt to offset some of the perceived unhealthiness of the entrée. One student remarked:

"I go [to the salad bar] every time because like getting a side salad makes me feel better if I'm eating something bad for me. "

Harvest of the Month Program

In regards to the Harvest of the Month Program, students noted that they enjoyed trying new fruits and vegetables, particularly trying new foods in ways they weren't necessarily accustomed to. Through the use of different preparation methods of the HOTM foods, such as consuming the produce raw or incorporating them into a recipe, students were given the means to develop their own taste preferences. Students also noted that HOTM gave them the opportunity to try new foods, and this provided them insight into what kinds of foods they would prefer in their salad bar at lunch. Some students appreciated the program because they felt it demonstrated the school's concern for their health and well-being by encouraging them to try a variety of fruits and vegetables. One student commented:

"It's kind of cool that the school wants to help us just try new stuff."

Common thoughts regarding the tastings included that the foods provided health benefits, an exciting experience, good tasting food, and a chance to share knowledge with friends and family. One student expressed:

"If [I] try something, and I like it, I'll be like, 'Hey Mom, can we go get this. We tried it at school, and it was really good.'…I think the HOTM kind of helps the parents because when we talk about the things that we like, it helps them, kind of know what we like."

Furthermore, students provided positive feedback regarding the HOTM books; they gained more knowledge of produce and of how fruits and vegetables grow. One student commented:

"Some of the foods that they have in the books are different from the school fruits, and that's, like, what we would want…and you get to learn about the fruits and vegetables."

Overall, implementation of the Harvest of the Month Program was positively received by all participants. Students' excitement towards trying new fruits and vegetables, in addition to expressing an interest in having a greater variety of produce during lunch, does suggest that the program provides an educational opportunity for students while increasing their desire for fruits and vegetables. Furthermore, with students preferring fresh fruits and vegetables over entrées, schools should consider offering more fruits and vegetables during the school year.

b. Description of how evaluation results will be used:

Preliminary findings for our pre/post HOTM school lunch selection and consumption findings have already been presented to school district administrators. We plan to present our final results at an upcoming school board meeting. These preliminary results were also shared at the Spring 2012 Network conference and at the Spring 2012 California State University, Chico Advisory Board meeting and a Summer 2012 After School Professional Development Institute conference offered by CSUC.

Final impact evaluation results will be presented at the 2013 Child Obesity Conference and at the

Annual Meeting of the California Dietetic Association. We will also be preparing study findings for publication in the Journal of the Academy for Nutrition and Dietetics.

7. Point of Contact

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Phone Number:	(530) 898-5288
Email Address:	cwolff@csuchico.edu

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

Published abstracts

1. Waite A, Wolff C, Goto K, Bianco-Simeral S. The impact of a multi-component school-based program on fruit and vegetable selection from school salad bars among K-6 grade students. Journal of Nutrition Education and Behavior 2012. Vol 44. No 4 S75-76.

Oral presentations

1. Wolff C, Bianco-Simeral S, Waite A, Kreps GL (speakers) Goto K, Schneider J (moderators). Campus to community: sustaining synergistic service learning in a high need, low resource environment. Presented at: Society for Nutrition Education and Behavior Annual Meeting; Washington DC; July 2012.

2. Waite A, Goto K, Chan K, Giovanni M, & Wolff C. Do environmental interventions impact elementary school students' lunchtime milk selection? Paper presented at the AAEA/EAAE Conference on Food Environment: The Effects of Context on Food Choice, Boston, 2012.

3. Wolff C, Gruneisen K. Innovative Approaches for Impact and Outcome Evaluation. Network for a Healthy California Annual Conference, 2012

Poster presentations

1. Waite A, Wolff C, Goto K, Bianco-Simeral S. The impact of a multi-component school-based program on fruit and vegetable selection from school salad bars among K-6 grade students. Poster presented at: Society for Nutrition Education and Behavior Annual Meeting; Washington DC; July 2012.

2. Vernoga M, Wolff C, Goto K, Bianco-Simeral S, Ramsey E. (2012). Tastings and garden enhanced nutrition education activities have a significant impact on intervention students' self-reported vegetable consumption. California Dietetic Association Annual Meeting. Ontario. April 2012.

3. Chan C, Goto K, Chen Q, Wolff C, Bianco-Simeral S, Chan K. (2012) Age, gender, and vegetable consumption are significant influencing factors associated with fourth-to-sixth grade students' selection of milk at school cafeterias. California Dietetic

Association Annual Meeting. Ontario, California. April 2012.

4. Evans K, Wolff C, Bianco-Simeral S, Goto K, Ramsey E. Implementation and encouragement levels of nutrition education program were significant factors associated with teachers' perceptions of student, classroom, and school nutrition related practices. California Dietetic Association Annual Meeting. Ontario, California. April 2012.

5. Chen Q, K. Goto, PhD, C Wolff, MPA, PhD, RD, K Chan, PhD, A Waite. Vegetable consumption, age, and gender are significant factors associated with fourth-to-sixth grade students' selection of milk in school cafeterias. Poster presented at the Network for a Healthy California Annual Conference, 2012.

6. Evans K, Wolff C, Bianco-Simeral S, Goto K, Ramsey E. Implementation and encouragement levels of nutrition education program were significant factors associated with Teachers' perceptions of student, classroom, and school nutrition related practices. Poster presented at the Network for a Healthy California Annual Conference, 2012.

7. Sims G, Wolff C, Goto K, Bianco-Simeral, S. Making a Difference: The Harvest of the Month Curriculum Improves Fruit and Vegetable Familiarity, Preferences, and Consumption among Upper Elementary School Students. Poster presented at the Network for a Healthy California Annual Conference, 2012

8. Waite A, Frigaard M, Goto K, Wolff C, Bianco-Simeral S. The Harvest of the Month Curriculum Increases Fruit and Vegetable Selections from School Salad Bars among K-6 Grade Students. Poster presented at the Network for a Healthy California Annual Conference, 2012

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

Published articles

1. Evans K, Goto K, Wolff C, Bianco-Simeral S, Frigaard M. Teachers' perceptions indicates success for school-based nutrition education programs. Californian Journal of Health Promotion (in press)

2. Fiori K, Wolff C, Goto K, Frigaard M, Chan K, Bianco-Simeral S. Discrepancies among student school lunch preferences, menu options, and consumption patterns in a low-income northern California high school. Californian Journal of Health Promotion. 2011;9(2):29-39.

c. Did you use the Network Youth Survey or the Network High School Survey: No

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from	0

	Compendium:	
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

Swanson M. Digital photography as a tool to measure school cafeteria consumption. J Sch Health. 2008; 78: 432-437.

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

We used cafeteria food production records to compare against our selection data.

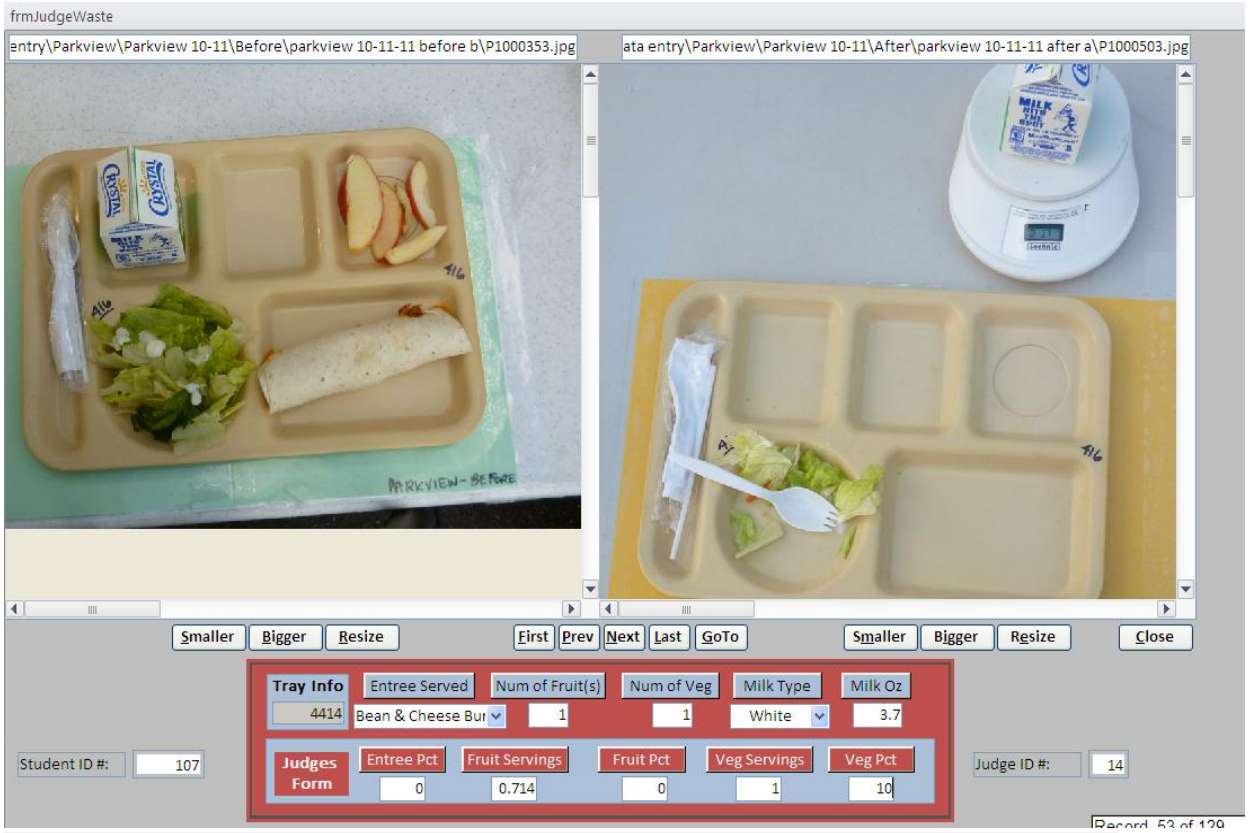
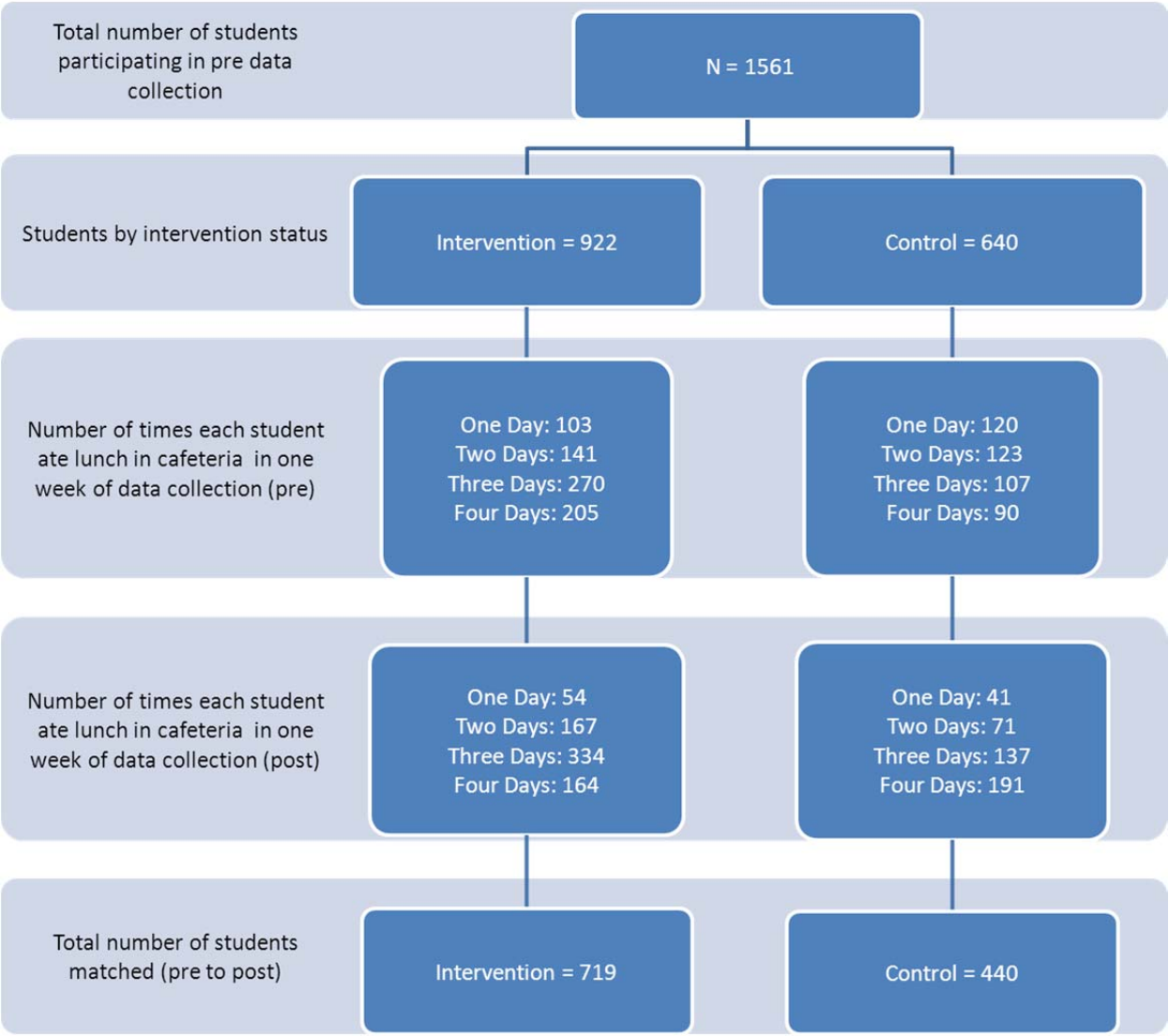


Figure 1. Screenshot of Custom Designed Access Program

Table 1. Characteristics of Matched K-6 Students				
Number of Students Observed	**Intervention (N=719)**		**Control (N=440)**	
	No.	**%**	**No.**	**%**
Grade				
1st	117	16	90	20
2nd	118	16	97	22
3rd	119	17	71	16
4th	107	15	64	15
5th	139	19	51	12
6th	119	17	67	15
Number of Days Students Ate Lunch in Cafeteria During Data Collection - Pre				
One Day	103	14	119	27
Two Days	141	20	123	28
Three Days	270	38	107	24
Four Days	205	28	90	20
Number of Days Students Ate Lunch in Cafeteria - Post				
One Day	54	8	41	9
Two Days	167	23	71	16
Three Days	334	47	137	31
Four Days	164	23	191	43


Total number of students participating in pre data collection
N = 1561
Students by intervention status
Intervention = 922
Control = 640
Number of times each student ate lunch in cafeteria in one week of data collection (pre)
One Day: 103
Two Days: 141
Three Days: 270
Four Days: 205
One Day: 120
Two Days: 123
Three Days: 107
Four Days: 90
Number of times each student ate lunch in cafeteria in one week of data collection (post)
One Day: 54
Two Days: 167
Three Days: 334
Four Days: 164
One Day: 41
Two Days: 71
Three Days: 137
Four Days: 191
Total number of students matched (pre to post)
Intervention = 719
Control = 440

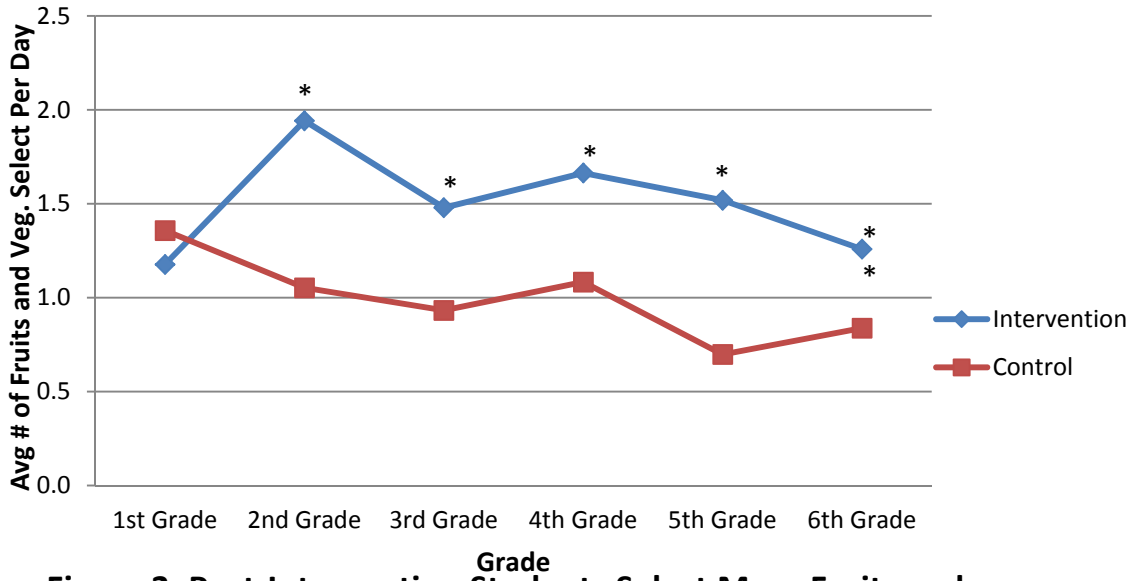


Figure 3. Post-Intervention Students Select More Fruits and

*** Indicates Significant Difference at p<0.05**

**** Independent t-tests indicate a significant difference in selection**

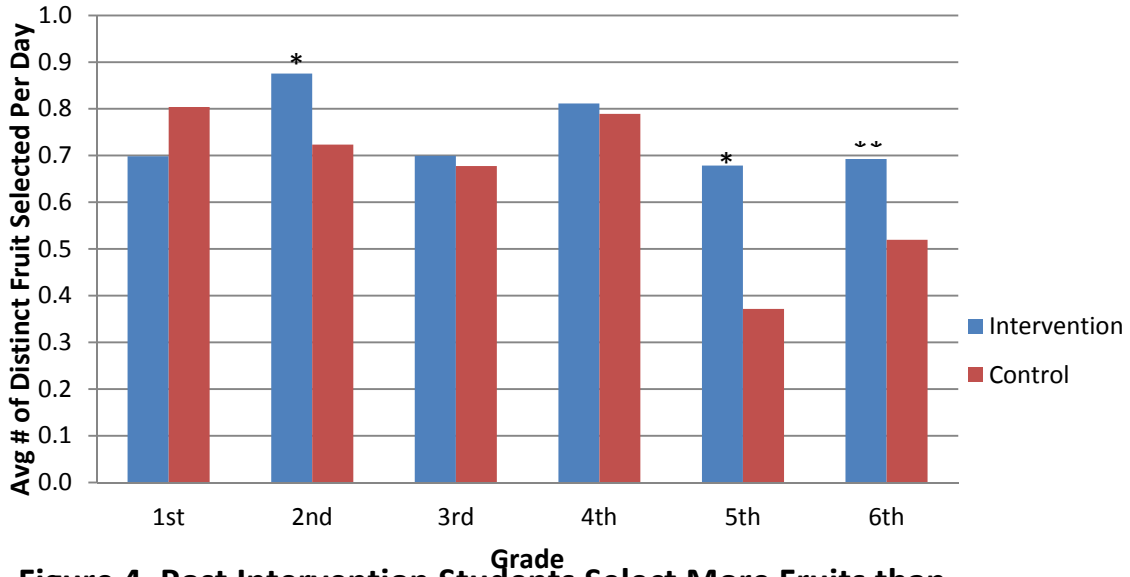


Figure 4. Post Intervention Students Select More Fruits than Control Students

*** Indicates Significant Difference at p<0.05**

**** Sixth Grade: p=0.052**

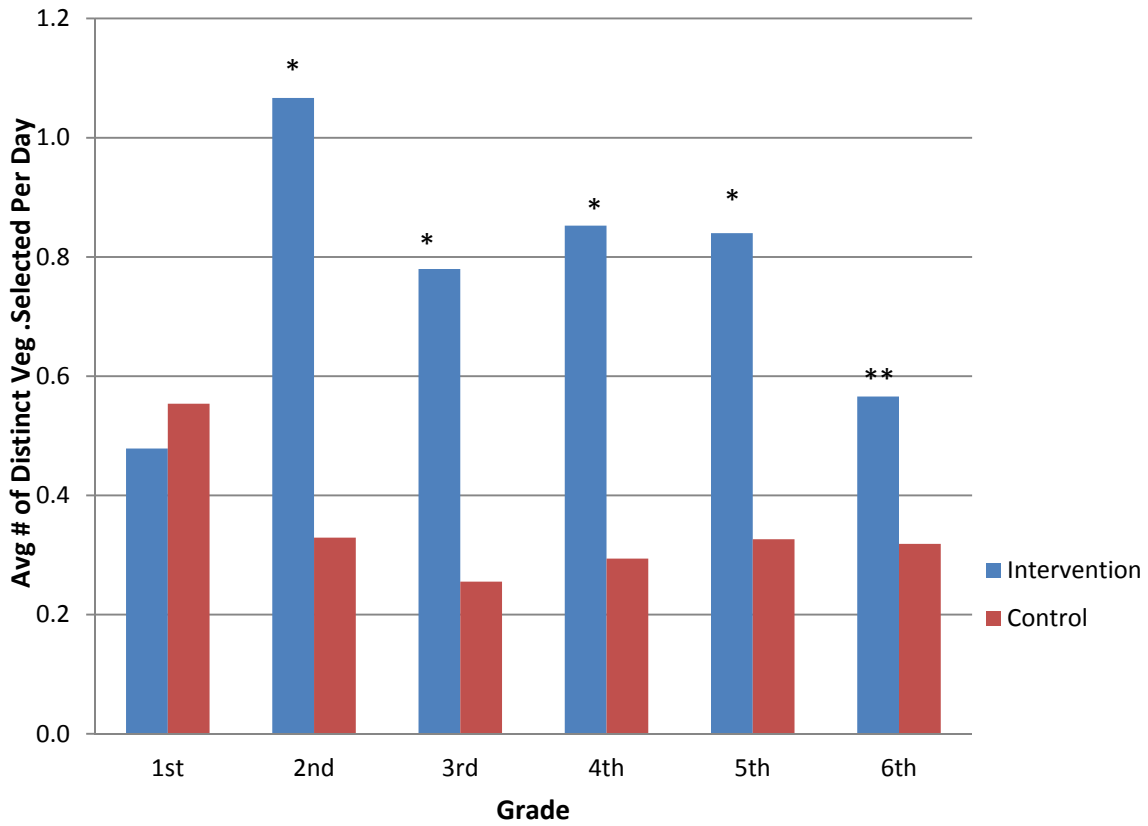


Figure 5. Post Intervention Students Select More Vegetables than Control Students

*** Indicates Significant Difference at p<0.05**
**** Sixth Grade: p=0.07**

Table 2. Pre To Post Changes in Average Number of Servings of Fruit and Vegetable Consumed Between Intervention and Control Students by Grade

	Grade	Intervention (n=338)			Control (n=151)		
		Mean ± SD		*p* value	Mean ± SD		*p* value
		Pre	Post		Pre	Post	
Fruit	1st	0.28 ± 0.23	0.40 ± 0.23	0.005	0.31 ± 0.21	0.30 ± 0.19	0.802
	2nd	0.34 ± 0.28	0.31 ± 0.22	0.563	0.36 ± 0.26	0.33 ± 0.21	0.596
	3rd	0.30 ± 0.24	0.43 ± 0.28	0.006	0.21 ± 0.25	0.25 ± 0.17	0.551
	4th	0.39 ± 0.33	0.35 ± 0.20	0.330	0.47 ± 0.33	0.36 ± 0.30	0.311
	5th	0.29 ± 0.21	0.39 ± 0.31	0.026	0.16 ± 0.23	0.24 ± 0.19	0.208
	6th	0.45 ± 0.30	0.34 ± 0.26	0.056	0.23 ± 0.25	0.30 ± 0.23	0.449
Vegetable	1st	0.12 ± 0.21	0.23 ± 0.24	0.006	0.08 ± 0.14	0.09 ± 0.11	0.891
	2nd	0.20 ± 0.27	0.25 ± 0.25	0.218	0.09 ± 0.21	0.11 ± 0.17	0.752
	3rd	0.29 ± 0.44	0.26 ± 0.26	0.738	0.10 ± 0.18	0.06 ± 0.10	0.277
	4th	0.26 ± 0.36	0.26 ± 0.20	0.890	0.11 ± 0.26	0.14 ± 0.23	0.768
	5th	0.34 ± 0.41	0.31 ± 0.32	0.660	0.11 ± 0.35	0.07 ± 0.14	0.698
	6th	0.32 ± 0.42	0.22 ± 0.21	0.062	0.09 ± 0.15	0.11 ± 0.24	0.769

*Paired t-tests for students eating in the cafeteria ≥ 3 times per week

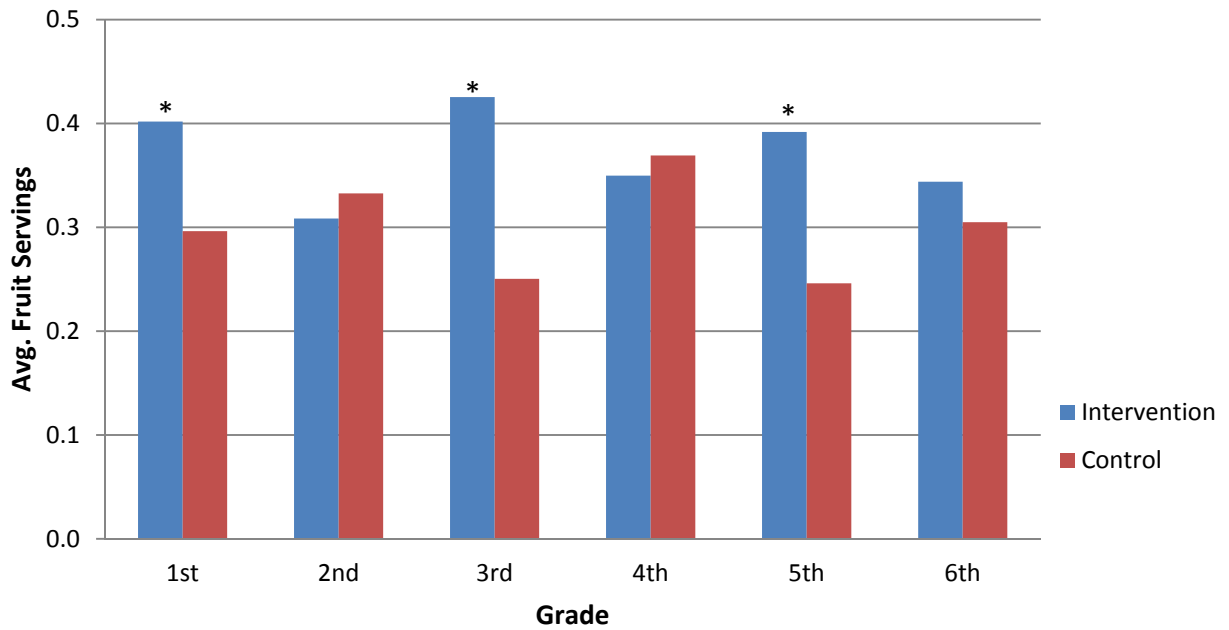


Figure 6. Intervention Students Consume More Servings of Fruit

*** Indicates Significant Difference at p<0.05**

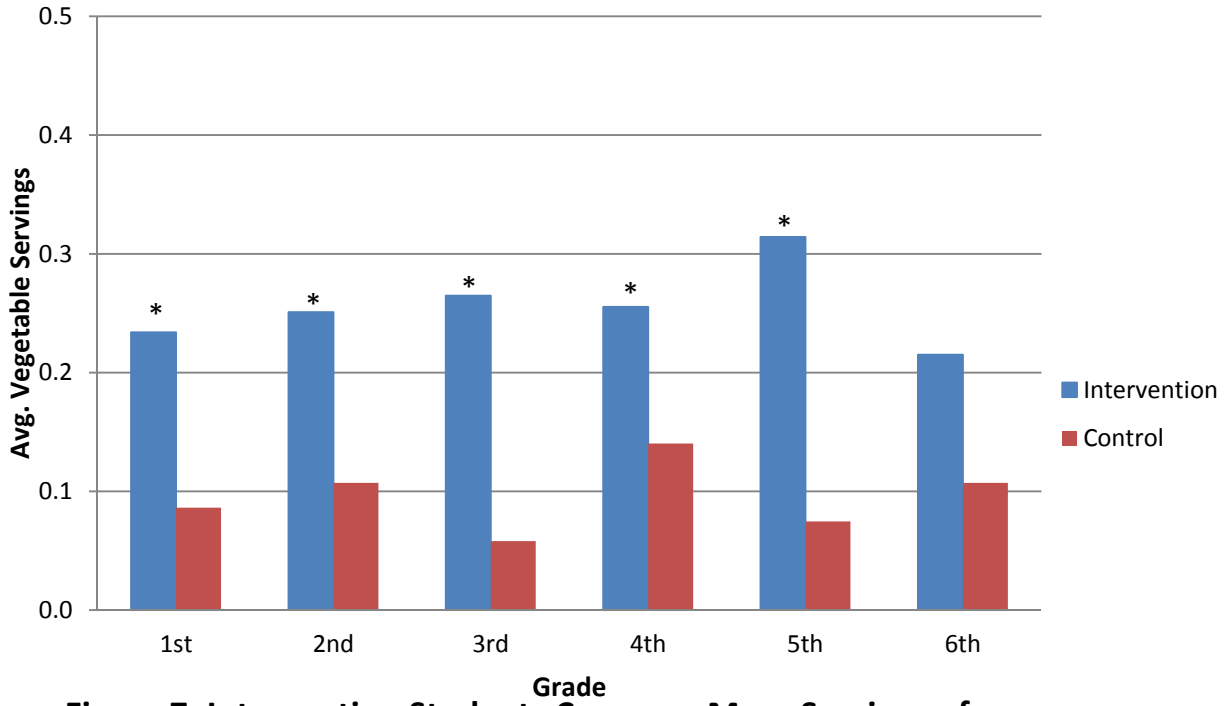


Figure 7. Intervention Students Consume More Servings of

*** Indicates Significant Difference at p<0.05**

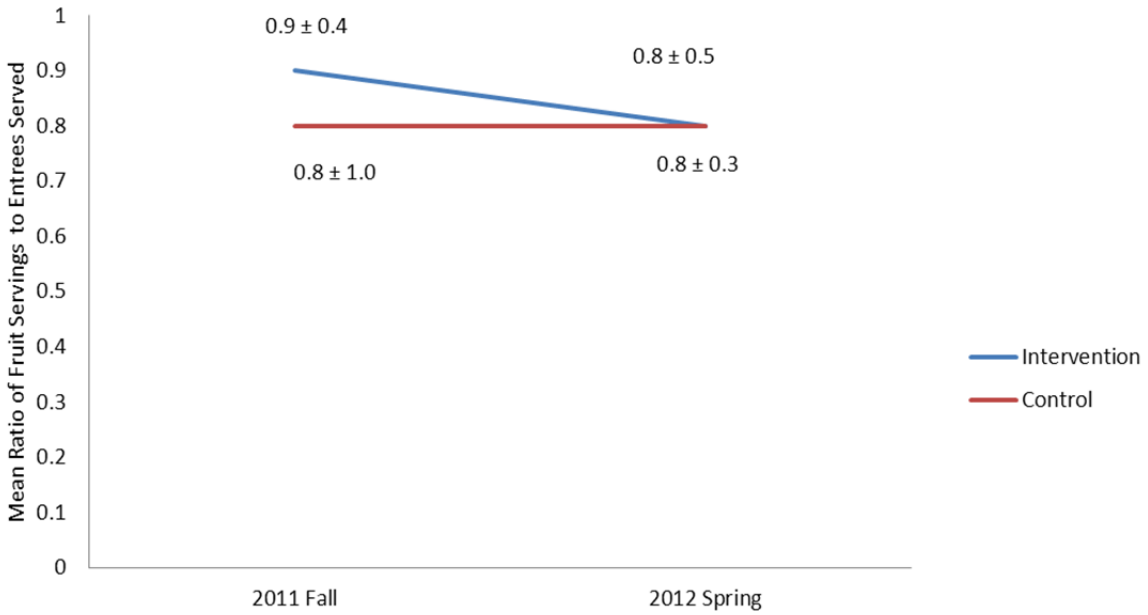


Figure 9. Fruit Selection ('11-'12 Year)

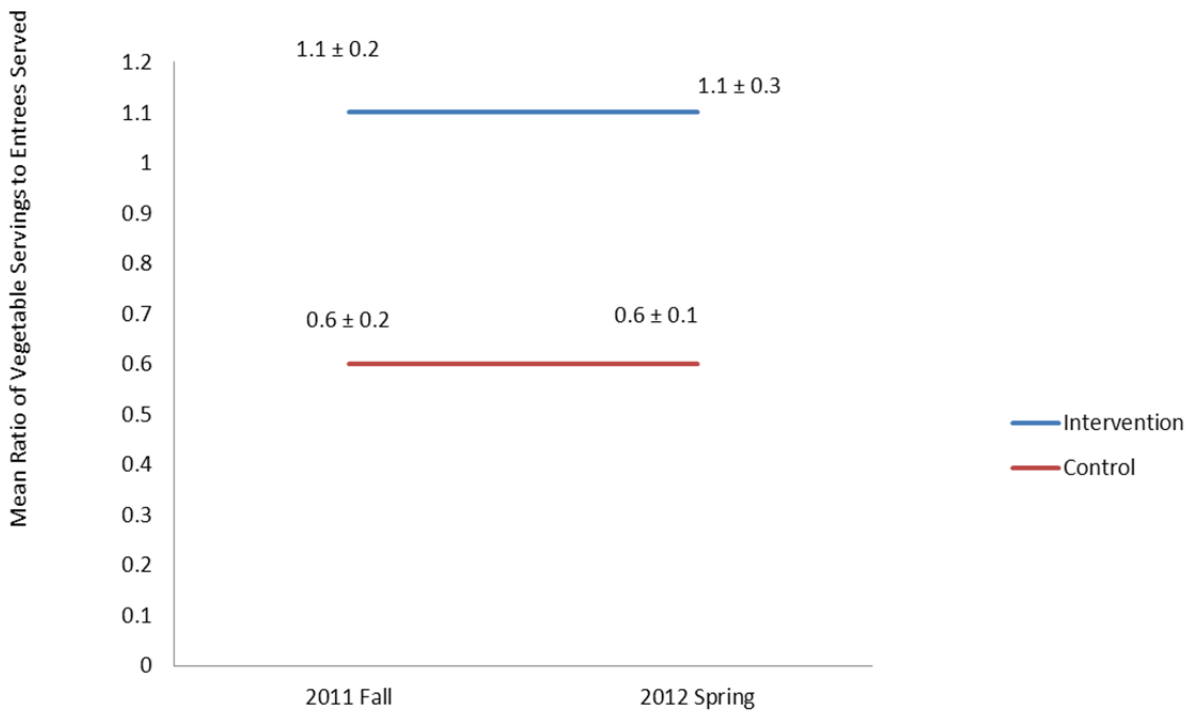


Figure 10. Vegetable Selection ('11-'12 Year)

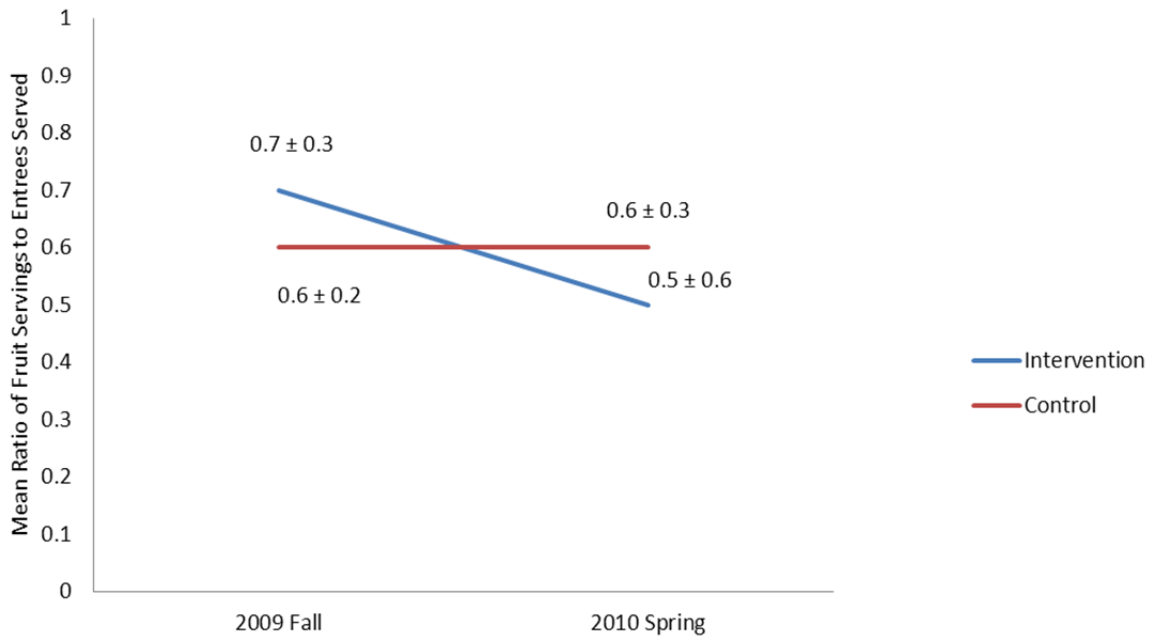


Figure 11. Fruit Selection ('09-'10 Year)

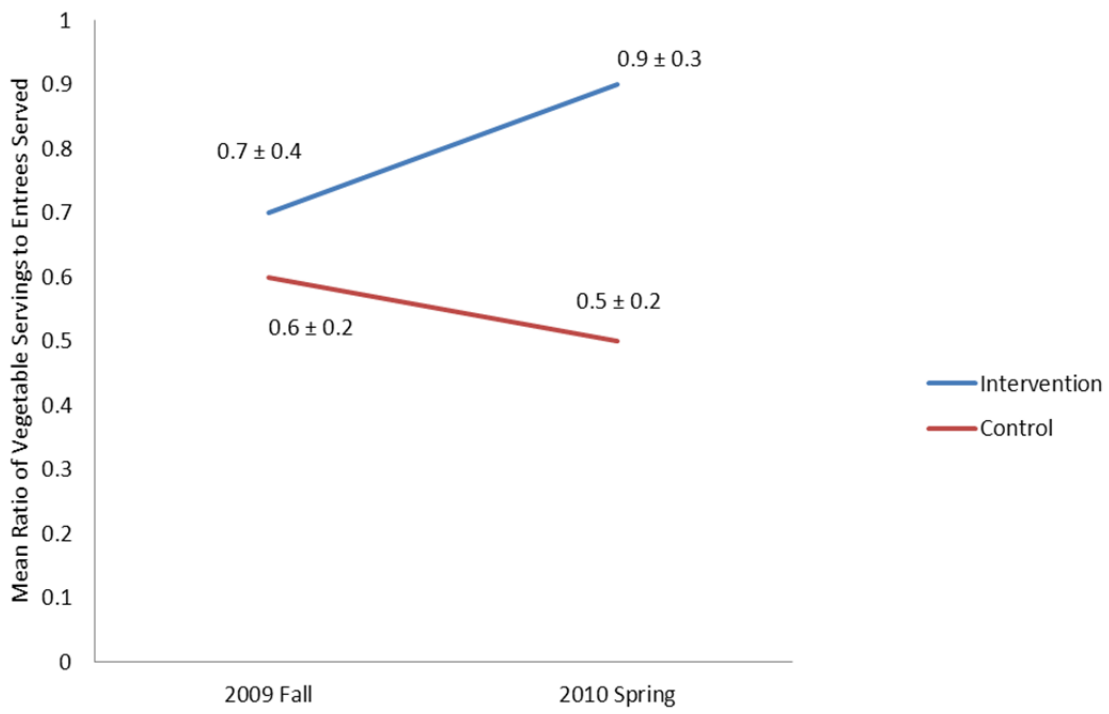


Figure 12. Vegetable Selection ('09-'10 Year)

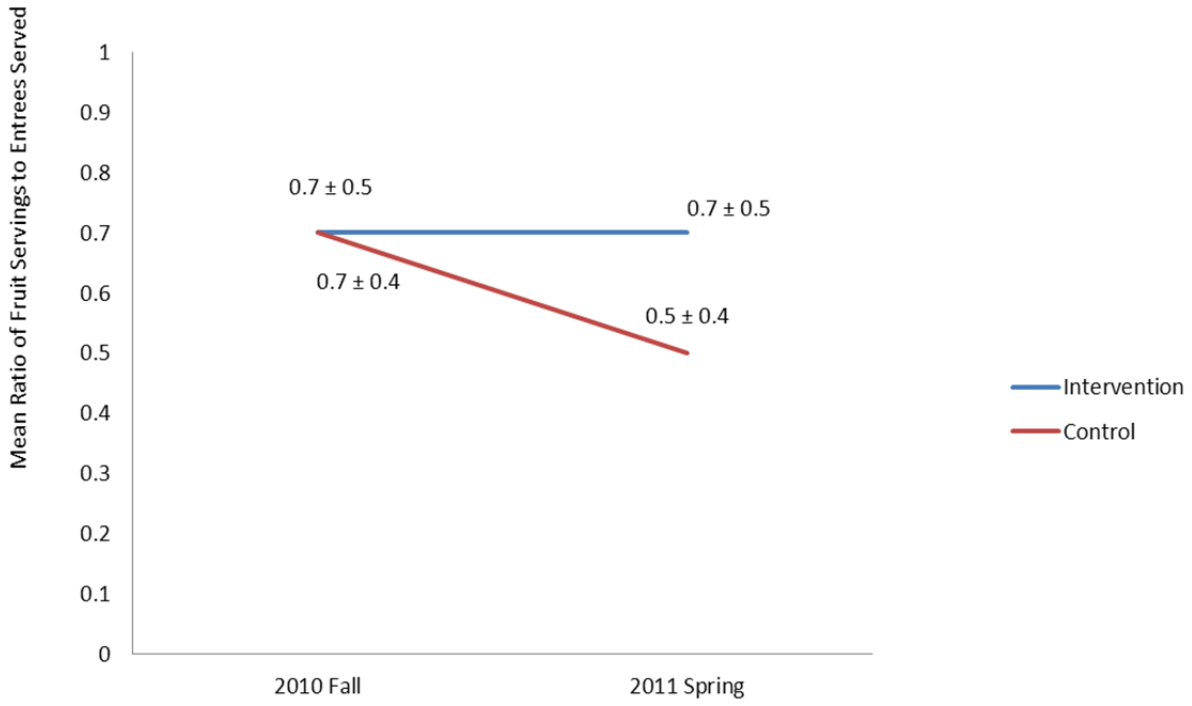


Figure 13. Fruit Selection ('10-'11 Year)

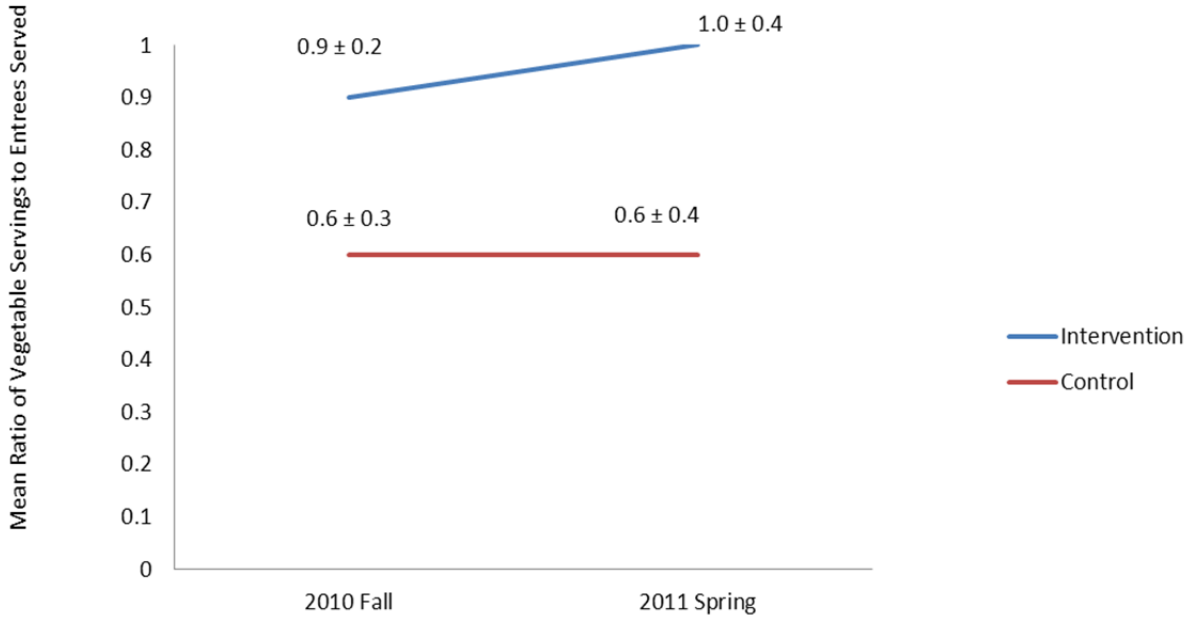


Figure 14. Vegetable Selection ('10-'11 Year)

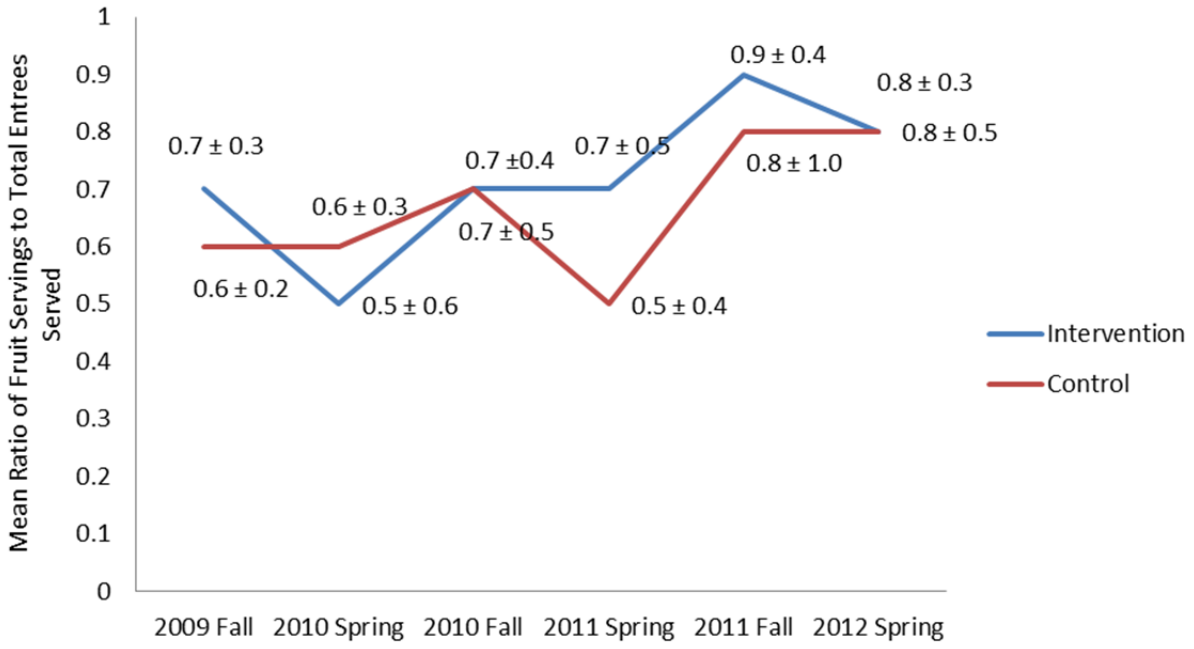


Figure 15. Fruit Selection Over 3 Year Period

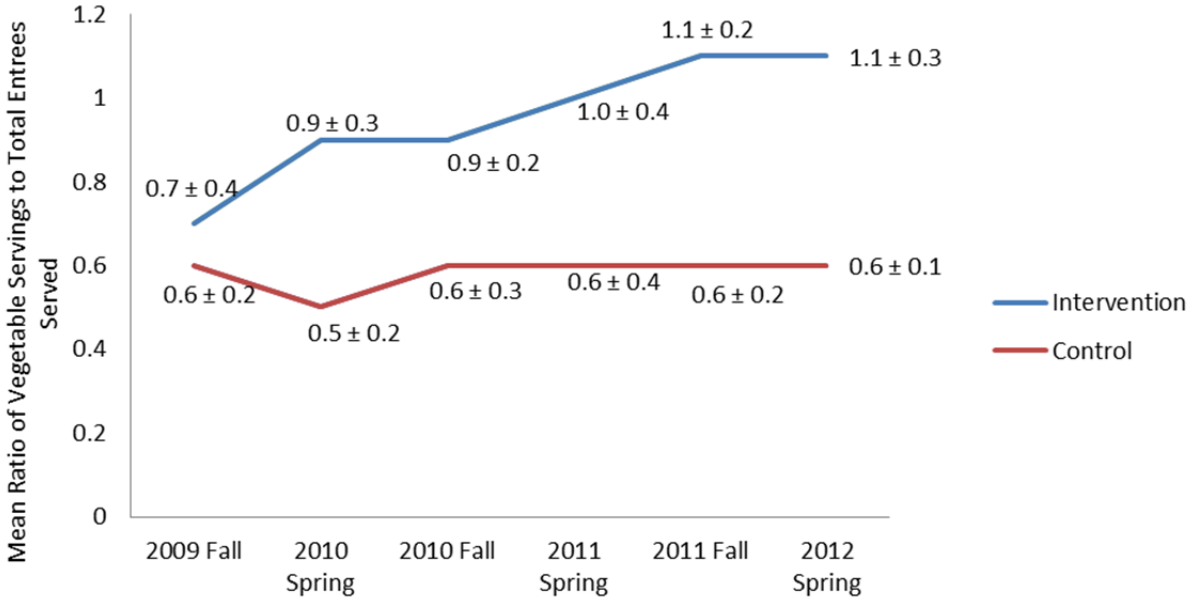


Figure 16. Vegetable Selection Over 3 Year Period

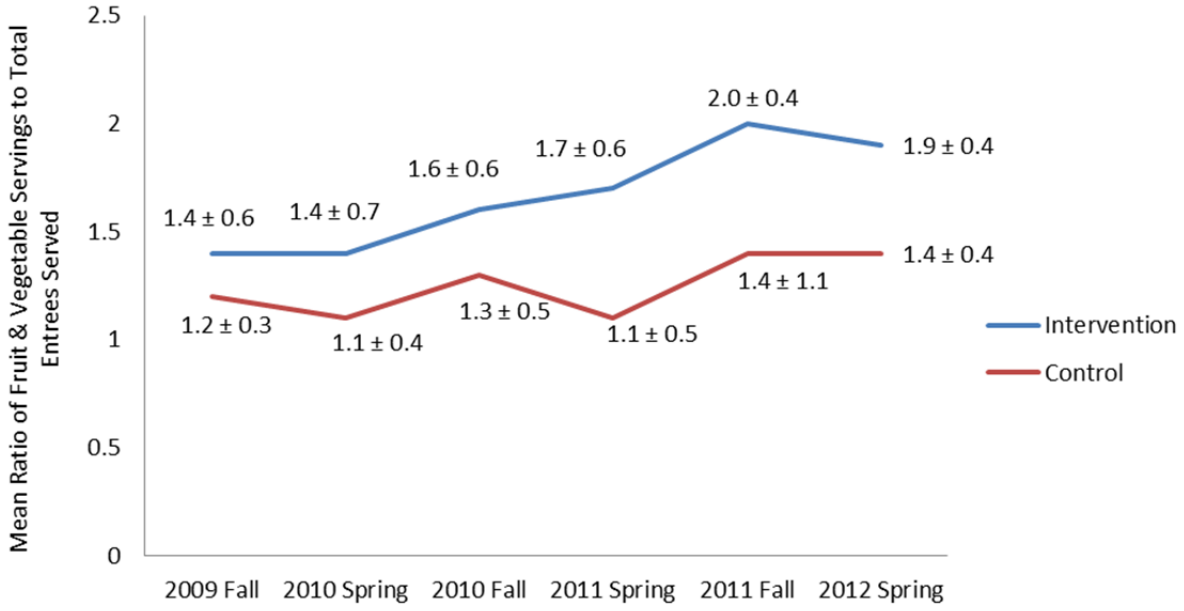


Figure 17. Fruit and Vegetable Selection Over 3 Year Period

FFY12 Impact and Outcome Evaluation Final Report

Network-funded contractor:	California State University, Chico, Research Foundation (SCNAC)) - 10-10093
Contract number:	10-10093
Information provided by :	Cindy Wolff
Telephone:	5038985288
Date:	31 July, 2012
Email:	cwolff@csuchico.edu

1. Project Description and Goals

Project Name:	Impact of HOTM on low-income elementary school fruit and vegetable consumption
Target Population:	Age: 7-11; Grade: 4th - 6th; Low-income eligible site
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	Nourish

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The majority of the nutrition education intervention was derived from the Harvest of the Month (HOTM) curriculum. The HOTM curricula included taste testings, posters with health benefits and images of the HOTM item incorporated into various recipes, educator newsletters, Farmer of the Month (FOTM) newsletters, student HOTM workbooks, HOTM themed and garden enhanced nutrition education. The HOTM produce items for the monthly tastings included: tomato, butternut squash, persimmons, mandarins, potatoes, dried fruit, cabbage, peas, and asparagus. Additional streamline tastings and cooking demonstrations in the classroom were also used to support the promotion of these items.

Other nutrition education activities included MyPyramid lessons including portion sizes and moderation, whole grain and fiber lessons, nutrition education display boards and activities, Re-Think Your Drink lessons to encourage drinking water in place of sweetened beverages, and Eat your Colors Week. Students and teachers also received food-themed books and other education materials to promote fruit and vegetable consumption. Nutrition education was integrated into Health, Mathematics, Science, English, Physical Education, History and Social Science. In addition, Nourish curriculum was used as a secondary nutrition education material.

Once again, the Chico Country Day Charter Elementary School was the used as the intervention site. This site has an enhanced nutrition education program that includes a school garden with many parents actively involved in the school garden committee.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

NA

In 1-2 paragraphs, please provide a description of standardized training:

SCNAC Site Assistants (part-time Network-funded staff who also work part-time for district) gave monthly trainings on the foundations of nutrition and the HOTM program, how the curriculum addresses the California health education content standards, and methods for increasing physical activity.

In 1-2 paragraphs, please provide a description of standard administration of data

Data collection was headed by SCNAC researchers and approved by the CSU, Chico Human Subject Review Committee. The data collection instrument was the Network Youth Survey, addressing the elementary school students' activity patterns, consumption of fruits, vegetables, meals and snacks during school. Student consent and survey instructions were read aloud and surveys were distributed and collected during class. Students completed surveys in approximately 5-10 minutes.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

NA

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 100 grade students who participated in Impact of HOTM on low-income elementary school fruit and vegetable consumption will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used? Pre-Test and Post-Test only

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? School

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	174
How many sites?	1
How many classrooms?	6

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Self-reported fruit and vegetable consumption was measured using the Network Youth Survey for 4-6th grade students. The Network Youth Survey plus additional questions pertaining to the Nourish curriculum were used to measure outcomes for 6th grade students only.
Goal 2/Objective 2	0

Were any other measures used? 0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	1
How many lessons from the intervention occurred *after* pre-tests?	8

	Intervention			Control
Pre-test:	10/1/2011	to	10/30/2011	to
Start of Intervention Date	10/1/2012			NA
End of Intervention Date	5/4/2012			NA
Post-test:	5/1/2012	to	5/30/2012	to
Follow-up:	to			to

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	n/a	

d. How were the surveys administered?

Student consent and instructions were read aloud to classroom by trained researchers.

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Paired-samples t-tests were used to compare pre and post Network Survey responses for elementary school students who had been participating in the HOTM program for the 2011-2012 school year. Demographic characteristics of the intervention school are represented in Table 1.

Table 2 displays the differences in reported food consumption between matched pre/post students. There was a significant decrease in the self-reported consumption of "yogurt or cottage cheese or yogurt drink" and a significant increase in the consumption of "regular (not diet) sodas or soft drinks."

Although there was a significant increase in soda consumption this year (0.28 - 0.44), this year's increase had a lower post survey score than the 2010-2011 survey finding in the same school (0.58). This year the pre soda score was considerably lower than last year's pre soda score in the control school (0.28 vs. 0.39).

Table 3 displays the difference in attitude toward new foods. There was no significant difference in attitude toward new foods pre to post. Not presented in the table but was included in the survey was whether students reported consuming breakfast pre to post. Once again, there was no significance (95% vs. 93% pre to post).

Table 4 displays the pre to post changes for parental consumption of fruit and vegetables. No significant changes were found.

Table 5 displays pre to post changes in the survey items pertaining to fruit and vegetable availability in the home. There were no significant changes found.

Table 6 displays changes in physical activity levels for weekends and weekdays. There were significant increases for physical activity on both weekends and weekdays ($p < 0.05$). This finding is encouraging. However, it is difficult to ascribe it to a particular program component. The promotion of physical activity is woven throughout Network funded activities at this school. Specific physical activity interventions were provided intermittently throughout the school year.

Additional analyses: The following analyses are comparisons of intervention students by grade and gender.

Table 7 displays pre and post survey responses toward physical activity and playing outdoors by 4th graders by gender. For example, 4th grade girls reported higher responses for weekdays on the survey item, "Below, check the days you exercised or took part in physical activity that made your heart beat fast and made you breathe hard for at least 60 minutes?" and "Below, check the days you play outdoors for at least 30 minutes?" The only significant difference pre to post for all responses was an increase in PA of 60 minutes during weekday for boys ($p=0.010$).

Table 8 displays pre to post responses toward eating sweets, drinking soda, physical activity and playing outdoors as reported by fifth graders. Significant difference ($p=0.036$) with eating sweets was found pre to post for 5th grade boys ($n = 28$) responding to the survey item, "Yesterday, did you eat sweet rolls, doughnuts, cookies, brownies, pies, or cake?" Significant difference ($p=0.008$) was found in number of days 5th grade boys played outside. Significant difference ($p=0.030$) with drinking soda was found pre to post for 5th grade girls ($n = 26$) responding to the survey item, "Yesterday, did you drink any regular (not diet) sodas or soft drinks?" Note to Network Research Team: The term "sweet roll" is outdated and "candy" is not included in the question.

Table 9 displays pre to post responses toward drinking soda, playing outdoors and physical activity as reported by 6th graders. Significant difference (p=0.020) playing outdoors on weekdays was found for girls (n=33) responding to the following survey item, "Below, check the days you play outdoors for at least 30 minutes?" Significant difference (p=0.021) with physical activity was found

b. Description of how evaluation results will be used:

The results will be shared with the school and district staff, as well as parents via the school newsletter.

7. Point of Contact

Name:	Cindy Wolff
Phone Number:	5038985288
Email Address:	cwolff@csuchico.edu

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

Published abstract

Waite A, Wolff C, Goto K, Bianco-Simeral S. The impact of a multi-component school-based program on fruit and vegetable selection from school salad bars among K-6 grade students. Journal of Nutrition Education and Behavior 2012. Vol 44. No 4 S75-76.

Poster presentations

Waite A, Wolff C, Goto K, Bianco-Simeral S. The impact of a multi-component school-based program on fruit and vegetable selection from school salad bars among K-6 grade students. Poster presented at: Society for Nutrition Education and Behavior Annual Meeting; Washington DC; July 2012.

Vernoga M, Wolff C, Goto K, Bianco-Simeral S, Ramsey E. (2012) Tastings and garden enhanced nutrition education activities have a significant impact on intervention students' self-reported vegetable consumption. California Dietetic Association Annual Meeting. Ontario. April 2012.

Evans K, Wolff C, Bianco-Simeral S, Goto K, Ramsey E. Implementation and encouragement levels of nutrition education program were significant factors associated with teachers' perceptions of student, classroom, and school nutrition related practices. California Dietetic Association Annual Meeting. Ontario, California. April 2012.

Evans K, Wolff C, Bianco-Simeral S, Goto K, Ramsey E. Implementation and encouragement levels of nutrition education program were significant factors associated with Teachers' perceptions of student, classroom, and school nutrition related practices. Poster presented at the Network for a Healthy California Annual Conference, 2012.

Sims G, Wolff C, Goto K, Bianco-Simeral, S. Making a Difference: The Harvest of the Month Curriculum Improves Fruit and Vegetable Familiarity, Preferences, and Consumption among Upper Elementary School Students. Poster presented at the Network for a Healthy California Annual Conference, 2012

Waite A, Frigaard M, Goto K, Wolff C, Bianco-Simeral S. The Harvest of the Month Curriculum Increases Fruit and Vegetable Selections from School Salad Bars among K-6 Grade Students. Poster presented at the Network for a Healthy California Annual Conference, 2012

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

Published articles

Evans K, Goto K, Wolff C, Bianco-Simeral S, Frigaard M. Teachers' perceptions indicates success for school-based nutrition education programs. Californian Journal of Health Promotion (in press)

Fiori K, Wolff C, Goto K, Frigaard M, Chan K, Bianco-Simeral S. Discrepancies among student school lunch preferences, menu options, and consumption patterns in a low-income northern California high school. Californian Journal of Health Promotion. 2011;9(2):29-39.

c. Did you use the Network Youth Survey or the Network High School Survey

Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Table 1. Demographic Characteristics Reported by Intervention Students		
Participant Characteristics:	**(n=174)***	
	No.	**%**
Grade		
4	47	31.1
5	54	35.8
6	50	33.1
Gender		
Male	78	44.8
Female	96	55.2
Race/Ethnicity		
White	122	82
African American	2	1
American Indian/Alaskan Native	3	2
Native Hawaiian/Other Pac. Islander	1	1
Other	20	14

*N varies from 148 to 174 by variable.

Table 2. Pre to Post Changes in Consumption Reported by Intervention Students (n=140)*			
Statement: Yesterday, how many times did you eat…	**Intervention**		
	Mean ± SD		***p* value****
	Pre	**Post**	
Milk	1.71 ± 1.02	1.48 ±1.01	0.056
Yogurt	0.77 ± 0.93	0.46 ± 0.69	0.001
Cereal	0.78 ± 0.65	0.73 ± 0.69	0.478
French Fries	0.58 ± 0.65	0.59 ± 0.65	0.853
Vegetables	2.28 ± 1.54	2.18 ± 1.44	0.548
Fruit	2.25± 1.37	2.39 ± 1.45	0.377
Punch	0.54 ± 0.77	0.55 ± 0.80	0.65
Fruit Juice	1.01 ± 1.03	1.07 ± 1.21	0.801
Water	3.90 ± 1.42	3.94 ± 1.30	0.881
Soda	0.28 ± 0.52	0.44 ± 0.70	0.022
Sweets	0.62 ± 0.73	0.51 ± 0.62	0.201
* N varies from 140-143 for these specific statements **Paired sample t-tests			

Table 3. Pre to Post Changes in Attitude Toward New Foods Reported by Intervention Students (n=92)			
Statement:	**Intervention**		
	Mean ± SD		***p* value***
	Pre	**Post**	
I like to try new foods.	1.26 ± 0.61	1.30 ± 0.51	0.649
*Paired sample t-tests			

Table 4. Pre to Post Changes for Parent Fruit and Vegetable Consumption Reported by Intervention Students (n=100 for Fruit and n=106 for Vegetable)			
Statement:	**Intervention**		
	Mean ± SD		***p* value***
	Pre	**Post**	
How often do your parents eat fruit?	2.43 ± .70	2.42 ± 0.76	0.391
How often do your parents eat vegetables?	2.54 ± 0.64	2.45 ± 0.77	0.277
*Paired sample t-tests			

Table 5. Pre to Post Changes Fruit and Vegetable Availability at Home Reported by Intervention Students (n=137 for Fruit and n=138 for Vegetable)			
Statement:	**Intervention**		
	Mean ± SD		***p* value***
	Pre	**Post**	
At home do you have fruits to eat?	1.85 ± 0.35	1.88 ± 0.32	0.53
At home do you have vegetables to eat?	1.84 ± 0.37	1.84 ± 0.37	0.288
*Paired sample t-tests			

Table 6. Pre to Post Changes in Physical Activity Levels Reported by Intervention Students (n=142 for PA and n=143 for PO)			
How many days do students:			
	Mean ± SD		***p* value***
	Pre	**Post**	
Physical Activity: 60 min (Weekdays)	2.80 ± 1.76	3.50 ± 1.72	0.001
Physical Activity: 60 min (Weekends)	0.93 ± 0.83	1.15 ± 0.90	0.032
Play Outdoors: 30 min (Weekdays)	2.52 ± 1.81	3.35 ± 1.84	<0.001
Play Outdoors: 30 min (Weekends)	0.99 ± 0.88	1.29 ± 0.86	0.008
*Paired sample t-tests			

Table 7. Pre to Post Changes in Physical Activity and Playing Outdoors Reported by 4th Grade Intervention Students by Gender (n=20 for Boys and n=26 for Girls)			
How many days do students:	**Mean ± SD**		***p* value***
	Pre	**Post**	
Boys			
Physical Activity: 60 min (Weekdays)	1.88 ± 1.62	3.53 ± 1.70	0.01
Physical Activity: 60 min (Weekends)	0.71 ± 0.77	0.94 ± 0.89	0.361
Play Outdoors: 30 min (Weekdays)	2.06 ± 1.71	3.18 ± 2.01	0.103
Play Outdoors: 30 min (Weekends)	0.88 ± 0.78	1.24 ± 0.90	0.303
Girls			
Physical Activity: 60 min (Weekdays)	2.43 ± 1.57	3.10 ± 1.87	0.291
Physical Activity: 60 min (Weekends)	0.90 ± .77	0.95 ± 0.97	0.871
Play Outdoors: 30 min (Weekdays)	2.36 ± 1.92	3.14 ± 1.94	0.262
Play Outdoors: 30 min (Weekends)	0.91 ± 0.97	1.09 ± 0.92	0.505
*Paired sample t-tests			

Table 8. Pre to Post Changes in Eating Sweets, Drinking Soda, Physical Activity and Playing Outdoors Reported by 5th Grade Intervention Students by Gender (n=28 for Boys and n=26 for Girls)

Boys	**Mean ± SD**		***p* value***
	Pre	**Post**	
Yesterday, how many times did you eat sweets?	0.71± 0.66	0.39 ± 0.57	0.036
Yesterday, how many times did you drink soda?	0.41± 0.64	0.52± 0.58	0.449
Play Outdoors: 30 min (Weekdays)	2.68± 1.79	3.86± 1.53	0.008
Play Outdoors: 30 min (Weekend)	1.07 ± 0.81	1.54 ± 0.84	0.056
Physical Activity: 60 min (Weekdays)	2.93± 1.74	4.00 ± 1.33	0.013
Girls			
Yesterday, how many times did you eat sweets?	0.68 ± 0.56	0.56 ± 0.58	0.524
Yesterday, how many times did you drink soda?	0.12± 0.33	0.52± 0.91	0.03
Play Outdoors: 30 min (Weekdays)	3.19 ± 1.74	3.31 ± 1.98	0.832
Play Outdoors: 30 min (Weekend)	1.31 ± 0.93	1.31 ± 0.79	1
Physical Activity: 60 min (Weekdays)	3.92 ± 1.50	3.46 ± 1.86	0.373
*Paired sample t-tests			

Table 9. Pre to Post Changes in Drinking Soda, Playing Outdoors, and Physical Activity Reported by 6th Grade Intervention Students by Gender (n=33)

Boys	**Intervention**		
	Mean ± SD		***p* value***
	Pre	**Post**	
Play Outdoors: 30 min (Weekends)	1.07± 0.96	1.73 ± 0.73	0.072
Physical Activity: 60 min (Weekends)	1.20 ± 0.86	1.73 ± 0.70	0.072
Girls			
Play Outdoors: 30 min (Weekends)	3.40 ± 1.68	3.17 ± 1.67	0.02
Physical Activity: 60 min (Weekends)	0.74 ± 0.74	1.66 ± 0.64	0.021
*Paired sample t-tests			

Network-funded contractor:	Compton USD - 09-11220
Contract number:	09-11220
Information provided by :	Gehane Simoes
Telephone:	310-639-4321 X56683
Date:	7/31/2012
Email:	gsimoes@compton.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Compton Unified School District
Target Population:	8 years/3rd graders
Primary Curriculum Used:	Dairy Council Materials
Secondary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Third graders were chosen at 5 elementary schools to conduct the Impact Evaluation. Dairy Council workbooks were provided to all students and teachers. The network provided 5 scheduled lessons for teachers to administer in the classroom. This level was chosen, in order to monitor the results within the same group of kids over2 years.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Along with the dairy council lessons, "Power Up in 10" booklets were given to teachers, to use in the classroom throughout the intervention.

In 1-2 paragraphs, please provide a description of standardized training:

Each third grader received a dairy council workbook. The teacher conducted a lesson, once a month from the dairy council workbook to all students. Teachers followed a schedule with a set of lessons for the intervention. The teachers administered each lesson during the scheduled time, followed by some worksheet activities to support lesson. Teachers also encouraged some physical activity during each lesson, using the Power Up in 10 booklet.

In 1-2 paragraphs, please provide a description of standard administration of data

The Network for a Healthy California Youth Surveys were administered at the beginning of the intervention and at the end with a pre and a post test. Data was collected and inputted into the system. A comparison of the pre and post test results were then calculated for comparison and evaluation.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All third graders at Bursch, Carver, Emerson, Lincoln and Tibby Elementary received the dairy council workbooks, a 5 lesson plan schedule and a Power Up in 10 booklet, to administer the intervention.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 300 grade students who participated in Compton Unified School District will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

By Sept 30, 2012, a sample of 300 grade students who participated in Compton Unified School District will report an increase in outdoor/indoor physical activity on a daily basis.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample
How many matched surveys?	290
How many sites?	5
How many classrooms?	14
b. Control:	
How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey	
Goal 2/Objective 2	0	

Were any other measures used?	No

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	5

	Intervention			Control		
Pre-test:	9/30/2012	to	11/28/2012	NA	to	NA
Start of Intervention Date	10/3/2012			NA		
End of Intervention Date	4/27/2012			NA		
Post-test:	5/1/2012	to	6/8/2012	NA		NA
Follow-up:	1/0/1900	to	1/0/1900	NA		NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Based on the Youth Survey for 3rd graders at the selected 5 schools, there was an overall positive result. Breakfast was consistent throughout the intervention, with the help of BIC (Breakfast in the Classroom) implementation at 92%. Overall "healthy dietary behaviors", such as cheese, milk, yogurt and cereal, increased slightly. The consumption of fruits also increased a bit from 2.06-2.29, showing a desire to increase their fruit consumption and healthier food choices. There was an increase in the consumption of vegetables from 2.02-2.32, a P-value of 0.029. An overall increase in fruits and vegetables rose from 4.07-4.62, with a P-value of 0.013. This shows a tremendous desire to increase their daily intake with an additional fruit or vegetable, throughout the day. The overall "healthy foods" increased from 12.74-13.80, with a P-value of 0.030. In the "less Healthy Dietary Behaviors", although there was very minimal decrease in all categories, it showed a positive change in their food choices. There were steady results with access to fruits and vegetables in the home. There was not a significant change in the "Perceived Parental Consumption". In terms of physical activity, there was a decrease in both, the number of days of 60 minutes moderate/vigorous exercise and number of days of 30 minutes outdoor play.

As the Network continues to be active in the schools, I truly feel that the students begin to form a bond with you. When more nutrition messages are placed in the cafeteria; classroom; the increase in teachers' participation in nutrition activities; the placement of murals; and nutrition events, students become more aware of their surroundings and look forward to engage in such fun activities, that would encourage them to eat and think healthy. As I administered the pre and post-tests, students were so attentive and so eager to learn about different food options and what they need to do to stay healthy. I so enjoyed the interaction and the desire that those kids demonstrated during the intervention and throughout the year, towards other nutrition events.

b. Description of how evaluation results will be used:

This survey was to evaluate each individual on the consumption of fruits and vegetables and the increase in physical activity. With a couple of the different programs offered at the district, students are exposed to a greater awareness on healthy eating and how to make better choices on a daily basis. Breakfast in the classroom is a key component at the beginning of the day, offering a complete well balanced meal. During the day, the fruit and vegetable program, provides a serving of either one, to encourage the consumption of healthy choices throughout the day. Network for a Healthy California provides HOTM once a month and on-going cooking in the classroom and school wide activities that promote healthy choices. As a result of all these programs, students are increasingly receiving nutrition information inside and outside the classroom, towards better food choices. The Network will continue to encourage healthier food choices through nutrition education classes, cooking in the classroom and educational materials. The overall result in this intervention was fairly positive across the board. With the help of all the programs offered at the school sites, students are becoming more aware of healthier food choices and implementing them in the home. As for physical activity, there was not an increase in both categories. Network will provide additional educational such as, "jamin' minutes" and "instant recess", to teachers, to increase motivation and minutes towards exercising. Going into 4th grade, the same group of kids will be a part of this intervention for another year and possibly see a greater increase in healthy foods and physical activity. The Network will also provide additional nutritional messages to enhance their awareness on healthy eating and food choices, in the coming school year.

7. Point of Contact

Name:	Gehane Simoes
Phone Number:	310-639-4321 X56683
Email Address:	gsimoes@compton.k12.ca.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

no

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.80	0.91	0.11	0.184
4. Milk	1.49	1.65	0.16	0.071
5. Yogurt or cheese	0.61	0.65	0.04	0.569
6. Cereal	0.91	0.95	0.04	0.614
8. Vegetables	2.02	2.32	0.31	0.029
9. Fruit	2.06	2.29	0.23	0.081
10. Juice	1.82	1.73	-0.10	0.410
11. Water	3.17	3.44	0.27	0.039
15. Breakfast	0.92	0.92	0.00	1.000
Total: fruit & vegetable (no juice)	4.07	4.62	0.55	0.013
Total: fruit, vegetable, juice	5.90	6.34	0.45	0.138
Total: healthy foods (Q3-6, 8-11)	12.74	13.80	1.06	0.030
Less Healthy Dietary Behaviors				
7. French fries or chips	0.66	0.57	-0.09	0.197
12. Punch, sports drinks, fruit-flavored drinks	0.97	0.84	-0.13	0.174
13. Soda or soft drinks	0.60	0.57	-0.04	0.631
14. Cookies, cakes, other sweets	0.99	0.84	-0.15	0.074
Total: less healthy foods (Q7, 12-14)	3.19	2.82	-0.38	0.088
Trying New Foods	2.75	2.67	-0.08	0.337
16. Trying new fruits	1.45	1.40	-0.04	0.395
17. Trying new vegetables	1.30	1.27	-0.04	0.529
Home Access	3.44	3.53	0.09	0.264
18. Fruits to eat at home	1.75	1.78	0.03	0.372
19. Vegetables to eat at home	1.65	1.69	0.03	0.570
Perceived Parental Consumption	5.02	4.94	-0.08	0.599
20. How often parents eat fruit	2.43	2.53	0.10	0.298
21. How often parents eat vegetables	2.49	2.36	-0.13	0.103
Physical Activity	5.15	7.00	1.85	0.000
22. Days of 60 minutes moderate/vigorous	2.70	3.59	0.89	0.000
23. Days of 30 minutes outdoor play	2.44	3.41	0.97	0.000

Demographics

Average Age	8.0
Gender	
Males	141
Females	149

Network-funded contractor:	Contra Costa Health Services - 11-10224
Contract number:	11-10224
Information provided by :	Jennifer Lifshay & Maria Padilla
Telephone:	925 313-6831 and 925 313-6108
Date:	7/31/2012
Email:	Jennifer.Lifshay@hsd.cccounty.us; Maria.Padilla@hsd.ccounty.us

Section 1

1. Project Description and Goals

Project Name:	Contra Costa Health Services
Target Population:	18-59
Primary Curriculum Used:	Nuevos Niños Nuevas Familias
Secondary Curriculum Used:	0.E+00

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Three Promotoras from the community led seven workshop series that consisted of six sessions each. The target audience was Hispanic adult women between the ages of 18 and 60. Each series contained two food preparation activities. At the end of each session, each Promotora completed fidelity logs to highlight completed components of the workshops and to provide feedback. Topics that were covered in workshops series included: the recommendations for fruit and vegetable consumption and the amount of time recommended for physical activity; the components of a healthy breakfast and healthy snacks; serving sizes; demonstrations of a serving of fruit/vegetable; review of the USDA's food pyramid; menu planning that included tips on shopping on a budget; label reading; calculating the amount of sugar in food items; stress and nutrition; and nutrition and physical activity demonstrations. Network recipes were handed out and discussed with workshop participants.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

0

In 1-2 paragraphs, please provide a description of standardized training:

The Promotoras attended a training session where they learned how to administer the evaluation tools and were trained on key components of the workshops such as sample food demonstrations, and the store circular exercise.

In 1-2 paragraphs, please provide a description of standard administration of data

The Promotoras used standardized surveys. The evaluation survey used included the Food Behavior Checklist, 2 questions from the Fruit and Vegetable Checklist and a self-efficacy tool provided by the Carolyn Rider. They were also given a data collection protocol that provided direction on how to assign identification numbers and administer the demographic forms, attendance sheets, and pre-tests post-tests, and follow-up tests as well as how to complete fidelity logs. The Promotora manager, the Evaluation manager and/or another Promotora observed and assisted with the first pre-test administration of each Promotora to ensure that data collection was conducted according to the protocol.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

The Promotoras used a uniform curriculum and PowerPoint presentation.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 75 Adults who participated in at least five Promotora-led nutrition education sessions will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group but with a follow-up test

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	individual assignment

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	95
How many sites?	7
How many classrooms?	7

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Food Behavior Checklist (cups)	
Goal 2/Objective 2	0	

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	6

	Intervention			Control		
Pre-test:	2/8/2012	to	4/18/2012	1/0/1900	to	1/0/1900
Start of Intervention Date	2/8/2012			NA		
End of Intervention Date	5/23/2012			NA		
Post-test:	3/14/2012	to	5/23/2012	1/0/1900	to	1/0/1900
Follow-up:	4/4/2012	to	6/8/2012	1/0/1900	to	1/0/1900

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

This evaluation assessed the following pre-post changes among participants that attended 5 or more sessions of a Promotora-led nutrition education intervention: knowledge; self-efficacy; and self reported fruit and vegetable consumption behavior. The pre-test and post-test surveys included the same 21 questions: all 7 questions from the Fruit & Vegetable Checklist; 2 questions from the Food Behavior Checklist, 10 self-efficacy questions (from a tool provided by the State) and 2 additional questions about knowledge of the daily fruit and vegetable consumption and physical activity recommendations. Follow-up tests, administered at the start of follow-up sessions held approximtaley 3 weeks after the post-test sessions included these same 21 questions plus several questions related to participants' experiences attempting to eat fruits and vegetables in the 3 weeks prior to the follow-up test.

Two types of analyses were conducted on the knowledge, self-efficacy and behavior data collected for this evaluation: 1) pre-post test changes on all measures among all 95 participants who completed 5 or more sessions and completed matched pre-post tests and 2) changes between post-test and follow-up for each measure, among respondents who achieved improvements between the pre-test and post-test on each of these measures. The first analysis was conducted to assess the impact of the intervention on participants with an adequate dose of the intervention. The second analysis was conducted to assess whether improvements achieved during the intervention were maintained at follow-up.

The following is an overview of the findings and our interpretation of them. Paired t-tests were used to assess statistical significance for differences in means and McNemar's test was used to assess statistical significant for changes in proportions. (Table numbers in the text refer to the tables included in the results tab in the excel sheet of the report template.)

Knowledge

Pre-test to post-test (knowledge)

There were significant pre-post test increases in knowledge of both the daily fruit and vegetable consumption recommendations and the physical activity recommendations among intervention participants. At pre-test 11.6% of respondents knew the fruit and vegetable recommendations and 56.8% knew the physical activity recommendations. At post-test, the percent of respondents who knew these recommendations increased to 84.2% (fruit and vegetable) and 90.5% (physical activity). These changes were statistically significant ($p<.001$).

Post-test to follow-up (knowledge)

Among respondents who learned the fruit and vegetable recommendations during the intervention (i.e., positive pre-post change) this knowledge was not sustained: 100% knew the recommendations at post-test yet 89.6% did so at follow-up. This was a statistically significant decrease ($p=.02$). There is no evidence that knowledge of this recommendation changed between post-test and follow-up: 100% of respondents knew the recommendations at post-test compared to 90.6% at follow-up. This was not a statistically significant change. ($p=.25$).

Self-efficacy

Nine different self-efficacy (SE) measures were used to assess SE to eat fruits and vegetables. These included the following:

How sure are you that you could ….

a) eat fruit or vegetables when you are in a hurry

b) eat fruit or vegetables as part of lunch on most days

c) eat fruit or vegetables when you are feeling tired

d) eat fruit or vegetables when you are eating away from home

e) eat fruit or vegetables for dinner on most days
f) have an extra serving of vegetables at dinner
g) eat at least 5 cups of fruit or vegetables most days
h) order at least one vegetable dish at a restaurant
i) eat other fruit or vegetables when your favorites are not available

Pre-test to post-test (SE)
At pre-test, mean scores among intervention participants for all of these self-efficacy (SE) measures were between 3 ('can't decide') and 4 ('sure') except SE to 'order at least one vegetable dish at a restaurant' which was 2.99 (i.e., between 'not at all sure' and 'can't decide', but very close to 'can't decide'.) At post-test, mean scores were between 4 (sure) and 5 (very sure) on all measures except SE to 'eat fruit or vegetables when you are eating away from home', which was 3.97 (i.e., very close to but slightly less than 'sure').

Between the pre-test and post-test there were statistically significant increases in all of these individual self-efficacy measures and the aggregate measure of all nine individual SE measures : a) eat fruit or vegetables when you are in a hurry (p=.004); b) eat fruit or vegetables as part of lunch on most days (p=.001); and p<.001 for all other SE measures "c" through "I". The individual SE measure with the largest increase between pre-test and post-test was SE to "eat at least 5 cups of fruits and vegetables." (+1.14 from 3.10 to 4.24). This seems appropriate given that this was a major emphasis of the intervention. (See Table 2 for pre-post test means and changes for all nine SE measures.)

Post-test to follow-up (SE)
Analyses conducted on each of the individual SE measures among participants who experienced positive changes on these measures during the intervention indicated no evidence of any real change on any of these individual measures between post-test and follow-up (p-values ranged from .16 and .88). The overall, aggregate self-efficacy measure demonstrated an increase, from 39.07 to 40.58, which was statistically significant (p=.022). This seems plausible given that this aggregate measure of confidence to eat fruits and vegetable may continue to improve after the workshop series as participants have more opportunities to practice the skills they learned in the intervention.

Behaviors
A total of seven measures of fruit and vegetable consumption were assessed, primarily related to quantity and variety. The three measures of fruit consumption include: citrus consumption in the past week; cups of fruit eaten daily; and variety of fruit eaten daily. The three measures of vegetable consumption include: variety of vegetables eaten daily; cups of vegetables eaten daily; and 2 or more vegetables eaten at main meal. Fruit and vegetable consumption as snacks was the other measure assessed.

Pre-test to post-test (behaviors)
Between pre-test and post-test, all behavior measures demonstrated statisticaly significant improvements (i.e.,greater quantities or more variety) except for citrus consumption, which did not change significantly. The largest increases were changes in cups of vegetables consumed and cups of fruit consumed. Composite measures indicated statistically significant improvements in consumption with greater changes in the measures related to vegetables versus fruits.

FRUIT CONSUMPTION
Q2: Citrus fruit or juice consumption in the past week: Most participants reported consuming citrus fruit or juice during the past week on the pre-test (90.3%) and post-test (94.6%). This was not a statistically significant difference (p=.42).

Q3: Cups of fruit eaten per day: Mean fruit consumption increased by more than 1 cup from 1.37 cups on the pretest to 2.53 cups on the post-test. This change among intervention participants was statistically significant (p<.001).

Q4: Eat more than one kind of fruit daily: Mean increased +0.72, from 2.57 on the pretest to 3.30

on the post-test (i.e, between “sometimes” and “often” on the pre-test to between “often” and “always” on the post-test). This change among intervention participants was statistically significant (p<.001).

For overall fruit consumption, a composite measure including the three measures listedabove (i.e., citrus consumption as well as volume and variety of fruit consumed) was assessed. The mean for this composite score increased +0.68 from 1.90 to 2.58 (out of 3) indicating that overall fruit consumption improved. This change among intervention participants was statistically significant (p<.001).

VEGETABLE CONSUMPTION
Q5: Eat more than one kind of vegetable daily: Mean increased +0.66, from 2.60 to 3.26 (out of 4.0) between the pre- and post-test (i.e, between “sometimes” and “often” on the pre-test to between “often” and “always” on the post-test). This change amongintervention participants was statistically significant (p<.001).

Q6: Cups of vegetables eaten per day: Mean vegetable consumption increased by more than 1 cup (+1.26) from 1.28 cups on the pretest to 2.54 cups on the post-test. This change among intervention participants was statistically significant (p<.001).

Q7: Eat two or more vegetables at main meal: Mean increased +.76 from 2.47 to 3.24 (out of 4.0) between the pre- and post-test (i.e, between “sometimes” and “often” on the pre-test to between “often” and “everyday” on the post-test). This change among intervention participants was statistically significant (p<.001).

For overall vegetable consumption, a composite measure including the three measures listed above (i.e., volume and variety of vegetable consumption daily and at main meal) was assessed. The mean for this composite score increased +.95 from 1.43 to 2.38 (out of 3) indicating that overall vegetable consumption improved. This change among intervention participants was statistically significant (p<.001).

FRUIT & VEGETABLE CONSUMPTION COMBINED (Questions 1-7 from the Fruit & Vegetable Checklist.

Q1: Eat fruits or vegetables as snack: Mean increased +0.63 from 2.76 to 3.38 (out of 4.0) between the pre- and post-test (i.e, between “sometimes” and “often” on the pre-test to between “often” and “everyday” on the post-test). This change among intervention participants was statistically significant (p<.001).

For overall fruit and vegetable consumption, a composite measure including all seven behavior questions listed above regarding volume and variety of fruit and vegetable consumption, citrus consumption and consumption of fruits or vegetables as snack, was assessed. The mean for this composite score increased +1.89 from 3.93 to 5.81 (out of 7) indicating that overall fruit and vegetable consumption improved. This change among intervention participants was statistically significant (p<.001).

OTHER BEHAVIORS
Other behaviors that were assessed included consumption of regular soda and use of nutrition labels. Both soda consumption and use of nutrition labels improved significantly between pre-test and post-test.

Consumption of regular soda: Mean decreased -0.45 from1.86 to 1.41 between the pre- and post-test. (although both measures remianed between “sometimes” and “no”). This improvement among intervention participants was statistically significant (p<.001).

Use of nutrition labels when selecting items to purchase: Mean increased +.95 from 2.36 to 3.31 (out of 4) between the pre- and post-test. (i.e., between “sometimes” and “often” on the pre-test to between “often” and “always” on the post-test). This change among intervention participants was

statistically significant (p<.001).

Post-test to follow-up (behaviors)
Among intervention participants with positive pre-post test changes in behaviors, two individual behaviors and all aggregate measures of fruit, vegetable and fruit and vegetable consumption demonstrated statistically significant changes between post-test and follow-up. None of the other individual behavior measures changed significantly between post-test and follow-up; p-values ranged from .07 to 1.0.

Among people who decreased their soda consumption during the intervention, there was a statistically significant increase in the frequency of soda consumption between post-test (1.16) and follow-up (1.51). Both measures fall between 'no' and 'sometimes.'

Cups of fruit consumed and the composite measures for fruits, vegetables and fruits, and vegetables combined improved significantly between post-test and follow-up: cups of fruits consumed increased from 2.65 to 2.82 (p=.003); composite measures increased for fruit (2.72 to 2.83 out of 3; p=.01), vegetables (2.52 to 2.72 out of 3; p=.001) and both fruits and vegetables (5.94 to 6.35 out of 7; p=.001). Similar to pre-post test changes, these changes in composite measures were greater for vegetables than fruits.

Other follow-up questions
In addition to the knowledge, SE and behavior questions included on the pre-test and post-test, the follow-up test also included several questions to assess how difficult it was for participants to eat fruits and vegetables during the 3 weeks prior to the follow-up session and to identify which barriers and facilitators, if any, influenced their ability to do so.

When asked, "In the past 3 weeks, how easy or difficult was it to eat at least 5 cups of fruits and vegetables per day?," most respondents indicated that it was 'very easy' (66%) or easy (30%); only 3% indicated that it was "somewhat difficult."Most participants agreed that the following helped or motivated their ability to eat fruits and vegetables 'in the prior 3 weeks:

- Knowing how to plan meals with fruits and vegetables (98%)
- Concern for the health of my family (98%)
- Concern for my health (97%)
- Knowing how to prepare meals with fruits and vegetables (96%)
- Knowing that my family likes fruits and vegetables (89%)

When presented with the list of the following potential barriers to eating fruits and vegetables in the prior 3 weeks, few participants agreed that these were actual barriers for them:

- Fast food is more convenient (11%)
- Seeing advertisements for unhealthy foods including fast foods (9%)
- Fruits and vegetables take too much time to prepare; fruits and vegetables cost too much; and fruits and vegetables spoil; don't like to cook ; and family doesn't like to eat fruits and vegetables (3% agreed with each of these)
- Fruits and vegetables are difficult to get (1%)

Only 9 respondents indicated that they experienced other barriers to eating fruits and vegetables and only 7 mentioned specific barriers: lack of money; work/get home too late to prepare foods; issues with family interest in foods (e.g., children don't like some foods, rest of family doesn't like same foods as mother) and lack of new recipes.

I. PROCESS FINDINGS

Fidelity logs and attendance sheets completed by the Promotoras captured quantitative information including the degree to which the key elements of each session were completed and the amount of time spent delivering each session and delivering the demonstration activities specifically
The primary process targets for this intervention were met this year. Seven workshop series were

delivered between 2/8/12 and 5/23/12 to a total of 117 adult women who attended at least one session; 95 of these participants attended 5 or more sessions and completed matched tests (i.e., 81%).

An average of 113 minutes of nutrition education was provided per session. The first session of each series included the least amount of time spent on nutrition education (average of 86 minutes), in part because this session includes a 30 minute physical activity demonstration. Participants spent an average of 25 minutes engaged in the 2 food demonstrations offered in sessions 2 and 4.

b.Description of how evaluation results will be used.

The findings from this year's evaluation are consistent with prior years' evaluations of this intervention. We feel that the impact of this intervention is reasonable and do not anticipate making further changes to this intervention.

The follow-up test data did indicate some opportunities for emphasizing the fruit and vegetable recommendations and soda consumption messages outside of this intervention to help encourage people to eat enough fruits and vegetables and make or sustain reductions in soda consumption. Towards this end, we will support efforts to disseminate the "rethink your drink" message and reinforce the fruit and vegetable recommendations in the community.

b. Description of how evaluation results will be used:

(See attached word document)

7. Point of Contact

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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c
- Food Behavior Checklist
- Fruit and Vegetable Checklist
- Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Network-funded contractor:	Del Norte USD - 09-11223
Contract number:	09-11223
Information provided by :	Deborah Kravitz
Telephone:	707-464-0273
Date:	7/27/2012
Email:	dkravitz@delnorte.k12.ca.us

1. Project Description and Goals

Project Name:	Harvest of the Month, Power Up! With Fruits & Vegetables, and Garden-based Nutrition Education Program- Elementary School Sites
Target Population:	Grades 4th & 5th Ages 9-10
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	PowerPlay!

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

10 Monthly Harvest of the Month Lessons featuring f/v , of the month: Sept. – Tomatoes, Oct.-Root Vegetables, Nov.-Persimmons, Dec.-Oranges, Jan.- Grapefruit, Feb.-Kiwifruit, Mar.-Spinach, Apr.-Carrots, May-Peas, June-Berries. Utilizing 4th & 5th Grade

Power Up! With Fruits & Vegetables workbooks and following established and Network approved Pacing Guides; lessons focused on one or more of the following as well as featuring a Nutrition Competency aligned with CA Health Education Content Standards, Children's Power Play! and HOTM Activity, Tasting and Cooking, Nutrient Focus and Nutrition Literature Book. Garden based Nutrition Education met weekly and focused on a different seasonal f/v, seed, nut or herb that is local to our community along with a p.a. lessons and HOTM lesson.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

P.A. was incorporated into lessons as well as a featured "Energizer of the Month" that aligns with the HOTM featured f/v. Garden-based lessons featured physical activity as well. Support for staff implementing the "Mileage Club" program continued. P.A. breaks were incorporated into meetings and trainings. Support provided to teachers through offering staff trainings featuring physical activity as well as providing curriculum and material to support classroom-based p.a. This included the purchase of "Classroom Energizers", "Instant Recess" DVD, "The Shape of Yoga" and other approved Network materials/curriculum. Support of school based events and activities such as annual "Field Days" , "International Walk to School Day", p.a. fundraising activities (walk-a -thons)

In 1-2 paragraphs, please provide a description of standardized training:

LIA staff were trained on the new workbooks and teacher pacing guides the first week of school. Weekly planning days (Mondays) and Monthly staff meetings were held to plan lessons. Use of Network approved recommended and supplemental curricula. Attended Network trainings and Regional Network meetings /collaborative for professional development and support.

In 1-2 paragraphs, please provide a description of standard administration of data

Surveys conducted by Network staff utilizing a "Read Aloud" method with support from classroom teacher. Students instructed to not work ahead. Students verify date, student number, surveys collected and identified by classroom, put in folder. All efforts to conduct the pre and post surveys on same day of week were given and Mondays were excluded. Surveys were coded, matched and entered into template. Verification of survey coding and data entry was conducted.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

10 Monthly Harvest of the Month Lessons featuring f/v , of the month: Sept. – Tomatoes, Oct.-Root Vegetables, Nov.-Persimmons, Dec.-Oranges, Jan.- Grapefruit, Feb.-Kiwifruit, Mar.-Spinach, Apr.-Carrots, May-Peas, June-Berries. Utilizing 4th & 5th Grade

Power Up! With Fruits & Vegetables workbooks and following established and Network approved Pacing Guides; lessons focused on one or more of the following as well as featuring a Nutrition Competency aligned with CA Health Education Content Standards, Children's Power Play! and HOTM Activity, Tasting and Cooking, Nutrient Focus and Nutrition Literature Book. Garden based Nutrition Education conducted weekly and focused on a different seasonal f/v, seed, nut or herb that is local to our community as well as incorporated one lesson on p.a. and HOTM. Lessons were selected from Network approved curriculum and all lessons were consistent with each educator, pre-determined during weekly planning days and monthly staff meetings

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 200 grade students who participated in Harvest of the Month, Power Up! With Fruits & Vegetables, and Garden-based Nutrition Education Program- Elementary School Sites will report an increase in fruit and

vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Other (Specify in next field)	Specify Other: Pre Test and Post Test, No Control Group, and Intervention of different intensities

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	451
How many sites?	6
How many classrooms?	16

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	0

Were any other measures used? 0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	9 HOTM Lessons and 3-4 mostly garden based lessons for most classrooms, but not all--this varied the intensity

	Intervention			Control
Pre-test:	Sept. 13, 2011	to	Sept. 29, 2011	
Start of Intervention Date	Oct. 2011			NA
End of Intervention Date	6/1/2012			NA
Post-test:	6/1/2012	to	6/13/2012	
Follow-up:	1/0/1900	to	1/0/1900	

c. Describe how the data were collected.

Intervention: Paper and pencil survey

Comparison/control: NA

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Healthy Dietary Behaviors: Overall we saw a significant increase in Total: Fruit vegetable (no juice) and Total: Healthy foods (Q3-6, 8-11), which is great news. Specifically, Q3,4,6, and 10 (cheese, milk, cereal and juice) we saw a very slight decrease in consumption, which was not significant. Q5 Yogurt or cheese had no change in results between the pre and post surveys. Q8 Vegetables had a Pre test mean of 1.90 and a Post test mean of 2.03 for a P Value that was 0.206, which was a slight increase but not significant. However, students are indicating they ate vegetables 2 times. This is a bit disappointing as our HOTM program and garden-based nutrition education focuses heavily on fruits & vegetables and each of the schools participating in our evaluation have salad bars at lunch at least 2 days a week. In addition, most of our schools have very high (80-94%) free and reduced meal participation rates, where students rely on school meals. One note I am making is with regard to the day of the week the students are surveyed as compared to site salad bar days. Would be interesting to see if students indicated they ate more vegetables the day before if it were a day they had salad bar at their school. Q9 Fruits had a Pre test mean of 2.00 and a Post test mean of 2.44 for a P Value of 0.00, which is significant and can be attributed to our intervention. Q11, water had a Pre test mean of 3.68 and a Post test mean of 3.79 for a P-value of 0.266, which is not a significant increase in consumption. Students were indicating that they drank water between 3 and 4 times the day before, which is not enough! This is an area that with our RYD campaign and educational focus, we had hoped to see increases in consumption. Q15 Breakfast had a Pre test mean of 0.88 and a Post test mean of .087 for a P Value of 0.929, which indicates a flat change. Students are mostly indicating that they are eating breakfast , which is fantastic, especially since all our elementary schools have a Universal Free Breakfast Program. There is really no reason a child should not have access to breakfast. The TCE grant the district received to address improvements in the food services are (mentioned in the high school report) also has an objective for us to look at the school breakfast program and participation rates along with possibly "Piloting" a breakfast delivery program at one site to see if we can increase participation. This may be of interest in next year's evaluation results. Total: fruit & vegetable (no juice) had a Pre Test mean of 3.89 and a Post test mean of 4.47 for a P Value of 0.001, which is significant and can be attributed to the intervention received. Total; fruit, vegetable & juice had a Pre test mean of 5.33 and a Post test mean of 5.78 for a P Value of 0.047, which is also significant. Total: healthy foods (Q3-6, 8-11) had a Pre test mean of 13.07 and a post test men of 13.43 for a P Value of 0.263, which is an increase, but not significant. The results this year are a step in the right direction as compared to last year's data for Healthy Foods.

Less Healthy Dietary Behaviors: Overall we saw a decrease in consumption of less healthy foods, but not of a significant nature. Specifically, Q7 French fries or chips had a Pre test mean of 0.81 and a Post test mean of 0.67 for a P Value of 0.028, which is a significant reduction in consumption of these unhealthy foods. This was the only area where we saw numbers/changes that were significant. Q12 Punch, sports drinks had a Pre Test mean of 0.88 and a Post Test mean of 0.86 for a P Value of 0.802, which was not significant. Q13 Soda or soft drinks had a Pre Test mean of 0.57 and a Post Test mean of 0.50

for a P Value of 0.704. Q14, Cookies, cakes , other sweets had a Pre Test mean of 0.85 and a Post Test mean of 0.81 for a P Value of 0.568, which was not significant. Finally Total: less healthy foods (Q7, 12-14) had a Pre Test Mean of 3.10 and a Post Test mean of 2.93 for a P Value of 0.302, which was not significant but did illustrate a slight reduction in consumption of less healthy foods. The overall responses to less healthy foods seemed to be somewhere Yes, I ate them 1 time yesterday. Students really are not eating a lot of unhealthy foods according to our results, which is a very good thing. One disappointing result was with the soda, soft drink numbers. As mentioned before, the RYD campaign and education has been ongoing for the past year and we did cover RYD again this year in both the classrooms and heavily in the community. One possible explanation could be the timing of the post surveys (the last week of school) when many of the schools are celebrating with "field days" and field trips and parties. Soda consumption may be higher this week than normal. This is no excuse as the goal is to have our students want to choose healthy beverages over soft drinks anytime and especially during end of year celebrations and field trips.

Trying New Foods: Q16,17 Trying new fruits and vegetables had no significant change in the responses between the pre and post surveys. Students indicated that they "sometimes" like to try new f/v. Students indicated a higher preference for trying new fruits over vegetables, which is not surprising. Again, this is an area that we hope to continue to address and see increases in students' responses with the goal of students almost always or always.

Home Access: Q18,access to fruits at home to eat had a Pre Test mean of 1.71 and a Post Test mean of 1.70 for a P value of 0.768, which was basically no change. Students are indicating that they "sometimes" and closer to "Always" have fruits to eat. Q 19 Vegetables at home to eat had a bit of a surprising change. The Pre Test mean was 1.62 (slightly lower that fruits which I expected) and a Post Test mean of 1.74 for a P Value of 0.001, which is significant. The responses indicate a consistent ""Sometimes" and closer to "Always".

Perceived Parental Consumption: Q20,21 were fairly consistent between the Pre and Post test means. The P Values for both questions were not significant however, students did indicate that their parents are consuming fruits & vegetables "Most days a week", which is very good. In looking back at last year's data , the numbers for these questions are very similar.

Physical Activity: I am excited to report that for Q22,23, Physical Activity, both of these questions had a significant increase between the Pre and Post test means. Q22, Days of 60 minute moderate/vigorous had a Pre test mean of 4.77 and a Post Test mean of 5.26 for a P Value of 0.000, which indicates a significant increase in activity. Q23, days of 30 minutes playing outdoors had a Pre Test mean of 4.90 and a Post Test mean of 5.24 for a P Value of 0.023, which is also significant. Students reported being active 5 day s a week, which is great news. Our intervention this year included promoting physical activity either as a part of our HOTM lessons and/or as stand-alone lessons. In addition, our garden-based educators included one p.a. lesson as part of their weekly lessons each month. I believe that the increased attention and inclusion of p.a. into our intervention has provided some positive results.

Qualitative Findings:

As with previous years, I know that I can speak for my whole staff in that we all believe that we have the best jobs in the district! We are very proud of what we do and that we are making a difference in the lives and health of our students and their families as well as our staff in the district. There are numerous anecdotal examples of this. For example, there are the numerous "Thanks You" cards and letters written by students addressing appreciation for a great lesson that week/month. There are the emails from teachers thanking the staff for a great lesson. There are the parents (with student in tow) who stop by our booth at "Back To School" or "Open House" events or community events and share their stories about how their child came home and wanted mom to go to the store to buy the featured fruit or vegetable, or who request that the family make the recipe that was shared that day in school. There are the many times that we see students and their families in the community and the parent will say that somehow we were able to get their preschooler to try a new vegetable and that now everyone in their family has to try "Two Bites" and become members of a club. Finally, for the first year in a while, we have seen results that show that the students are increasing fruit & Vegetable consumption and increasing physical activity and that the results can be attributed to the intervention they receive. These are just a few of the things that have happened this past year in which I feel shows that Del Norte USD is moving the needle……

b. Description of how evaluation results will be used:

First of all, the Nutrition Staff will be holding a staff meeting prior to the beginning of the start of the school year at which time the results from this past year's Impact Evaluation will be shared and discussed. As a team, we can strategize as to how these results can be best used to meet our goals of increasing fruits and vegetable consumption and increasing physical activity. One other possibility would be to share the results with the staff at each of the participating school sites. As the program coordinator,

I attend periodic staff meetings at each of the schools to update them on the nutrition program. It may be interesting to present this data to the teachers and administrators at the sites and enlist their thoughts and ideas. With the Harvest of the Month program being our main emphasis, I know that we will plan on continuing with those successful aspects of our intervention which include: Harvest of the Month (new year of seasonal fruits and vegetables aligned with all our partners in the Northcoast region), Power Play! , Nutrition-based garden education and Color Cafe' (Salad Bar Nutrition Education). A continued effort to get the message home to our families through events at school sites (Back to School Nights, Open Houses, etc.), newsletters, community events, and possible parent education classes would be a priority. As with the previous High School report, I will be working closely with our Food Services Director and staff to see that the menus reflect the HOTM program. In addition, 3 of our schools were awarded the CDE Fresh Fruit & Vegetable Program Grant again this year (Joe Hamilton, Margaret Keating and Smith River), so these school sites will have access to an additional 3 days of fresh fruits & vegetables per week. I would also plan to share this information with our district administrative team and with the "Children's Health Collaborative" (CHC), a local group made up of parents, local physicians and school district employees as well as the newly formed School Wellness Council. . Finally, the “Power up with Fruits and Vegetables” workbooks for 4th & 5th grades have been redesigned with “Pacing Guides” developed and differentiation between the two grades to reflect the applicable content standards with an emphasis on the Health Education Content Standards and Nutrition Competencies. For the K ,1,2, 3, and 6th grades, our partners in the North Coast have developed "approved" Harvest of the Month workbooks that align with our HOTM schedule.

7. Point of Contact

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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. N/A

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* N/A

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

Food Preferences Survey	
Knowledge surveys various available; identify scale(s) from Compendium:	0
Norms surveys for children various available; identify scale(s) from Compendium:	0
Outcome Expectations for Fruits and Vegetables (Reynolds)	
Outcome Expectations for Fruits and Vegetables (Baranowski)	
Physical Activity Preferences for Children and Adults	
Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)
0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate

your intervention? If so, please briefly describe them below.

0

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	1.18	1.09	-0.09	0.171
4. Milk	1.62	1.57	-0.06	0.366
5. Yogurt or cheese	0.43	0.42	0.00	0.949
6. Cereal	0.83	0.78	-0.05	0.326
8. Vegetables	1.90	2.03	0.13	0.206
9. Fruit	2.00	2.44	0.44	0.000
10. Juice	1.44	1.32	-0.12	0.198
11. Water	3.68	3.79	0.11	0.266
15. Breakfast	0.88	0.87	0.00	0.929
Total: fruit & vegetable (no juice)	3.89	4.47	0.57	0.001
Total: fruit, vegetable, juice	5.33	5.78	0.45	0.047
Total: healthy foods (Q3-6, 8-11)	13.07	13.43	0.36	0.263
Less Healthy Dietary Behaviors				
7. French fries or chips	0.81	0.67	-0.13	0.028
12. Punch, sports drinks, fruit-flavored drinks	0.88	0.86	-0.02	0.803
13. Soda or soft drinks	0.57	0.59	0.02	0.704
14. Cookies, cakes, other sweets	0.85	0.81	-0.04	0.568
Total: less healthy foods (Q7, 12-14)	3.10	2.93	-0.17	0.302
Trying New Foods	2.58	2.67	0.10	0.126
16. Trying new fruits	1.45	1.51	0.06	0.100
17. Trying new vegetables	1.13	1.16	0.04	0.350
Home Access	3.34	3.46	0.11	0.051
18. Fruits to eat at home	1.71	1.70	-0.01	0.768
19. Vegetables to eat at home	1.62	1.74	0.13	0.001
Perceived Parental Consumption	4.51	4.68	0.17	0.138
20. How often parents eat fruit	2.20	2.31	0.12	0.073
21. How often parents eat vegetables	2.29	2.33	0.03	0.637
Physical Activity	9.67	10.50	0.83	0.001
22. Days of 60 minutes moderate/vigorous	4.77	5.26	0.49	0.000
23. Days of 30 minutes outdoor play	4.90	5.24	0.33	0.023

Demographics

Average Age	9.6
Gender	

Males	233
Females	218

Network-funded contractor:	Del Norte USD - 09-11223
Contract number:	09-11223
Information provided by :	Deborah Kravitz
Telephone:	707-464-0273
Date:	7/25/2012
Email:	dkravitz@delnorte.k12.ca.us

1. Project Description and Goals

Project Name:	0
Target Population:	0
Primary Curriculum Used:	0
Secondary Curriculum Used:	0

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Bimonthly nutrition education and physical activity promotion lessons were incorporated into the mandatory year-long freshman Health Classes. Utilized a schedule of 10 featured f/v for HOTM as well as approved Network existing curriculum, lessons focused on the nutrition and physical activity content areas of the CA Health Education Content Standards. Nutrition staff consulted with high school Health teachers to identify lessons that support their units and incorporate concepts and skills to support health literacy. One specific lesson (Rethink Your Drink) that was piloted last year was incorporated into the curriculum this year. In addition, nutrition staff continued to support the salad bar at lunch with nutrition education, student produced HOTM posters, weekly nutrition and p.a. tips in Daily Bulletin, participation in school/family events such as Back to School, Open House, Orientation Nights, etc., Warrior O.T. (After School Program) nutrition/cooking classes, and continuation of the youth-led nutrition education project (CHANGE).

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Participation in annual fall day called "Fruit & Physical Fitness Field Day" with all high school P.E. classes. Promotion of physical activity during bimonthly lessons using HOTM Energizers (provided by Regional P.A. Specialist), Instant Recess, Shape of Yoga, and classroom energizers. Finally close communications with high school P.E. teachers to promote p.a. and provide resources when possible and allowable

In 1-2 paragraphs, please provide a description of standardized training:

Weekly planning days (Mondays) and Monthly staff meetings were held to plan lessons. Use of Network approved recommended and supplemental curricula. Attended Network trainings and Regional Network meetings /collaborative for professional development and support along with Network Conference and participation in webinars

In 1-2 paragraphs, please provide a description of standard administration of data

Surveys conducted by Network staff utilizing a "Read Aloud" method with support from classroom teacher. Students instructed to not work ahead. Students verify date, student number, surveys collected and identified by classroom, put in folder. All efforts to conduct the pre and post surveys on same day of week will be given. Surveys will be coded, matched and entered into template. Verification of survey coding and data entry will take place. Network High School Survey Administration Protocol was reviewed and followed.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

10 Monthly Harvest of the Month Lessons featuring f/v of the month: Sept. – Tomatoes, Oct.-Root Vegetables, Nov.-Persimmons, Dec.-Oranges, Jan.- Grapefruit, Feb.-Kiwifruit, Mar.-Spinach, Apr.-Carrots, May-Peas, June-Berries.

Lessons were selected from Network approved curriculum and all lessons were consistent for each educator, pre-determined during weekly planning days and monthly staff meetings. Lessons for high school Health Classes were coordinated with Health teachers to ensure that they are consistent with the CHECS and unit being taught.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 150 grade students who participated in High School Health Classes will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	175
How many sites?	1
How many classrooms?	7

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network HS Survey
Goal 2/Objective 2	0

Were any other measures used?	No

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention			Control		
Pre-test:	9/12/2011	to	9/16/2011			
Start of Intervention Date	9/26/2012			NA		
End of Intervention Date	6/12/2012			NA		
Post-test:	5/30/2012	to	6/1/2012			
Follow-up:	1/0/1900	to	1/0/1900			

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Healthy Dietary Behaviors: Overall we saw significant increase in total fruit and vegetable (no juice) consumption, total fruit, vegetable and juice consumption, and total healthy foods consumption. In addition, we saw slight decreases (not of significance) in the consumption of milk and cereal (Q4,6) and very slight (not significant) increases in the consumption of cheese, juice, and water (Q3,8,14). Breakfast consumption stayed the same (Q18). These results are very positive and encouraging. Specifically: Q5 Yogurt had a Pre test Mean of 0.15 and a Post Test Mean of 0.33 for a P Value of 0.001, which is significant. However, the numbers indicate that high school students surveyed were still consuming yogurt less than one time the previous day. Q9 Fruit had a Pre Test Mean of 2.16 and a Post Test Mean of 2.489 for a P Value of 0.014, which indicates a significant increase in fruit consumption. Students indicated that they were consuming fruit 4-6 times within that past 7 days. Q10-13- Vegetables (green salad, potatoes, carrots, others) showed a Pre Test Mean of 4.03 and a Post Test Mean of 4.65 for a P value of 0.010, which is a significant increase. Students indicated they ate these vegetables at least 2 times daily. Q14 Water had a Pre Test Mean of 3.22. and a Post Test Mean of 3.42 for a P Value of 0.085, which was not significant. The encouraging part is that students are drink water at least 3 times the previous day and showed a very slight increase, however, with the Rethink Your Drink efforts going on, we had hoped to see more of a significant increase. One encouraging related piece to this is that there was a significant decrease in the consumption of punch, sports drinks and fruit-flavored drinks (Q15) and a decrease in soda consumption (Q16) which I will address next. In addition, one major factor that the Youth Engagement group (CHANGE) was able to determine after surveying 675 of their peers here at the high school is that students don't drink as much water here on campus as they would if the water fountains were maintained or in better condition. Students indicated they would drink more water if they had the facilities to do so. This summer we are installing 3 new water fountains/hydration stations and I am curious to see if we see an increase in water consumption in this next year. Q 18 Breakfast had a Pre Test Mean of 0.71 and a Post Test Mean of 0.71, for a flat result. The encouraging part of these results (assuming I am interpreting this correctly) is that almost 3/4's of our students indicated they ate breakfast. The great news is: Total: Fruit and vegetable (no juice) had a Pre Test Mean of 6.19 and a Post Test Mean of 7.13 for a P Value of 0.004, which indicates a significant increase in consumption. Total fruit, vegetable, juice had a Pre Test Mean of 7.99 and a Post Test Mean of 9.12 for a P Value of 0.004, which indicates a significant increase in consumption and Total healthy foods (Q3-6, 8-14) had a Pre Test Mean of 14.23 and a Post Test Mean of 15.76 for a P Value of 0.002, which indicates a significant increase in consumption of these foods.

Less Healthy Dietary Behaviors: Q7- French fries or chips had a Pre Test Mean of 0.72 and a Post Test Mean of 0.60 for a P Value of 0.077, which is not significant. However there was a decrease in consumption indicated and students were consuming less that 1 time the previous day, which is great news. Q 15, Punch, sports drinks, fruit-flavored drinks had a Pre Test Mean of 1.14 and a Post Test Mean of 0.89 for a P Value of 0.002, which indicates a significant reduction of consumption of these sugar sweetened beverages. Q 16 Soda or soft drinks had a Pre Test Mean of 0.78 and a Post Test Mean of 0.70 for a P Value of 0.321, for a decrease in consumption that is not significant, but none-the-less a decrease, which we are happy to see. The RYD lessons and local campaign I believe has made an impact on the decisions that the youth are making with regards to reducing unhealthy beverage consumption and drinking more healthy beverages like water and juice. As noted above, it will be interesting to see this next year if we continue to see a reduction in unhealthy beverage consumption and increase in water consumption as we install new hydration stations here at the high school and continue with the RYD lessons and campaign. Q17, Cookies, cakes, other sweets had a Pre Test Mean of 0.59 and a Post Test Mean of 0.54 for a P Value of 0.523, which is not significant. The good news here is that students are reporting that they consume less than 1 times yesterday and that they indicated a decrease in consumption, so they are not eating a lot of sweets. In summary, the Total; less healthy foods (Q7, 15-17) had a Pre Test Mean of 3.23 and a Post Test Mean of 2.73 for a P Value of 0.007, which is significant.

Trying New Fruits and Vegetables: Q19 Like to try new fruits had a Pre Test Mean of 1.36 and a Post Test Mean of 1.48 for a P Value of 0.012 which indicated a significant increase in responses to trying new fruits. Students indicated that they "sometimes" like to try new fruits and indicated a shift over the year closer to "Almost always or always". Q 20 Like to try new vegetables had a Pre Test Mean of 1.02 and a Post Test Mean of 1.07 for a P Value of 0.233, which is not significant. Basically it looks like students’ responses to this question remained fairly flat indicating that students "sometimes" like to try new vegetables. Overall Trying New Fruits and Vegetables had a Pre Test Mean of 2.38 and a

Post Test Mean of 2.55 for a P Value of 0.022, which is significant and indicated that the intervention has increased students willingness to try new fruits and vegetables.

Home Access: Q 21 and 22 access to fruits and vegetables at home indicated a small increase in access but nothing significant. Q19 Fruits to eat at home had a Pre test Mean of 1.66 and a Post Test Mean of 1.69 for a P Value of 0.447 and Q 22 Vegetables to eat at home had a Pre Test Mean of 1.63 and a Post Test Mean of 1.68 for a P Value of 0.190, also insignificant, yet very slight increase. Students are indicating that they have access "sometimes" leaning towards "always", which is good news. Our students appear to have access to f/v at home sometimes to always.

Perceived Parental Consumption: Q 23-24 results were also fairly flat between the pre and post survey results. Students indicated that their parental consumption for fruit (Q23) had a Pre Test Mean of 2.01 and a Post Test Mean of 2.09 for a P Value of 0.199. Q24 vegetables had a Pre Test Mean of 2.21 and a Post test Mean of 2.28 for a P Value of 0.352. Neither had a significant change but both responses to these two questions indicate that students perceive their parents eating f/v "most days during the week" which is good news.

Physical Activity: Q25-26 results indicate that students did not have a significant increase in physical activity. Q25 Days of 60 minutes moderate/vigorous had a Pre Test Mean of 3.86 and the same Post Test Mean. Q 26 Days of 30 minutes outdoor play had a slight decrease between Pre and Post Test Means (3.66 -3.63). On a positive note students are indicating that they are physically active more than 3.5 days a week and that students are getting 60 minutes of moderate to vigorous activity than "playing". One note I will make about Q 26 is that high school students seemed a little taken aback by the term "playing" as if they are too old to still be playing. I think this is a valid issue and that the wording for this question should be addressed and a more suitable, age appropriate word be used instead of playing.

Overall I believe that this year's survey results are very positive and the significant increases in consumption of f/v, healthy foods and beverages as well as the decrease in consumption of unhealthy foods and beverages can be attributed to the intervention of our nutrition education program and coordination of the education with the high school health classes and teachers. Having the opportunity this past year to work with these students on a regular basis and be an integral part of their curriculum has proven to be very successful in achieving one of our major Network goals of increasing fruit and vegetable consumption. We are very fortunate here in Del Norte that Health classes are a part of the graduation requirements for all students and that every freshman takes Health for a whole year.

Qualitative Findings

The Impact/Outcome Evaluation process has continued to be supported by the high school administration and health teachers and has gone along very smoothly over the past several years. We had several outstanding moments this year. First we saw significant positive results indicating that students were making healthier choices in their dietary behaviors which can be attributed to the intervention they have received here in school and specifically in their health classes. Our Nutrition Program Assistant worked very hard to prepare and conduct two lessons a month surrounding the featured HOTM f/v as well as nutritional cooking. Her dedication to the health classes this year and the outcome of the evaluation show that she is making and impact on these students along with their classroom health teachers. This is very encouraging as the nutrition staff and the health classroom staff along with the high school administration have made a commitment to make health and nutrition a priority and expect that the nutrition staff play a major role in providing the nutrition education throughout the year, not just for the 3 weeks that the health classes focus on a state nutrition unit. The students from the health, p.e. and foreign languages classes produced monthly HOTM posters that were displayed throughout the high school. (In FFY13 we would like to take some of the posters and put them in the various elementary and middle schools). The high school youth-led nutrition education project team, C.H.A.N.G.E. had another very successful year and was able to complete their research project. They will start all over again this fall with working their way through the YPAR process. Finally, I think we need to mention the Rethink Your Drink campaign and education that has been ongoing in our schools and community. We have started seeing practices of having healthy beverages at school district parent, staff and community meetings and celebrations as well as policies being implemented restricting and/or eliminating unhealthy beverages from meeting/events and/or celebrations.

b. Description of how evaluation results will be used:

The Nutrition Staff is planning on holding a staff meeting prior to the beginning of the 2012/13 school year at which time the results from this past year's Impact Evaluation will be shared and discussed. As a team, we can strategize as to how these results can be best used to meet our goals of increasing fruits and vegetable consumption and increasing physical activity. I think it is important to look at last year's data to see the trends. We have seen positive trends across the board with regard to increases in f/v consumption, physical activity, decreases in consumption of unhealthy foods, etc. One other possibility would be to share the results with the Health teachers at the high school. With the Harvest of the Month program being our main emphasis, I know that we will plan on continuing with those successful aspects of our intervention which include: Harvest of the Month (new year of seasonal fruits and vegetables aligned with all our partners in the Northcoast region), and Color Cafe' (Salad Bar Nutrition Education). A continued effort to get the message home to our families through events at school sites (Back to School Nights, Open Houses, etc.), newsletters, community events, will be made. Collaboration with our Food Services staff on how to incorporate next year's HOTM featured fruits and vegetables into the school menus and salad bars will continue. In fact, a grant addressing the increase in school meal participation has been allowing the staff to participate in a series of culinary trainings designed to incorporate more scratch cooking and increasing the use of fruits and vegetables and whole grains into the school meals. I would also plan to share this information with our administrative team, the "Children's Health Collaborative" (CHC), a local group made up of parents, local physicians and school district employees and the newly formed School Wellness Council.

7. Point of Contact

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Phone Number:	707-464-0273
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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

none

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

none

c. Did you use the Network Youth Survey or the Network High School Survey

Yes

d. Optional Surveys

- [ ] Food Preferences Survey
- [ ] Knowledge surveys various available; identify scale(s) from Compendium: 0
- [ ] Norms surveys for children various available; identify scale(s) from Compendium: 0
- [ ] Outcome Expectations for Fruits and Vegetables (Reynolds)
- [ ] Outcome Expectations for Fruits and Vegetables (Baranowski)
- [ ] Physical Activity Preferences for Children and Adults
- [ ] Self-Efficacy surveys for children various available; identify scale(s) from Compendium: 0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

Network High School Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.97	1.05	0.09	0.298
4. Milk	1.32	1.27	-0.05	0.521
5. Yogurt	0.15	0.33	0.18	0.001
6. Cereal	0.58	0.57	-0.01	0.931
8. Juice	1.79	1.99	0.19	0.117
9. Fruit	2.16	2.49	0.33	0.014
Vegetables (10-13)	4.03	4.65	0.61	0.010
14. Water	3.22	3.42	0.19	0.085
18. Breakfast	0.71	0.71	0.00	1.000
Total: fruit and vegetable (no juice)	6.19	7.13	0.94	0.004
Total: fruit, vegetable, juice	7.99	9.12	1.13	0.004
Total: healthy foods (Q3-6, 8-14)	14.23	15.76	1.53	0.002
Less Healthy Dietary Behaviors				
7. French fries or chips	0.72	0.60	-0.12	0.077
15. Punch, sports drinks, fruit-flavored drinks	1.14	0.89	-0.25	0.002
16. Soda or soft drinks	0.78	0.70	-0.08	0.321
17. Cookies, cakes, other sweets	0.59	0.54	-0.05	0.523
Total: less healthy foods (Q7, 15-17)	3.23	2.73	-0.50	0.007
Trying New Fruits and Vegetables	2.38	2.55	0.18	0.022
19. Like to try new fruits	1.36	1.48	0.12	0.012
20. Like to try new vegetables	1.02	1.07	0.06	0.233
Home Access	3.29	3.36	0.08	0.188
21. Fruits to eat at home	1.66	1.69	0.03	0.447
22. Vegetables to eat at home	1.63	1.68	0.05	0.190
Perceived Parental Consumption	4.24	4.40	0.16	0.175
23. How often parents eat fruit	2.01	2.09	0.08	0.199
24. How often parents eat vegetables	2.21	2.28	0.06	0.352
Physical Activity	7.52	7.49	-0.03	0.942
25. Days of 60 minutes moderate/vigorous	3.86	3.86	0.00	1.000
26. Days of 30 minutes outdoor play	3.66	3.63	-0.03	0.893

Demographics

Average Age	14.0
Gender	
Males	NA
Females	NA

Network-funded contractor:	East Los Angeles College
Contract number:	11-10217
Information provided by :	Dena Herman, Manjit Kaur, Jeannie Wakamatsu, Ani Tarpinian
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Section 1

1. Project Description and Goals

Project Name:	Harvest of the Month
Target Population:	8-11 years old/4th-5th Grade
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	0.E+00

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The intervention was offered through the Harvest of the Month Program. It included seven HOTM produce throughout the year at 7 elementary school sites within El Rancho USD. Three of the seven produce were offered via Tasting Trios where teachers signed up to receive ingredients to assemble in class. Two of the seven produce were offered via Cooking with the Chef where our chef went into classrooms and assembled the taste tests with the students. The other two produce were distributed in an assembly/classroom teaching format where our staff provided direct nutrition education along with taste tests. During the intervention, students learned about the history and importance of each fruit and vegetable and had an opportunity to taste healthy snacks incorporating the produce. Students received family newsletters to take home, along with the copy of the recipe.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

There was no concrete lesson plan for physical activity. However, the importance of physical activity was discussed during 2 out of the 7 HOTM presentations as a general guideline to follow.

In 1-2 paragraphs, please provide a description of standardized training:

All lead teachers were trained in administering the survey during the annual teacher training by the Data Manager. Lead teachers were given the surveys prior to the intervention to distribute to 4th and 5th grade classrooms.

In 1-2 paragraphs, please provide a description of standard administration of data

Lead teachers submitted names of all 4th and 5th grade classrooms at their site. From the list, one 4th and one 5th grade classroom was selected using the Random Number Generator from each of the seven participating sites. Surveys were given to students from the selected classrooms. Teachers gave instructions to students to fill out the surveys with the answers they felt were most accurate for their situation. Teachers also emphasized that there were no "correct" answers. Surveys were administered prior to the intervention and again after the intervention had been completed.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

The standard nutrition intervention across all sites included two 20-minute HOTM classroom presentations, two 30-minute Cooking with the Chef presentations, and three 30-minute Tasting Trios. Educator's Newsletters for teachers were provided prior to the taste test as a classroom resource. Four one-hour parent workshops were offered to all seven HOTM sites throughout the year. In addition, HOTM and MyPlate

websites were linked to school websites as parent resources. Each school's cafeteria was decorated with HOTM bulletin boards and displays. Each month students received HOTM menu slicks and HOTM Family Newsletters to take home. Food Service also incorporated featured HOTM produce at least twice each month. There was also a special promotion during National Nutrition Month to promote healthy eating.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 250 4th and 5th grade students who participated in Harvest of the Month will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Random Sample

How many matched surveys?	385
How many sites?	7
How many classrooms?	14

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1: Network Youth Survey

Were any other measures used? Recorded observations of behavioral changes in students, parents, and the school environment pertaining to HOTM were made by lead teachers. End of the year teacher evaluations were collected from the HOTM sites.

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	7

	Intervention	Control
Pre-test:	11/3/2011 to 11/18/2011	N/A to N/A
Start of Intervention Date	11/3/2011	NA
End of Intervention Date	11/18/2011	NA
Post-test:	5/25/2012 to 6/12/2012	N/A to N/A
Follow-up:	N/A to N/A	N/A to N/A

c. Describe how the data were collected.

Intervention: Surveys were administered to students who were instructed to fill them out (paper and pencil survey).

Comparison/control: N/A

d. How were the surveys administered?

See above. Surveys were collected from the students once they were completed. Teachers were instructed not to offer responses but only answer clarifying questions as they arose.

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Milk consumption dropped on average from the pre-test to the post-test. The average change was approximately 0.21 or less than a serving. This result was statistically significant. The occurrence of "trying new foods" - in general as well as vegetables alone - decreased on average by 0.15 from the pre-test to the post-test. However, physical activity whether vigorous play for at least 60 minutes, outdoor play for at least 30 minutes, or physical activity in general, all increased significantly on average from the pre-test to the post-test.

b. Description of how evaluation results will be used:

The results show milk consumption and that trying new foods (especially vegetables) dropped over the period from the pre-test to the post-test while engagement in physical activity increased. Based on conversations with principals, the reason for an increase in physical activity may be attributed to California Physical Fitness testing that took place at school sites in May, immediately prior to the post-test administration.

Follow-up conversations with the teachers who administered the intervention will take place to try to understand what their reasoning is for this phenomenon and if there are changes that can be made to the intervention curriculum to improve these results. We will also inquire if the timing of post-surveys perhaps had an effect on the results and determine if these were conducted too close to the end of school for children to be able to concentrate on the responses they were giving on the surveys.

In addition to what has been described above, another reason fruit and vegetable changes may not be in the desired direction is that Latinos, who make up a considerable proportion of our population already have a relatively high baseline consumption of fruits and vegetables. Certainly, data from other surveys shows that fruit consumption outweighs vegetable consumption so there is room to improve in that area. In addition, many of the families that participate may be experiencing food insecurity and may not have access (financial or geographic) to fruits and vegetables on a consistent basis. Evaluation of food security levels may help explain some of the declines in intake.

Qualitative Results

Furthermore, Rio Vista Elementary School implemented a no cupcake policy in FFY 2012. As a result of this policy, parents were asked to send fruits and veggies with dips, and other healthy snacks in lieu of sugary treats. The parents were able to accept this policy with fewer rebuttals due to the HOTM program. They were also more open to sending water and less sugary drinks to school with their children.

Overall, teachers have expressed that HOTM presentations such as Cooking with the Chef are special days at school. They shared that the children who have generally been considered finicky eaters, or shy in large groups, have enthusiastically volunteered for HOTM activities. Also, autistic or other special needs students have tried new foods that posed textural issues in the past, much to the surprise of the special needs teachers.

7. Point of Contact

Name:	Dena Herman
Phone Number:	310-968-1242
Email Address:	yasminaa66@yahoo.com,

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. N/A

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* N/A

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

Food Preferences Survey	
Knowledge surveys various available; identify scale(s) from Compendium:	0
Norms surveys for children various available; identify scale(s) from Compendium:	0
Outcome Expectations for Fruits and Vegetables (Reynolds)	
Outcome Expectations for Fruits and Vegetables (Baranowski)	
Physical Activity Preferences for Children and Adults	
Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

Recorded observations made by lead teachers and end of the year teacher evaluations from participating HOTM sites.

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.83	0.81	-0.02	0.779
4. Milk	1.55	1.34	-0.21	0.001
5. Yogurt or cheese	0.36	0.32	-0.04	0.402
6. Cereal	0.79	0.76	-0.03	0.714
8. Vegetables	1.52	1.38	-0.14	0.170
9. Fruit	1.59	1.68	0.10	0.432
10. Juice	1.39	1.22	-0.17	0.134
11. Water	3.18	3.24	0.06	0.627
15. Breakfast	1.01	0.90	-0.11	0.126
Total: fruit & vegetable (no juice)	3.11	3.06	-0.05	0.796
Total: fruit, vegetable, juice	4.50	4.28	-0.21	0.362
Total: healthy foods (Q3-6, 8-11)	11.21	10.76	-0.45	0.205
Less Healthy Dietary Behaviors				
7. French fries or chips	0.73	0.76	0.03	0.756
12. Punch, sports drinks, fruit-flavored drinks	0.74	0.82	0.08	0.186
13. Soda or soft drinks	0.66	0.68	0.02	0.833
14. Cookies, cakes, other sweets	0.75	0.69	-0.06	0.544
Total: less healthy foods (Q7, 12-14)	2.89	2.95	0.07	2.319
Trying New Foods	2.63	2.32	-0.31	0.019
16. Trying new fruits	1.50	1.34	-0.16	0.061
17. Trying new vegetables	1.13	0.98	-0.15	0.030
Home Access	3.41	3.45	0.05	0.415
18. Fruits to eat at home	1.78	1.81	0.03	0.346
19. Vegetables to eat at home	1.62	1.60	-0.01	0.726
Perceived Parental Consumption	4.40	4.31	-0.09	0.505
20. How often parents eat fruit	2.07	2.10	0.03	0.704
21. How often parents eat vegetables	2.12	2.10	-0.01	0.867
Physical Activity	6.05	7.25	1.20	0.000
22. Days of 60 minutes moderate/vigorous	3.08	3.67	0.58	0.001
23. Days of 30 minutes outdoor play	2.97	3.59	0.62	0.000

Demographics

Average Age	9.5
Gender	
Males	210
Females	175

Network-funded contractor:	Fresno County Office of Education - 11-10246
Contract number:	11-10246
Information provided by :	Cyndi Dean
Telephone:	559-443-4833
Date:	7/31/2012
Email:	ckirby@fcoe.org

Section 1

1. Project Description and Goals

Project Name:	Fresno County Office of Education (FCOE) The Power of Choice
Target Population:	8th grade students
Primary Curriculum Used:	USDA Food and Nutrition Service: The Power of Choice
Secondary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Fresno County office of Education (FCOE), Wellness and Nutrition Program utilized the recommended USDA Food and Nutrition Service, The Power of Choice and the California Department of Public of Health, The Harvest of the Month (HOTM) curriculum. FCOE also included educational strategies from the ReThink your Drink healthy beverage campaign and health and nutrition information from Choose MyPlate.

Monthly interactive lessons were delivered throughout the course of November 5, 2011 to May 25, 2012. The Power of Choice lessons covered opportunities on how to learn to read labels, balancing daily calories, enjoying foods, and eating less, opting for healthy drinks, the importance of getting-physical and becoming fast-food savvy. The inclusion of HOTM brought taste-testing to the forefront that offered a connection of including fresh produce as snacks and with meals.

Fresno County office of Education (FCOE), Wellness and Nutrition Program utilized the recommended USDA Food and Nutrition Service, The Power of Choice and the California Department of Public of Health, The Harvest of the Month (HOTM) curriculum. FCOE also included educational strategies from the ReThink your Drink healthy beverage campaign and health and nutrition information from Choose MyPlate.

Monthly interactive lessons were delivered throughout the course of November 5, 2011 to May 25, 2012. The Power of Choice lessons covered opportunities on how to learn to read labels, balancing daily calories, enjoying foods, and eating less, opting for healthy drinks, the importance of getting-physical and becoming fast-food savvy. The inclusion of HOTM brought taste-testing to the forefront that offered a connection of including fresh produce as snacks and with meals.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

FCOE promoted the importance of getting-up and moving and stressing the recommended 60 minutes of physical activity a day by following the Let's Move Program and also offered a variety of chances to improve their physical activity through the After-school venue and outside the classroom activities such as: Walk to School, Pentathlon Adventure, National Breakfast and Nutrition Month and Health Fairs.

Physical Activity promotion was prevalent within FCOE's Nutrition Education intervention. Student's learned: a) the importance and benefits of daily physical activity, b) the FITT (frequency, intensity, type, time) principles, c) discovered new and fun ways to get-the-heart-pumping and d) goal setting.

In 1-2 paragraphs, please provide a description of standardized training:

FCOE Nutrition Educators put heads together with Classroom teachers on a monthly basis, whether it was during lunch time or before and/or after school. Those of us that worked with the Physical Education department met them during their Professional Learning Committee (PLC) meetings.

Upon the beginning of the intervention, it was the role of the Nutrition Educators to model lessons. Allowing teachers to view firsthand what was expected, what steps are necessary to conduct a nutrition and HOTM activity, and how to include nutrition messages into core subjects, proved beneficial to all involved. A sense of easiness came from these encounters.

In 1-2 paragraphs, please provide a description of standard administration of data

Data was administered by district assigned FCOE Nutrition Educators whose task was to oversee the Pretest and Posttest in action. Because this Network Youth Evaluation was administered to eighth grade students, Nutrition Educators did not read questions aloud; instead these individuals discussed the evaluation prior to its start, reviewed instructions, clarified the student's role, oversaw and collected the survey upon completion.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Prior to administering the survey, all involved met, reviewed and discussed procedures. Noting that some surveys would occur during physical education classes, a quiet location was secured beforehand. Nutrition educators were equipped with plenty of pencils and evaluations; classroom lists were received the day of the assessment.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 150 eighth grade students who participated in Fresno County Office of Education (FCOE) The Power of Choice will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

By September 30, 2012, a sample of 150 students who participated in FCOE the Power of Choice will report an increase in physical activity.

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

By September 30, 2012, a sample of 150 students who participated in FCOE the Power of Choice will report a decrease in consumption of sugar sweetened beverages and/or an increase in consumption of healthy beverage alternatives.

2. Evaluation Design

What design was used?	Network Youth Survey

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Pre-Test and Post-Test to Intervention group only

4. Describe how assignment to these groups was carried out:

a. Intervention:	334
How many matched surveys?	251
How many sites?	6
How many classrooms?	10
b. Control:	
How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	Network Youth Survey

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention	Control
Pre-test:	10/1/11 to 10/30/11	NA
Start of Intervention Date	11/1/2011	NA
End of Intervention Date	5/1/12	NA
Post-test:	5/1/12 to 5/30/12	NA
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Background
The Network for a Healthy California Youth Survey served as the instrument to uncover what eighth grade students choose to consume on a daily basis and how they viewed and engaged-in physical activity. Eighth graders have unique developmental characteristics. They are experiencing a transitional period that includes change; intellectual, physical, emotional, and social as they progress from childhood to adolescence. We can perceive that, although they assume to know what they want, they really remain uncertain. And these changes can hinder or prompt behavioral change.
Overall
Upon reviewing the results of the Pre-Test and Post-Test, FCOE discovered:
Core curriculum takes center stage although research suggests that school-agers who eat healthy and engage in moderate to vigorous daily physical activity are better learners in the classroom. Even still, nutrition learning and finding ways to be physically active continues to list at the bottom of a teacher's priorities.
• The intervention promoted a statistically significant outcome within the following areas: a) consuming yogurt, cottage cheese or drinking a yogurt drink on a daily basis and b) including cooked or uncooked vegetables more times than none into their daily intake. Overall, we can conclude gains as students' intake of daily fruits and vegetables (HOTM) are on the rise. When selecting a juice drink, they reach for 100% fruit juice or they prefer no juice. The addition of yogurt, cottage cheese or drinking a yogurt drink is a huge indication of knowing the role dairy foods play in their lives.
• These noteworthy changes signify that when offered the right tools, sensible information and decision-making opportunities, eighth grade students do opt to make health enhancing eating choices that prove viable for their health now and for years to come.
Conclusion
School-based interventions do aid in promoting healthful dietary choices among this transitional age group. Furthermore, interventions can prove impactful in changing behaviors when presented as a series of improved choices that will boost their daily routines. The importance of sharing meals together as a family and practicing hands-on activities such as: discussing what's for dinner, grocery shopping, cooking all together and participating in a variety of physical activities, will prove to leave lasting impressions on all involved. Youth can take away these experiences and incorporate them daily as a way of life.

b. Description of how evaluation results will be used:

Evaluation results will be used as plan of action to open the new school year (4th quarter) within all school sites and continue throughout the start of the new contract year. The intent focus will present a means for Nutrition Educators, HOTM Classroom teachers, Physical Education teachers, Food Service personnel and for Afterschool programs.

7. Point of Contact

Name:	Cyndi Dean
Phone Number:	559-443-4833
Email Address:	ckirby@fcoe.org

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.	The following posters were presented on this evaluation: a) MyPlate poster and handouts, b) Drink Less Fat/Sugar, c) Fruit and Vegetable Posters and Photo Library, d) ReThink Your Drink, e) Nutrition Label and handouts, e) Healthy Warning, f) Fast Food Tablet and g) 10 Reasons Why Water is Good for You.
b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*	None

c. Did you use the Network Youth Survey or the Network High School Survey

Network Youth Survey

d. Optional Surveys

Food Preferences Survey	
Knowledge surveys various available; identify scale(s) from Compendium:	0
Norms surveys for children various available; identify scale(s) from Compendium:	0
Outcome Expectations for Fruits and Vegetables (Reynolds)	
Outcome Expectations for Fruits and Vegetables (Baranowski)	
Physical Activity Preferences for Children and Adults	
Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

None

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

FCOE Nutrition Educators observed the intervention from beginning to end. They also met, reported-out and discussed occurrences during monthly Team Meetings that showcased all school site experiences.

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	1.06	1.01	-0.05	0.444
4. Milk	1.40	1.28	-0.12	0.071
5. Yogurt or cheese	0.26	0.38	0.12	0.033
6. Cereal	0.54	0.52	-0.02	0.616
8. Vegetables	1.54	1.55	0.00	0.964
9. Fruit	1.54	1.83	0.28	0.002
10. Juice	1.08	1.20	0.12	0.235
11. Water	3.41	3.41	-0.01	0.891
15. Breakfast	0.68	0.65	-0.03	0.414
Total: fruit & vegetable (no juice)	3.09	3.38	0.29	0.044
Total: fruit, vegetable, juice	4.17	4.58	0.41	0.031
Total: healthy foods (Q3-6, 8-11)	10.86	11.13	0.28	0.318
Less Healthy Dietary Behaviors				
7. French fries or chips	0.70	0.76	0.06	0.388
12. Punch, sports drinks, fruit-flavored drinks	0.88	0.88	0.00	0.954
13. Soda or soft drinks	0.73	0.71	-0.02	0.777
14. Cookies, cakes, other sweets	0.74	0.68	-0.06	0.379
Total: less healthy foods (Q7, 12-14)	3.05	3.03	-0.02	0.903
Trying New Foods	2.31	2.30	-0.01	0.876
16. Trying new fruits	1.32	1.32	0.00	0.925
17. Trying new vegetables	1.00	0.98	-0.02	0.784
Home Access	3.48	3.44	-0.04	0.533
18. Fruits to eat at home	1.71	1.74	0.03	0.394
19. Vegetables to eat at home	1.73	1.66	-0.07	0.108
Perceived Parental Consumption	4.56	4.49	-0.07	0.582
20. How often parents eat fruit	2.24	2.25	0.02	0.768
21. How often parents eat vegetables	2.30	2.24	-0.06	0.485
Physical Activity	7.81	7.31	-0.50	0.116
22. Days of 60 minutes moderate/vigorous	4.08	3.74	-0.34	0.053
23. Days of 30 minutes outdoor play	3.71	3.54	-0.17	0.343

Demographics

Average Age	13.0

FFY12 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Huntington Beach Union High School District - 09-11226
Contract number:	09-11226
Information provided by :	Nancy Wikes
Telephone:	714-894-1698
Date:	7/25/2012
Email:	nwikes@hbuhsd.edu

1. Project Description and Goals

Project Name:	Nutrition Skill Building through Cooking
Target Population:	14-17 years/9th-12th grade
Primary Curriculum Used:	A series of 6 contractor created lessons
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

A series of 6 lessons were conducted with the health classes over the course of the semester. The lessons included: Lesson 1: MyPlate/Portion Sizes, Lesson 2: Food Labels, Lesson 3: Rethink your Drink, Lesson 4: Menu Panning, Lesson 5: Media/Shopping and Lesson 6: Physical Activity. Skill building activities were included with each lesson in the form of hands on cooking demonstrations; students prepared veggie quesadillas, fruit parfaits, spa water, veggie tortilla roll ups, salads and kiwi salsa. SMART goals were discussed and a pledge poster was created; each student wrote their healthy lifestyle goal on the poster which remained in the classroom for the entire semester.

This series was conducted twice, once during first semester and the second time during second semester.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

One of the 6 lessons noted above was physical activity. The lesson included a discussion on the definition of physical activity, the recommendations, the importance of physical activity, common barriers, ways to become more physically active etc. The skill building activity for this lesson was a Salsa Calisthenics activity which integrated making salsa with physical activity.

In addition, three of the 6 lessons included a "Stop and Scribble" activity. Following the lesson music would start and the students would be instructed to do an exercise until the music stopped, at that time the instructor would ask a question and the students would quickly "scribble" down the answer and the music would start again. The students would then be instructed to do a new exercise. This continued for 4 or 5 different exercises. Examples of the exercises include: squats, knee highs, jumping jacks, overhead arm stretch, and arm circles. When the entire activity was complete the students were given the answers - reviewing the lesson.

In 1-2 paragraphs, please provide a description of standardized training:

Training was standardized by using the same instructor for all classes.

In 1-2 paragraphs, please provide a description of standard administration of data

Data collection was standardized by using the Network Administration Protocol.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Training was standardized across all classrooms by using the same instructor for all classes. One instructor conducted lessons #1 and 2 in all classes. A second instructor conducted lessons #3 and 4. And a third instructor conducted lesson #5 and 6 in all classes.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 150 9th-11th grade students who participated in Nutrition Skill Building through Cooking will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Sugar Sweetened Beverages) Optional:

By Sept 30, 2012, a sample of 150 9th-11th grade students who participated in Nutrition Skill Building through Cooking will report a decrease in consumption of sugar sweetened beverages and/or an increase in consumption of healthy beverage alternatives.

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample
How many matched surveys?	712
How many sites?	2
How many classrooms?	23

b. Control:	Convenience Sample
How many matched surveys?	118
How many sites?	1
How many classrooms?	5

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network HS Survey
Goal 2/Objective 2	Network HS Survey

Were any other measures used?	N/A

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	6

	Intervention			Control		
Pre-test:	9/7/11 and 2/6/2012	to	9/8/11 and 2/8/2012	2/23/2012	to	2/24/2012
Start of Intervention Date	10/1/11 and 2/16/2012			NA		
End of Intervention Date	12/15/11 and 4/6/2012			NA		
Post-test:	1/9/12 and 6/5/2012	to	1/13/12 and 6/8/2012	6/6/2012	to	6/15/2012
Follow-up:	to			to		

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	Paper and pencil survey	

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Results from the intervention group showed a number of significant results under the categories: Healthy Dietary Behaviors, Less Healthy Dietary Behaviors, Trying New Fruits and Vegetables, and Physical Activity.

More specifically, under the “Health Dietary Behaviors” category both milk and yogurt consumption increased (with a p-value of .001 and .003 respectively); fruit and vegetable consumption increased (p-values .024 and .013) and total: fruit and vegetable (no juice), total: fruit, vegetable, juice and total: healthy foods all significantly increased (p-values .003, 049, and .040 respectively).

Under the “Less Healthy Dietary Behaviors” category: punch, sports drinks, fruit flavored drinks, soda, cookies, cakes, other sweets and Total: less healthy foods all significantly decreased with p-values .000.

Both questions under the “Trying New Fruits and Vegetables” category showed significant results. The question “Like to try new fruits” showed a significant increase with a p-value .000 and the question “Like to try new vegetables” increased with a p-value .010.

The results of the physical activity questions also showed a significant increase. The question regarding “the days of 60 minutes of moderate/vigorous activity” increased with a p-value .000 and “the days of 30 minutes outdoor play” increased with a p-value .011.

None of the questions related to the “Home Access” or the “Perceived Parental Consumption” categories showed any significant results.

Results from the control group showed significant results on three questions under the “Healthy Dietary Behaviors” category only. The significant results under this category show a decrease in cheese consumption with a p-value of .023, a decrease in juice consumption with a p-value of .009 and an increase in cereal consumption with a p-vale of .005.

There were no significant results in the “Less Healthy Dietary Behaviors”, “Trying New Fruits and Vegetables”, “Home Access”, “Perceived Parental Consumption, or the “Physical Activity” categories for the control group.

Summary:

Based on these results it appears that the intervention had a positive effect on helping high school students increase their consumption of healthy foods and decrease their consumption of unhealthy foods. Students responded that they consumed more fruits, vegetables and dairy products and were more willing to try new fruits and vegetables overall. They also responded that they decreased the amount of sugar sweetened beverages, sports drinks and other sweets they were consuming. In addition, physical activity was shown to significantly increase in the intervention group.

The control group showed a few significant results including a decrease in cheese and juice consumption and an increase in cereal consumption. The control group data was based on 118 matched surveys which is a sufficient sample to analyze this data. However, the intervention group data was based on 712 matched surveys which provide greater statistical power.

b. Description of how evaluation results will be used:

These evaluation results will be used to further improve and continue the intervention provided to high school students.

7. Point of Contact

Name:	Nancy Wikes
Phone Number:	714-894-1698
Email Address:	nwikes@hbuhsd.edu

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

n/a

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

n/a

Network High School Survey Results

Intervention Group

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.82	0.85	0.02	0.559
4. Milk	1.16	1.29	0.12	0.001
5. Yogurt	0.19	0.26	0.07	0.003
6. Cereal	0.44	0.41	-0.03	0.356
8. Juice	1.83	1.75	-0.08	0.233
9. Fruit	2.06	2.20	0.14	0.024
Vegetables (10-13)	3.62	3.87	0.25	0.013
14. Water	3.52	3.43	-0.09	0.115
18. Breakfast	0.69	0.71	0.02	0.256
Total: fruit and vegetable (no juice)	5.68	6.08	0.40	0.003
Total: fruit, vegetable, juice	7.50	7.81	0.31	0.049
Total: healthy foods (Q3-6, 8-14)	13.58	13.97	0.39	0.040
Less Healthy Dietary Behaviors				
7. French fries or chips	0.66	0.62	-0.04	0.296
15. Punch, sports drinks, fruit-flavored drinks	0.86	0.71	-0.15	0.000
16. Soda or soft drinks	0.72	0.57	-0.15	0.000
17. Cookies, cakes, other sweets	0.71	0.58	-0.13	0.000
Total: less healthy foods (Q7, 15-17)	2.92	2.46	-0.46	0.000
Trying New Fruits and Vegetables	2.36	2.50	0.14	0.000
19. Like to try new fruits	1.34	1.42	0.09	0.000
20. Like to try new vegetables	1.02	1.08	0.06	0.010
Home Access	3.44	3.46	0.02	0.500
21. Fruits to eat at home	1.75	1.74	0.00	0.938
22. Vegetables to eat at home	1.69	1.71	0.02	0.330
Perceived Parental Consumption	4.43	4.44	0.01	0.835
23. How often parents eat fruit	2.16	2.16	-0.01	0.798
24. How often parents eat vegetables	2.24	2.26	0.01	0.628
Physical Activity	6.32	6.95	0.63	0.000
25. Days of 60 minutes moderate/vigorous	3.43	3.80	0.38	0.000
26. Days of 30 minutes outdoor play	2.90	3.15	0.25	0.011

Demographics

Average Age	14.6
Gender	
Males	398
Females	345

Control Group

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	1.07	0.84	-0.23	0.023
4. Milk	1.10	1.03	-0.08	0.331
5. Yogurt	0.19	0.22	0.03	0.529
6. Cereal	0.29	0.48	0.19	0.005
8. Juice	2.27	1.84	-0.43	0.009
9. Fruit	2.19	2.12	-0.08	0.623
Vegetables (10-13)	3.34	3.45	0.11	0.621
14. Water	3.21	3.16	-0.04	0.765
18. Breakfast	0.71	0.71	0.00	1.000
Total: fruit and vegetable (no juice)	5.55	5.56	0.01	0.977
Total: fruit, vegetable, juice	7.86	7.41	-0.45	0.221
Total: healthy foods (Q3-6, 8-14)	13.74	13.07	-0.67	0.160
Less Healthy Dietary Behaviors				
7. French fries or chips	0.64	0.64	0.00	1.000
15. Punch, sports drinks, fruit-flavored drinks	0.84	0.76	-0.08	0.337
16. Soda or soft drinks	0.47	0.54	0.08	0.319
17. Cookies, cakes, other sweets	0.66	0.52	-0.14	0.106
Total: less healthy foods (Q7, 15-17)	2.59	2.47	-0.12	0.496
Trying New Fruits and Vegetables	2.03	2.08	0.04	0.544
19. Like to try new fruits	1.19	1.27	0.09	0.096
20. Like to try new vegetables	0.85	0.80	-0.04	0.299
Home Access	3.49	3.52	0.03	0.703
21. Fruits to eat at home	1.78	1.81	0.03	0.551
22. Vegetables to eat at home	1.71	1.71	0.01	0.843
Perceived Parental Consumption	4.12	4.31	0.19	0.171
23. How often parents eat fruit	2.03	2.17	0.14	0.129
24. How often parents eat vegetables	2.04	2.14	0.09	0.251
Physical Activity	5.25	5.32	0.06	0.835
25. Days of 60 minutes moderate/vigorous	2.74	2.85	0.11	0.485
26. Days of 30 minutes outdoor play	2.54	2.46	-0.08	0.678

Demographics

Average Age	16.1
Gender	
Males	87
Females	103

Network-funded contractor:	Health Education Council - 08-85132
Contract number:	08-85132
Information provided by :	Kacy Rodriguez
Telephone:	916-556-3344 x. 123
Date:	7/31/2011
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Section 1

1. Project Description and Goals

Project Name:	Exercise Across California 2011
Target Population:	4th

Primary Curriculum Used:	
PowerPlay!	
Secondary Curriculum Used:	
	0

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

The Exercise Across California (EAC) fitness and nutrition program, serving over 900 fourth grade students and over 40 teachers was developed by the San Joaquin County Office of Education (SJCOE) who set a number of fitness and nutrition goals and objectives to positively impact the health of participating students. The 2010-2011 school year was the second year in which the program aimed to get students to be energized about fitness and nutrition through increasing physical activity in the school setting, providing fitness and nutrition information in the classroom, and creating community partnerships that reinforced the importance of fitness and nutrition in the surrounding environment. 32 4th grade classes from 14 schools in San Joaquin County were selected to be a part of the EAC program. Each 4th grade class walked 2,126 miles collectively across California visiting 12 historical and educational milestones along the way. Miles were tracked over 5 months using pedometers that were purchased using grant funds from Kaiser Permanente (KP). Each school additionally received $2500 from KP to purchase physical education equipment to use in the program. The top 3 students from each grade, who exercised the most miles won a trip to San Francisco to walk across the Gold Gate Bridge and also attend a San Francisco Giants game. The Children's Power Play! Campaign - Gold Country Region provided the main nutrition component of this program and implemented the School Idea and Resource Kit (SIRK) into all participating classrooms through teacher trainings and materials distribution--assisted heavily by San Joaquin University of California Cooperative Extension. It was the aim of the nutrition component of the EAC program to conduct at least 7 lessons from the SIRK throughout the duration of the intervention. At the end of the school year, students would be rewarded for their participation in EAC through Kaiser Permanente's The Best Me Educational Theatre performance, which supported the nutrition and physical activity messages from EAC. Some participating schools also received a promotional assembly from the Children's Power Play! Campaign – Gold Country Region.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

EAC developed a goal to energize children to exercise and be active to prepare students for the California Physical Fitness Test. The program set an objective to improve California Physical Fitness Test Results by 10% by the end of the program through getting the fourth grade students to exercise at least 5 miles per month from January-May 2011. Teachers recorded the number of miles exercised per student, per month during this time period. In order to make these objectives fun and engaging for students, the program incorporated information about California history and geography into the miles that students exercised—making their fitness education into a journey that represented miles "exercised across California."

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Lead teachers for each participating school received the Children's Power Play! Campaign standard training for the School Idea and Resource Kit.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

All participating fourth grade students (convenience sample) were administered a pre-test paper and pencil survey in October 2010 before the intervention began. Completed pretests were collected in November 2010. The same group of students was administered post-test paper and pencil surveys in April 2011 and collected in May 2011. There were no questions included in the post-test that were not on the pre-test. No comparison (control) data sample was collected.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

All classrooms implemented the School Idea and Resource Kit activities as a part of the EAC program. No additional nutrition education intervention materials were used.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

Impact/Outcome Objective 1:

By Sept 30, 2011, a sample of 780 4th grade students who participated in Exercise Across California 2011 will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

a. What design was used?

Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?

Individual

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample
b. Control:	

# of intervention matched pre/post measures collected	679
# of control matched pre/post measures collected	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey	
Goal 2/Objective 2	Other-Specify	Specify Other: School Idea & Resource Kit

Where any other surveys used?	0

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/1/2010	11/1/2010
Post-test:	3/1/2011	5/1/2011
Follow-up:		

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	7/10/2011

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Data collection for the 2010-2011 EAC school year represented a more rigorous evaluation through an increase in match size from 574 in 2009-2010 to 679 in 2010-2011, additionally, sample size increased from 683 to 780. Data was received from 27 of the 32 participating EAC classrooms, representing 13 schools and 9 school districts in San Joaquin. Of the 780 surveys that were administered, 679 matched. This is the second year that EAC has been the focus of Gold Country Region's Impact/Outcome Evaluation, which has yielded notable benefits in conducting the intervention and analyzing results. One benefit is that participating teachers, schools and other involved personnel are, on the most part, already familiar with the content of the nutrition education being conducted and the accompanying evaluation process. Additionally, the Evaluation Coordinators now have two sets of data from two years in a row which makes for a richer analysis that can not only compare pre- and post-test changes, but also differences and means between different years of evaluation. If the program and accompanying evaluation continue, then there may be the possibility of using the data for a longitudinal study that analyzes the evolution of a nutrition and physical activity program within the same region over time. In general, the results from the second year of the EAC program show marked increases in Knowledge, Norms, Self Efficacy and Fruit and Vegetable Consumption with p-values less than or equal to 0.05. Similar to last year, there were not plans for policy change (particularly those of availability and access) regarding nutrition, so it can be assumed that we did not see statistically significant changes in consumption because there were no new opportunities where students could enact what they learned. Furthermore, students outcome expectations may have been affected by this lack of policy change because without being able to experience results first-hand, their beliefs in the effects of fruits and vegetables on a healthy lifestyle may not have been realized. School policies and the availability of fresh produce would have led to changes in norms and consumption. Future efforts should focus on these aspects and additional collaborations who have expertise in school wellness policies should be formed to develop a well-rounded multi-faceted program. Last year, the results of the 2010 EAC Evaluation did not show statistically significant increases in Norms, however, this current year's results do show an increase. Being in its second year of implementation in the same school sites, EAC may have generated excitement over fruit and vegetable consumption and physical activity that carried over and increased from its first year. Additionally, Kaiser Permanente's The Best Me Educational Theatre troupe performs to all 3rd, 4th, and 5th grade students at participating schools—meaning that this year's fourth graders received additional excitement and encouragement from their exposure as third graders last year. These factors may have very well affected the increase in positive social norms regarding fruit and vegetable consumption.

b. Description of how evaluation results will be used:

San Joaquin County Office of Education will be using results to submit a final report to their funder for this program, Kaiser Permanente. We are still waiting on information regarding the continuance of this program for the 2011-2012 school year.

7. Point of Contact

Name:	Kacy Rodriguez
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Email Address:	krodriguez@healthedcouncil.org

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

0

c. Did you use the Network Youth Survey or the Network High School Survey

Yes

d. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Knowledge				
Total Score (Q1-Q4, Q26)	2.20	2.74	0.54	0.000
Q1	0.74	0.74	0.00	0.945
Q2	0.83	0.90	0.07	0.000
Q3	0.09	0.21	0.11	0.000
Q4	0.26	0.33	0.07	0.005
Q26	0.27	0.55	0.28	0.000
Outcome Expectations				
Total Score (Q5-Q13)	37.15	37.38	0.23	0.388
Self-Efficacy				
Total Score	45.24	46.13	0.89	0.026
SE for shopping (Q14, Q16-Q17)	12.63	12.59	-0.04	0.733
SE for asking (Q15, Q18-Q21)	20.76	21.09	0.33	0.082
SE for eating FV (Q22-Q24)	11.62	12.12	0.49	0.007
Norms				
Total Score (Pg. 5, Q27-32)	4.27	4.93	0.65	0.036
Fruit Norms (Pg. 5, Q27-Q29)	2.44	2.68	0.24	0.007
Vegetable Norms (Pg. 5, Q30-Q32)	1.81	1.98	0.17	0.239
Consumption				
Vegetable Consumption	1.31	1.38	0.08	0.133
Fruit Consumption	1.54	1.63	0.09	0.081
Juice Consumption	1.36	1.27	-0.09	0.101
Total Consumption	4.22	4.28	0.06	0.524

Demographics	
Hispanic	
yes	285
no	228
Race/Ethnicity	
American Indian or Alaskan Native	71
Asian	40
Black or African American	54
Native Hawaiian or Other Pacific Islander	36
White	209

Network-funded contractor:	Monrovia USD - 10-10069
Contract number:	10-10069
Information provided by :	Lizett Olivares
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Date:	7/22/2012
Email:	lolivares@monroviaschools.net

1. Project Description and Goals

Project Name:	Healthy Valley Collaborative's Healthy Parents, Healthy Communities
Target Population:	18-59
Primary Curriculum Used:	Contractor developed Healthy Parents, Healthy Communities 5 Session series
Secondary Curriculum Used:	0.E+00

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

This skills-based five session parent series is designed to promote learning by “doing.” Therefore, nutrition content and physical activity promotion are integrated throughout each lesson. Topics include: My Plate, consuming and preparing healthy beverages, using a nutrition facts label to make healthy food and drink choices at the grocery store, learning about calcium-rich foods, preparing a nutritious breakfast, and making healthy choices while eating outside of the home. The series is also taught sequentially to build participants’ skills and knowledge in a progressive manner. The components are listed below.

Education Component: 15-20 minutes
Hands-on Activity: 10-15 minutes
Physical Activity: 5-10 minutes
Recipe Preparation: 25-30 minutes

In 1-2 paragraphs, please provide a description of the physical activity intervention:

5-10 minutes of physical activity will be included during each lesson using Power Play! resources, i.e. Power Up in 10, Power Cards, and Shape of Yoga. Physical activity sessions will be conducted as an intermediary between the education and cooking component.

In 1-2 paragraphs, please provide a description of standardized training:

All educators from participating school districts collaborated in revising the five nutrition lessons and used a “best practices” approach to determine the techniques to effectively deliver the content information. Lessons were also be modeled by each educator to provide a standardized approach in delivering the lessons.

In 1-2 paragraphs, please provide a description of standard administration of data

Data was collected by using pre and post assessment surveys administered by the educators. The FBC instruction guide was used. Educators read each question aloud to the participants and provided clarification wherever needed.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Standardized lesson formats approved by the Network for a Healthy California were used. In an effort to be consistent, the same educator at each site provided the 5 lessons and administered the collection of data. Lessons were also modeled by each educator to provide a standardized approach in delivering the lessons.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 150 who participated in Healthy Valley Collaborative's Healthy Parents, Healthy Communities will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Sugar Sweetened Beverages) Optional:

By September 30, 2013, a sample of 75 adults who participated in Healthy Parents, Healthy Communities Parent Education Series will report a decrease in consumption of sugar sweetened beverages and/or an increase in consumption of healthy beverage alternatives.

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience sample

How many matched surveys?	221
How many sites?	24
How many classrooms?	24

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Food Behavior Checklist (cups)
Goal 2/Objective 2	Food Behavior Checklist (cups)

Were any other measures used? 0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	5

	Intervention	Control
Pre-test:	10/1/2011 to 5/25/2012	to
Start of Intervention Date	10/1/2011	NA
End of Intervention Date	6/15/2012	NA
Post-test:	11/1/2011 to 6/15/2012	to
Follow-up:	12/1/2011 to 7/15/2012	to

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	n/a	

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Over 275 parent participants initiated the nutrition education parent series. 221 parent participants completed a 5 week nutrition education series called Healthy Valley's Healthy Parents, Healthy Community. The Fruit and Vegetable (CUPS) Behavior Checklist and selected questions from the Fruit and Vegetable Inventory List were used to assess fruit and vegetable consumption and self-efficacy to purchase and plan meals with them.

The 221 parent participants who completed the series significantly increased in 20 of 22 areas of the Fruit and Vegetable checklist survey and the adapted additional questions from the Fruit and Vegetable Inventory Survey. The results are as follows: Eat fruit and vegetable as snacks 2.69 to 3.03 ($p< 0.001$), drank less sports drinks or punch 2.12 to 1.84 ($p< 0.001$), eat or drank citrus fruits or juice 0.85 to 0.90 ($p<0.028$), drank less regular soda 1.84 to 1.67 ($p<0.001$), consumed more milk in the past week 0.92 to 0.95 ($p< 0.045$), ate more fruit per day ($p< 0.001$), ate more vegetables per day ($p< 0.001$), ate different fruit 2.63 to 2.79 ($p<.0.007$), ate different vegetables 2.67 to 3.00 ($p< 0.001$), drank more milk 3.00 to 3.11 ($p<0.038$) , removed skin off chicken more frequently 3.38 to 3.51 ($p<. 0.004$), consumed more fish the past week 0.56 to 0.73 (p, 0.001), ate 2 or more vegetables at main meal 2.61 to 2.81 ($p< 0.001$), read nutrition facts labels more often 2.46 to 2.96 ($p< 0.001$), less participants ran out of food 2.02 to 1.90 ($p<0.027$), self rated their eating habits improved 5.63 to 6.55 ($p< 0.001$), and overall fruit and vegetable consumption increased 3.89 to 4.46 ($p<0.001$), respectively. In reference to behavior change using the adapted Fruit and Vegetable Inventory checklist, participants significantly increased their self-efficacy in eating more calcium rich foods 1.68

to 1.76 (p<0.001) and ordering more vegetable dishes when they eat out 1.65 to 1.76 (p<0.006).

As compared to last year's post data, significant increases occurred in only 13 of 22 areas of the FBC survey questions. The results of last year's intervention of 207 parents are as follows: increased fruit and vegetable consumption from 3.91 to 4.45 (p< 000.1), ate different fruit (and vegetables 2.61 to 2.87 (p<0.001) and 2.71 to 2.92 (p< 0.001), parents eating 2 or more vegetables at main meal from 2.58 to 2.80 (p< 0.001), self efficacy of participant's to eat fruits and vegetables as snacks, purchase vegetables, and plan meals using fruits and vegetables increased significantly (p< 0.001, 0.007, 0.004, 0.001), decreased sport drinks or fruit punch from 2.07 to 1.84 (p<0.001), increased consumption of milk from 2.85 to 3.00 (p< 0.011). Last year's participants also significantly increased frequency of reading nutrition facts labels to locate and interpret nutrition information from 2.40 to 2.88 (p< 0.000), lean protein consumption was evidenced by participants reporting eating more fish the past week and removed skin from chicken at the end of the series from 0.63 to 0.73 (p<0.000) and 3.30 to 3.53 (p< 0.007), and their overall self-rating of eating habits increased significantly from 5.47 to 6.27 (p< 0.001).

Based on the evidence provided, the Healthy Valley Collaborative Healthy Parent's Healthy Communities curriculum was effective in meeting both proposed objectives: increase fruit and vegetable consumption and decrease sugar sweetened beverage intake with parent participants. Further, the results of the four-week follow-up survey reflect that the participants retained healthy behavior and consumption more effectively after completing the series. The significant changes occurred in the following areas: Participants felt more confident to eat more fruits as snacks 1.90 to 1.99 (p<0.004), participants felt more confident to buy more vegetables when out grocery shopping 1.93 to 1.99 (p<0.020), more confident to eat more calcium-rich foods 1.72 to 1.95 (p<0.001), and more confident to order a vegetable dish when eating out 1.67 to 1.89 (p<0.001). When participants were asked what we could offer for the next parent education series, a majority of them expressed the need to practice making more healthy recipes. This may reflect why we did not reach significance in the self-efficacy questions regarding planning fruit and vegetable-based meals and snacks. However, there were improvements in the participants in the four-week follow-up survey (1.91 to 1.95 p<0.166 fruits, 1.72 to 1.95 p<0.166, vegetables).

Parents significantly benefited from the revised Healthy Parents, Healthy Communities nutrition education series as evidenced by improved in most eating habits related to the Fruit and Vegetable Behavior Checklist (FBC) and adapted questionnaire of the Fruit and Vegetable Inventory. The enhanced cooking component was an essential part of parent engagement and skill building. Parents had extensive hands-on experience cooking fruits and vegetables. Parents were willing to share their personal stories about how they made healthy changes in their home and schools. some of the comments were:

"I now look at Nutrition Facts Labels when I got to the grocery store"
"I serve more fruits and vegetables in meals at home"
"We (the family) try to order some type of fruit or vegetable for our meal when we eat out"
"We buy more fruits and vegetables to cook now"

b. Description of how evaluation results will be used:

Due to the highly successful results of this intervention by monitoring eating behaviors using the FBC and adapted fruit and vegetable checklist, the Healthy Valley Collaborative has decided to focus on other areas related to each school district's Scope of Work and reconnect at the end of the FFY13 contract to reconsidering continued collaboration.

7. Point of Contact

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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

Olivares, L., Huffaker, J., Ulloa, C., Voong, L., Bou Sleiman, C., Dunaway, J. (March 2012) Healthy Parents, Healthy Communities. Poster presentation at the Network for a Healthy California 2011 bi-annual conference, Sacramento, California.

Olivares, L., Huffaker, J., Ulloa, C., Voong, L., Bou Sleiman, C. Dunaway, J. (February 2012) Healthy Parents, Healthy Communities. Poster presentation at the CAPHERD Conference, Pasadena, California.

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

0

c

Food Behavior Checklist

Fruit and Vegetable Checklist

Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

Selected and adapted 4 questions from the Fruit and Vegetable Inventory, approved by the Network for a Healthy California IOE team

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.69	3.03	0.34	0.000
Q2. Drink sports drinks or punch (1-4)	2.12	1.84	-0.28	0.000
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.85	0.90	0.05	0.028
Q4. Drink regular soda (1-4)	1.84	1.67	-0.17	0.001
Q5. Consumed milk in past week (0=N; 1=Y)	0.92	0.95	0.04	0.045
Q6. Fruit eaten per day (0-3)	1.28	1.52	0.24	0.000
Q7. Vegetables eaten per day (0-3)	1.30	1.53	0.23	0.000
Q8. Different kinds of fruit daily (1-4)	2.63	2.79	0.16	0.007
Q9. Different kinds of vegetable daily (1-4)	2.67	3.00	0.33	0.000
Q10. Drink milk (1-4)	3.00	3.11	0.11	0.038
Q11. Take skin off chicken (1-4)	3.38	3.51	0.13	0.004
Q12. Consumed fish in past week (0=N; 1=Y)	0.56	0.73	0.16	0.000
Q13. 2 or more vegetables at main meal (1-4)	2.61	2.81	0.20	0.001
Q14. Read nutrition facts when shopping (1-4)	2.46	2.96	0.50	0.000
Q15. Run out of food before month end (1-4)	2.02	1.90	-0.12	0.027
Q16. Self-rating of eating habits (1-10)	5.63	6.55	0.92	0.000

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.81	2.00	0.19	0.000
Veggies (Q 7, 9,13) (Range 0-3)	1.52	1.77	0.25	0.000
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.89	4.46	0.57	0.000

Demographics	
Hispanic	
yes	210
no	11
Race	
American Indian or Alaskan Native	0
Asian	6
Black or African American	0
Native Hawaiian or Other Pacific Islander	0
White	179

Average Age	36.4
Gender	
Males	11
Females	219

FFY12 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Humboldt County Office of Education
Contract number:	11-10208
Information provided by :	Linda Prescott, MA, RD
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1. Project Description and Goals

Project Name:	Power Up! with Harvest of the Month
Target Population:	4th and 5th Grade Students
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	Power Play!

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Four school sites, twelve classrooms, and approximately 283 4th and 5th Grade students participated the nutrition education interventions. The nutrition education interventions were consistent across classrooms and consisted of the following components: Harvest of the Month (HOTM) tasting, reading of storybook highlighting the featured produce, HOTM educator newsletter, distribution of HOTM family newsletter 4 times per year, Power Up! with HOTM student workbooks, HOTM after school tastings, healthy classroom celebrations, and school wide events such as ReThink Your Drink, and Mileage Club.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

n/a

In 1-2 paragraphs, please provide a description of standardized training:

A lead teacher was identified at each school site and acted as the liaison between Network staff and participating teachers. Lead teachers attended training on November 9, 2011. Training included an overview of HOTM, introduction to Power Up! With HOTM student workbooks, review of teacher guide, and impact outcome evaluation expectations.

In 1-2 paragraphs, please provide a description of standard administration of data

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All participating teachers/classrooms received the same nutrition intervention components as described above.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of grade students who participated in will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre and Post Survey Tool with intervention sites. No control group was used.

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	212
How many sites?	4
How many classrooms?	12

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	

Were any other measures used?

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	2
How many lessons from the intervention occurred *after* pre-tests?	27

	Intervention	Control
Pre-test:	9/22/2011 to 9/29/2011	to
Start of Intervention Date	9/12/2011	NA
End of Intervention Date	6/4/2012	NA
Post-test:	6/8/2012 to 6/14/2012	to
Follow-up:	to	to

c. Describe how the data were collected.

Intervention:	paper and pencil survey
Comparison/control:	

d. How were the surveys administered?

Network staff distributed Youth Survey to students and walked the students through the survey question by question allowing students to ask clarifying questions. Network staff used additional tools such as a copy of the school breakfast and lunch menu to help facilitate completion of survey and answer questions posed by students.

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

In analyzing the pre and post data for all school, results showed statistically significant changes for 14 of the 29 areas evaluated. Overall there were statistically significant changes in healthy dietary behaviors with a p value of 0.000. Looking at individual categories for healthy dietary behaviors, there were statistically significant changes for consumption of vegetables and consumption of fruit as well as total fruit & vegetable with and without juice. Results also showed a statistically significant change for cereal. Findings also revealed a statistically significant increase in students willingness to try new fruits and vegetables. These results are encouraging as the main focus of our nutrition education interventions is to increase fruit and vegetable consumption. Results also showed a decrease in less healthy dietary behaviors that was statistically significant for french fries or chips and soda and soft drinks. For punch, sports drinks, and fruit-flavored drinks, results showed a slight decrease but it was not statistically significant. These results point to the need to continued education around sugar sweetened beverages. Additionally, consumption cookies, cakes, other sweets increase slightly. For three of the participating sites (10 classrooms), the post survey was conducted during the last week of school when end of the year parties and field trip activities were taking place. It is possible that the foods served at these festivities influenced the post survey results and overall findings. Lastly, results also showed statistically significant results for physical activity. However, in looking at the pre survey data the over all pre-test mean is fairly high.

b. Description of how evaluation results will be used:

7. Point of Contact

Name:	Linda Prescott, MA, RD
Phone Number:	707-445-7042
Email Address:	lprescott@humboldt.k12.ca.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.	0
b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*	0
c. Did you use the Network Youth Survey or the Network High School Survey	Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	

Physical Activity Preferences for Children and Adults

Self-Efficacy surveys for children various available; identify scale(s) from Compendium: 0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.97	1.12	0.15	0.058
4. Milk	1.64	1.64	0.00	0.947
5. Yogurt or cheese	0.35	0.44	0.09	0.087
6. Cereal	0.76	0.93	0.17	0.004
8. Vegetables	2.01	2.30	0.29	0.016
9. Fruit	2.11	2.56	0.45	0.000
10. Juice	1.22	1.35	0.13	0.223
11. Water	3.66	3.83	0.18	0.081
15. Breakfast	0.89	0.90	0.01	0.740
Total: fruit & vegetable (no juice)	4.12	4.86	0.74	0.000
Total: fruit, vegetable, juice	5.33	6.21	0.87	0.000
Total: healthy foods (Q3-6, 8-11)	12.71	14.17	1.45	0.000
Less Healthy Dietary Behaviors				
7. French fries or chips	0.63	0.48	-0.15	0.017
12. Punch, sports drinks, fruit-flavored drinks	0.66	0.62	-0.03	0.631
13. Soda or soft drinks	0.40	0.29	-0.11	0.046
14. Cookies, cakes, other sweets	0.58	0.63	0.05	0.420
Total: less healthy foods (Q7, 12-14)	2.27	2.03	-0.24	0.082
Trying New Foods	2.65	2.85	0.20	0.003
16. Trying new fruits	1.48	1.57	0.09	0.039
17. Trying new vegetables	1.17	1.28	0.11	0.012
Home Access	3.37	3.42	0.05	0.409
18. Fruits to eat at home	1.72	1.70	-0.02	0.607
19. Vegetables to eat at home	1.64	1.69	0.05	0.197
Perceived Parental Consumption	4.76	4.73	-0.04	0.735
20. How often parents eat fruit	2.39	2.34	-0.04	0.544
21. How often parents eat vegetables	2.34	2.31	-0.02	0.752
Physical Activity	7.03	8.80	1.77	0.000
22. Days of 60 minutes moderate/vigorous	3.56	4.33	0.77	0.000
23. Days of 30 minutes outdoor play	3.47	4.46	1.00	0.000

Demographics

Average Age	9.9
Gender	
Males	107
Females	105

Los Angeles County Office of Education (LACOE) *Network for a Healthy California* Coalition EVALUATION REPORT 2011-2012 FINDINGS

OVERVIEW

In 2009, the Los Angeles County Office of Education (LACOE*) Network for a Healthy California* Coalition received three-year funding from the California Department of Public Health for nutrition education activities to increase produce consumption by students. Following are the findings for year three of the contract, school year 2011-2012. The impact objective for the Coalition is as follows:

> By June 30, 2012, a sample of 5th grade students enrolled in two participating classrooms in one school within five districts (intervention sites) will report an increase in fruit and vegetable consumption, informed by self-reported eating behavior related to *Harvest of the Month* (HOTM) or HOTM Tasting Trios Program. In addition to measuring students' self-reported behavior, additional constructs will be assessed, including:
>
> - Openness to new foods (fruits and vegetables)
> - Access to fruit and vegetables in the home
> - Perceived parent behavior
> - Student participation in nutrition activities at home
> - Socialization-encouragement
> - Student participation in nutrition activities at school
> - Student observation of nutrition posters displayed at school
> - Physical activity

Five districts—Garvey, Glendale, Mountain View, Norwalk-La Mirada and Rowland Unified School Districts—were selected to participate in the evaluation of Coalition activities. One school from each district participated. A convenience sampling method was used for the selection of schools and classrooms; and a census of all students and teachers in classrooms was applied. Fifth grade classrooms participating in the *Harvest of the Month* program were selected from each of five schools – two classrooms each from Garvey, Glendale, Mountain View, and Rowland Unified School Districts, and three classrooms from Norwalk-La Mirada[1] Unified School District. Eleven classrooms participated in the evaluation.

[1] Per the principal's request to not exclude any 5th grade classrooms that were participating in the *Harvest of the Month* program, in the evaluation.

Students answered questions from the 2011-2012 Los Angeles County Office of Education *Network for a Healthy California Youth Survey, Grade 5* (LACOE NYS), adapted from the California Department of Public Health (CDPH) *Network for a Healthy California Youth Survey – 2011-2012*[2]. All 23 items from the CDPH survey were included on the LACOE NYS pretest and posttest. The survey assesses students on the constructs of self-reported consumption of produce (vegetables, fruits, and 100% fruit juice) and cereal, dairy, and unhealthy foods and drinks; openness to try new foods (fruits and vegetables); access to fruits and vegetables at home; perceived parent behavior; and self-reported physical activity. To the LACOE NYS, 18 items were included that assessed, at school — socialization-encouragement, participation in nutrition activities, observation of nutrition posters on display, and at home — participation in nutrition activities with family. The survey was composed entirely of selected response items. Questions allowed students to respond, with self-reported behaviors (e.g., – No, I didn't eat any vegetables yesterday, – Yes, I ate vegetables 1 time yesterday) and their own perceptions (e.g., –Yes, – No, – I don't know, and – Never, – Sometimes, – Always, – I don't know)

Students entered demographic information (age and gender) and their own unique identification number onto the pretest and posttest surveys, resulting in a sample of 295 matched pairs. Data were analyzed using paired samples t-tests from two data points: the pretest was administered in fall 2011 (9/22/11 – 11/10/11), and the posttest was administered in spring 2012 (5/30/12 – 6/7/12).

Selected teachers from eleven classrooms, at five schools, in five intervention districts answered questions regarding their delivery of nutrition education lessons and use of HOTM materials. The *Teacher Survey Pretest: 5th Grade* and *Teacher Survey Posttest: 5th Grade*, developed by the evaluation contractor, were administered to teachers participating in the evaluation at the beginning and end of the 2010–2011 school year. The impact objective for the participating teachers is as follows:

> By June 30, 2012, participating 5th grade teachers of the LACOE Coalition's *Network for a Healthy California* program in Garvey, Glendale, Mountain View, Norwalk-La Mirada, and Rowland Unified School Districts will report on use of nutrition education activities and materials.

The findings from the evaluation are divided into five main sections, (1) Student Results [student responses to the LACOE NYS], (2) Teacher Results [teacher responses to the *Teacher Survey: 5th Grade*], and (3) Conclusions, (4) Discussion, and (5) Recommendations. Figure 1 depicts the organization of the student results with the corresponding constructs and the item numbers for the LACOE NYS [see the Appendix for all pretest and posttest instruments and protocols for administration]. Throughout this

[2] California Department of Public Health (CDPH). (2011, updated July). *Network for a Healthy California Youth Survey*. Sacramento, CA: Network for a Healthy California.

report the individual unified school district names are referred to as – Garvey, Glendale, Mountain View, Norwalk-La Mirada, and Rowland – and not the formal title (e.g., Garvey Unified School District).

To increase the rigor of the evaluation from school year 2010-2011 which included the participation of Garvey, Glendale, Rowland and San Gabriel Unified School Districts, the 2011-2012 evaluation replaced the fourth district (San Gabriel) with Mountain View, and added a fifth district Norwalk-La Mirada, to the sample.

R^2E^2: Russell & English Research & Evaluation (R^2E^2) were subcontractors to LACOE to evaluate the impact of the HOTM nutrition education program for SY 2011-2012. R^2E^2 was responsible for analyzing the data and presenting the findings provided in this report.

STUDENT RESULTS

The purpose of this section is to describe the results of the evaluation of the *Harvest of the Month* (HOTM) program on the student cohort: fifth grade students who participated in the HOTM evaluation from fall 2011 to spring 2012. The sample includes 295 matched pairs of 5th grade students from two classrooms in one school in each of four school districts: Garvey, Rowland, Mountain View, Glendale, and three classrooms in one school from Norwalk-La Mirada. Student data are presented for the scale on each construct. Changes from pretest to posttest are noted in this report for each school district, as well as all districts combined.

The number of students or "N" fluctuates throughout the report because many analyses require the use of scales. If students skip one or more questions, a scale score is not computed for them. Statistically significant *positive* outcomes (e.g., eating *more* vegetables, eating *fewer* higher fat foods, exercising *more*) are noted by green highlighting in the cell. Statistically significant *negative* outcomes (e.g., eating *fewer* vegetables, exercising *less*) are noted by orange highlighting in the cell. The level of significance is included for each district and the district total, for example $p=.011$ (significant at $p<.05$ level). Each question from the Los Angeles County Office of Education *Network for a Healthy California Youth Survey*, Grade 5 (LACOE NYS) 2011–2012 is identified with the description of the related item being analyzed [e.g., LACOE NYS #1]. The LACOE *Network for a Healthy California Youth Survey* is found in the Appendix.

Student Demographics

Table A depicts the gender [NYS #2] of students that could be matched based on their student ID. There are 171 males (58.0%) and 124 (42.0%) females.

Table B presents the number of students in each district, and all districts, that participated at pretest and posttest. The last column of data shows the number of students that could be matched based on their student identification numbers. Looking at all districts combined, roughly 85% of students could be matched.

Self-Reported Consumption

Self-Reported Produce and Fruit Juice Consumption

Students reported how many times they ate vegetables, fruits, and the number of times they drank 100% fruit juice on the day before the survey. Options provided were zero, one, two, three, four, or five or more times. The average number of times students consumed these items is presented in Tables 1, 2, and 3. Table 1 shows the average number of times students reported eating *vegetables* the day before the survey [NYS #8]. Students' self-reported vegetable consumption significantly increased at Glendale (1.37 to 1.98). No other results are statistically significant.

Table 2 shows the average number of times students reported eating *fruits* the day before the survey [NYS #9]. As shown, self-reported fruit consumption significantly increased at Glendale (1.90 to 2.63) and Norwalk-La Mirada (1.23 to 1.61), and when all district data are combined.

Table 3 shows the average number of times students drank *100% fruit juice* the day before the survey [NYS #10]. Self-reported fruit juice consumption significantly <u>decreased</u> at Glendale (2.10 to 1.31) and for all districts combined (1.37 to 1.16).

To look at overall consumption of produce and juice, the number of times students reported eating *vegetables, eating fruit,* and *drinking 100% fruit juice* were combined into one scale [NYS #8–10]. The scale can range from zero to 15. Scores represent the number of times students reported eating vegetables, fruit, and/or drinking 100% fruit juice the day before the survey. Results are shown in Table 4 on the next page. Self-reported consumption of produce and juice did not significantly change at any school district.

Self-Reported Water Consumption

Students reported how many times they drank water, such as from a glass, bottle, or water fountain, the day the before the survey was administered [NYS #11]. Options provided were zero, one, two, three, four, or five or more times. The average number of times students drank water is presented in Table 5. As shown, self-reported water drinking significantly increased at Norwalk-La Mirada, Rowland, and when all districts' data are combined.

Self-Reported Dairy Consumption

Students reported their dairy consumption with three items [NYS #3–5]. Thinking of the day before the survey, students provided 1) the number of times they ate cheese by itself or on their food, 2) the number of times they drank milk of any kind, and 3) the number of times they reported eating yogurt, cottage cheese, or drank a yogurt drink. Options were none, one, two, or three or more times. Table 6 shows the average number of times students ate cheese by itself or on/in another food such as pizza, tacos, sandwiches, or macaroni and cheese [NYS #3]. Consumption increased significantly at Mountain View (0.85 to 1.30).

Table 7 depicts consumption of milk the day before the survey [NYS #4]. As shown, milk consumption did not change significantly for any school district.

Table 8 shows the average number of times students consumed yogurt, cottage cheese, or a yogurt drink the day before the survey. Self-reported consumption of these items <u>decreased</u> significantly when all district data are combined.

The three questions were combined to show the results for self-reported consumption of dairy products; the scale ranges from zero to nine, which represents the three items added together. As shown in Table 9, no significant increases or decreases are seen at any district or when all district data are combined.

Self-Reported Cereal Consumption

Table 10 shows self-reported consumption of either hot or cold cereal [NYS #6]. Students could report eating cereal zero, one, two, or three or more times the previous day. A significant <u>decrease</u> is seen for students at Mountain View; consumption dropped from 0.96 to 0.53.

Self-Reported Fried and Higher Fat-containing Snack Foods Consumption

Students reported how many times (zero, one, two, or three or more) they ate French fries or chips, such as potato chips, tortilla chips, or corn chips the day before the survey [NYS #7]. As shown in Table 11, self-reported consumption of these high fat foods significantly decreased at Glendale (from 1.18 to 0.64) and when all district data are combined (from 0.85 to 0.68).

Self-Reported Fruit-Flavored and Soft Drink Consumption

Consumption of sugary drinks, such as soda, punch, and sports drinks, and other fruit-flavored drinks (not including 100% fruit juice or diet drinks) was assessed with two questions [NYS #12–13]. Students reported drinking these items zero, one, two, or three or more times the day before the survey was administered.

Table 12 shows the results for consumption of punch, sports drinks, or other fruit-flavored drinks [NYS #12]. None of the changes from pretest to posttest are statistically significant.

The consumption of regular soda, pop, or soft drinks [NYS #13] is show in Table 13. A significant decrease in self-consumption is seen at Glendale (from 0.94 to 0.54).

The two questions were combined to show the results for self-reported consumption of sugary beverages; the scale ranges from zero to six. As shown in Table 14, when these two items are combined, changes from pretest to posttest are not statistically significant.

Self-Reported Sweets Consumption

One item assessed how often students reported eating sweet rolls, doughnuts, cookies, brownies, pies, or cakes [NYS #14]. Response options were zero, one, two, or three or more times. Significant decreases, meaning decreased consumption of sweets such as pastries and cakes, are seen at three of the five districts: Garvey (0.72 to 0.47), Glendale (1.12 to 0.72), and Mountain View (1.00 to 0.61). The decrease when all student data are combined is also significant (0.85 to 0.61). These data are shown in Table 15.

Self-Reported Breakfast Consumption

Students answered one question to indicate if they ate breakfast the day before the survey [NYS #15]. Table 16 presents these results. A negative change (column two of the data) is the number of students that ate breakfast at pretest, but not at posttest (indicating a negative outcome). A positive

change (column three) is the number of students that ate breakfast at posttest, but not at pretest (indicating a positive outcome). Ties are obtained when students answer the same way at pre- and posttest. Responses were coded zero ("No") and one ("Yes"). Wilcoxon signed rank tests were used to determine significant differences by testing the equality of matched pairs of observations; the null hypothesis is that both distributions are the same.

Overall, 85.5% of students (241 of 282) answered the same way at the pre- and posttest. A significant result is obtained at Mountain View, where 12 students reported eating breakfast at pretest, but not at posttest and just one student reported eating breakfast at the posttest, but not at pretest. A significant result is also obtained when all student data are combined.

Table 16a presents another way to look at student breakfast consumption at pretest and posttest. Specifically, Table 16a presents the mean score. Since "no" responses are coded zero, and yes responses are coded "1," the mean represents the proportion of students indicating they ate breakfast at pretest and posttest. Note that a large proportion of students in each district reported eating breakfast at the pretest (between 87% at Garvey and 98% at Mountain View). At Mountain View, the proportion of students that reported eating breakfast the day before the posttest survey was administered decreased to 74%. The proportion of students eating breakfast also decreased when all student data are combined.

Openness to New Foods (Fruits & Vegetables)

Self-Reported Openness to New Fruits

Students responded to the question, "I like to try new fruits" with 1=Almost never or never, 2=Sometimes, and 3=Almost always or always [NYS #16]. A significant increase is seen at Norwalk-La Mirada. These results are presented in Table 17.

Self-Reported Openness to New Vegetables

Students responded to the question, "I like to try new vegetables" with 1=Almost never or never, 2=Sometimes, and 3=Almost always or always [NYS #17]. As shown in Table 18, there are no significant changes from pretest to posttest at any of the school districts.

Self-Reported Openness to New Fruits and Vegetables

Openness to try new fruits and vegetables were combined into one scale; these data are shown in Table 19. To keep the scale consistent, the two items were summed and then divided by two (the number of items in the scale). A significant decrease in openness to new fruits/vegetables is seen at Mountain View, where scores dropped from 1.13 to 0.99.

Socialization – Encouragement

Socialization-Encouragement about Vegetables

Students responded to four items to indicate if their teachers told them vegetables are "good for you," "healthy," "taste good," and "to eat vegetables every day" [NYS #24–27]. "No" responses were coded zero and "yes" responses were coded one; then "yes" responses were added to create a scale that ranges from zero to four. All "I don't know" responses were omitted from analysis. As shown in Table 20, significant increases in teacher encouragement are seen at Rowland (increase of 0.94) and when all district data are combined (an increase of 0.23). Note that the number of cases analyzed (n=124) is 42% of all matched pairs (N=295) due to the high proportion of students who reported, "I don't know."

Socialization-Encouragement about Fruits

Students responded to four items to indicate if their teacher told them fruits are "good for you," "healthy," "taste good," and "to eat fruits every day" [NYS #28–31]. "No" responses were coded zero and "yes" responses were coded one; "yes" responses were then added to create a scale ranging from zero to four. Responses recorded as "I don't know" have been omitted. As shown in Table 21, a significant decrease is seen at Glendale, dropping from 4.00 at pretest (all students indicated their teacher does these four things) to 3.81 at posttest. Note again the decrease in the sample size for this analysis.

Nutrition Activities at School

Students indicated which of several nutrition activities occurred at their school. These activities were: a different teacher or a guest teaching about fruits or vegetables [NYS #32], making a recipe to try in class [NYS #33], the classroom teacher teaching them about fruits and vegetables [NYS #34], someone

in the cafeteria asking them to try a fruit or vegetable [NYS #35], and doing a nutrition activity on a worksheet [NYS #36]. Response options provided to students were "No," "Yes, 1 time," and "Yes, 2 or more times." These were scored zero, 1, and 2, respectively. Each question is presented individually in Tables 22 through 26. The five items were also summed to create a scale that ranges from zero to ten; this cumulative scale is presented in Table 27 on pages 15 and 16.

Different Teacher or Guest Teaching about Fruits or Vegetables

Significant increases are seen at each district, and for all students, in the number of times a different teacher or a guest taught about fruits or vegetables [NYS #32]. The greatest increases are seen at Glendale (an increase of 1.48 points—from 0.26 to 1.74) and Rowland (an increase of 1.33 points—from 0.67 to 2.00). Please see Table 22 for all survey data.

Making a Recipe with Fruits or Vegetables

As shown in Table 23, significant increases are seen at each district, and for all students, in the number of times either the students or a teacher made a recipe in class [NYS #33]. Increases of over one point are seen at Garvey, Glendale, Mountain View, and Rowland. A significant increase is also seen when all student data are combined.

Teaching about Fruits or Vegetables

As shown in Table 24, significant increases are seen at each district, and for all students, in the number of times students were taught about fruits and vegetables in class [NYS #34]. Most pretest means were below one and all posttest means are greater than 1.50 on a two-point scale.

Cafeteria Worker Asked Student to Try a Fruit or Vegetable

Table 25 shows the average number of times at pretest and posttest that a cafeteria worker offered students a fruit or vegetable to try [NYS #35]. Significant increases are seen at two of the five districts—Norwalk-La Mirada and Rowland—and when all district data are combined.

Nutrition Activity on a Worksheet

Table 26 presents data for the average number of times students did a nutrition activity on a worksheet at pretest and at posttest [NYS #36]. Significant increases are seen at each district, and for all students, with increases ranging from 0.60 at Mountain View to 1.36 at Rowland.

All Nutrition Activities at School

Table 27 shows the combined scale of nutrition activities that students indicated occurred at their school [NYS #32–36]. The scale ranges from zero (no activities) to 10 (each of the five activities occurred two or more times). Large, positive, and significant changes are seen at all districts and for all students combined. Increases range from a low of 3.26 at Norwalk-La Mirada to a high of 5.24 at Rowland.

Student Observation of Poster(s) Displayed at School

Students reported whether or not they saw nutrition posters displayed in their classroom or around school [NYS #37]. Table 28 (on the next page) presents these results. A negative change (column two of the data) indicates the number of students who observed a nutrition poster at pretest, but not at posttest. A positive change (column three of the data) indicates the number of students who observed a nutrition poster at posttest, but not at pretest. Ties (column 4) result when students observed a nutrition poster at both pretest and posttest or did not observe nutrition posters at both time periods.

The “no” responses were coded zero and “yes” responses were coded one; “I don’t know” responses were omitted. Wilcoxon signed rank tests were used to determine significant differences between the distribution of responses at pretest and posttest. The procedure tests the equality of matched pairs of observations; the null hypothesis is that both distributions are the same. As shown in Table 28, significant differences are noted at all school districts except for Glendale. Note the number of students that reported seeing posters at posttest that had need seen posters at pretest (the N+ column of data).

Table 28a presents the mean score for seeing nutrition posters in or around the student’s classroom or school [NYS #37]. Since “no” responses are coded 0, and yes responses coded “1,” the mean represents the proportion of students indicating they saw the posters at pretest and posttest. The

largest increase in the proportion of students that noticed nutrition posters is at Norwalk-La Mirada (from 28% at pretest to 74% at posttest). The majority of students in the other districts indicated they had seen nutrition posters at their school at the time of the pretest. All results are significant except for Glendale.

Home Influences

Parent's Produce Consumption

Students indicated how often their parents eat fruit [NYS #20] by responding "Never," "A few days a week," "Most days a week," or "Every day." Responses were coded 0, 1, 2, and 3, respectively. "I don't know" responses were omitted from the analyses. Using the same response options, students indicated how often their parents ate vegetables [NYS #21]. These results are displayed in Tables 29 and 30, respectively. Parental fruit (Table 29) and vegetable (Table 30) consumption, as reported by students, did not change significantly from pretest to posttest at any school district.

The questions for parental fruit and vegetable consumption were combined into one scale [NYS #20–21]. The scores were summed and then divided by two (the number of items in the scale) so that the scale range remained from zero to three. Table 31 presents these data. As shown, none of the changes from pretest to posttest are statistically significant.

Access to Produce in the Home

Students reported how often they have fruits to eat at home [NYS #18]. Response options were "Never," "Sometimes," and "Always," coded 0, 1, and 2. Omitting students that answered "I don't know," these results are displayed in Table 32. Self-reported access to fruits at home significantly increased at Rowland from pre- to posttest.

Using the same response options, students indicated how often they have vegetables to eat at home [NYS #19]. These results are displayed in Table 33. Perceived access to vegetables at home did not change significantly at any school district from pre- to posttest.

These two questions were combined into one scale [NYS #18–19]. The scores were summed and then divided by two (the number of items in the scale) so that the scale range remained from zero to two. As shown in Table 34, perceived access to fruits and vegetables in the home increased significantly at Glendale and Rowland from pretest to posttest.

Nutrition Activities at Home

Students reported which of four nutrition activities they participated in at home. These are: taking home a nutrition newsletter [NYS #38]; talking with a family member about the nutrition newsletter [NYS #39]; making a recipe using fruits and vegetables they tried at school with a family member [NYS #40]; and talking with a family member about eating fruits or vegetables [NYS #41]. Response options were "No," "Yes, 1 time," and "Yes, 2 or more times." These were scored 0, 1, and 2.

Taking Home a Nutrition Newsletter

Table 35 shows the number of times students reported taking home a nutrition newsletter that they received in class [NYS #38]. Significant increases, ranging from 0.49 (Glendale) to 1.36 (Mountain View), are observed at each district and when all student data are combined.

Talking with a Family member about the Nutrition Newsletter

Table 36 shows the number of times students reported talking with a family member about the Nutrition Newsletter [NYS #39]. Significant increases are seen at all school districts except for Glendale. The number of times this activity occurred at the time of the posttest is around one or less than one for each school district.

Making a Recipe with a Fruit or Vegetable Tasted at School

Table 37 shows the number of times students reported making a recipe at home using fruits or vegetables they tried at school [NYS #40]. A significant and positive increase is seen at only one school district—Norwalk-La Mirada. When all district data are combined, the increase from pretest (0.68) to posttest (0.91) is also statistically significant.

Talking with a Family Member about Eating Fruits or Vegetables

Table 38 shows the number of times students reported having a family member talk to them about fruits or vegetables [NYS #41]. Only students at Mountain View show a significant increase (from 1.40 at pretest to 1.70 at posttest). A significant increase is also seen when all student data are combined.

All Nutrition Activities at Home

The five items that assessed nutrition activities at home were combined into a scale that ranges from zero to ten; pretest and posttest means are presented in Table 39. Significant and positive increases are seen at each school district, and when all student data are combined. The smallest increase is seen at Glendale (0.88 times) and the largest increase is seen at Mountain View (2.15 times).

Physical Activity

Students reported on which days last week they exercised or took part in physical activity that made their heart beat fast and made them breathe hard for at least 60 minutes [NYS #22]. Table 40 presents these data. The scale ranges from zero (did not exercise in the past week) to seven (exercised every day the past week). Significant and positive increases in physical activity are seen at Mountain View and Rowland. When all student data are combined, the increase in physical activity for a minimum of 60 minutes per day over the previous seven days is also statistically significant.

Students then reported which days in the past 7 they played outdoors for at least 30 minutes [NYS #23]. The scale ranges from zero (did not play outdoors for at least 30 minutes) to seven (played outdoors for at least 30 minutes every day the past week). As presented in Table 41, only students at Norwalk-La Mirada reported they played outdoors significantly more days from pretest (2.05) to posttest (2.72).

Summary Results

All tables above provide results for individual districts within the Coalition, as well as all districts combined. As this is a Coalition project, a summary of results for the Coalition, by construct, are provided in Table 42. Provided in the summary of results table are the scales for constructs (e.g., self-reported consumption of fruits, vegetables and juice), item number in the survey, total number of students (N) completing item, pretest and posttest mean, change between pretest and posttest mean (Δ), and level of significance ($p<.05$)

As denoted by green shading, the following <u>scales</u> are significant: student participation in nutrition activities at home, socialization-encouragement for eating vegetables, student participation in nutrition activities at school. In addition, as indicated by green shading, students reported eating more fruits, drinking more water, and eating <u>fewer</u> high fat foods and sweets. Students reported being more physically active (at least 60 minutes/per day). Additionally, the students — reported their teachers

provided more encouragement regarding eating vegetables, participated in more nutrition activities at school and at home, and they noticed nutrition posters around their school.

As denoted by orange shading, students reported drinking less 100% fruit juice and fewer students reported eating breakfast at posttest compared to the pretest.

Encouraging results of student behaviors, those that showed a positive shift in mean scores but not significant, should also be recognized, those include: self-reported consumption of fruits and vegetables, openness to try new foods (fruits and vegetables), access to produce in the home, perceived parent behaviors of eating fruits and vegetables, teachers provided encouragement for eating fruits (socialization-encouragement), and playing at least 30 minute per day (physical activity).

TEACHER RESULTS

A pretest survey was administered to the 5th grade teachers participating in the intervention, at the time the LACOE *Network for a Healthy California* Youth Survey, Grade 5 2011-2012 was administered, between September 22 and November 10, 2011. The purpose of the teacher survey was to assess the scope of nutrition education and physical activity education activities at the intervention school sites prior to the student pretest. A posttest survey was administered to the same teachers at the time of the student survey posttest between May 30 and June 5, 2012, to assess the scope of the nutrition education and physical activity education activities implemented following the pretest and before the posttest. This information was needed for the evaluation, as it may influence the impact of student-reported changes from pretest to posttest. See the Appendix for pretest and posttest *Teacher Survey: 5th Grade, Network for a Healthy California*, Los Angeles County Office of Education.

The teacher results are organized into the following sections: (1) Nutrition Education Activities (*Pretest* and *Posttest*), including Nutrition Education Activities Sent Home, and Nutrition Education lessons and -Related field trips; (2) Physical Activity Education or Activities (*Pretest*); (3) Nutrition and Physical Activity Education or Activities; (4) School Breakfast Program and Milk Policies; and (5) Teacher Training Topics.

Nutrition Education Activities (*Pretest* and *Posttest*)

At *pretest* (item #1), teachers indicated if their students had participated in *any* nutrition education activities. At *posttest* (item #2), teachers indicated which of seven nutrition education activities their students had participated in since the teacher completed the survey at the beginning of the school year (*pretest*). If a teacher reported any activity, this was coded "yes." These data are shown in Table 43. All teachers at Norwalk-La Mirada and Rowland, and one of two teachers each at Garvey and Mountain View reported nutrition education activities at *pretest*. No teacher at Glendale reported such activities at *pretest*. At *posttest*, all teachers in all districts indicated their students had participated in nutrition education activities.

At *pretest* (item #1a), teachers indicated which nutrition education activities their students had participated in, the number of times students participated, and which featured fruit or vegetable was used. These data are shown in Table 44. Rowland used a variety of fruits. Apples were the most frequently used featured fruit across all activities in Norwalk-La Mirada and Rowland. Note only Garvey indicated they used one "other" activity, PE Activity Log, which is not included in this table.

Nutrition Education Activities Sent Home

At *pretest*, one of two teachers at Garvey and Glendale, no teacher at Mountain View, and all teachers at Norwalk-La Mirada and Rowland indicated they sent nutrition materials or information home with their students. Each teacher indicated which materials were sent home with students, and the number of times each item was sent home. At Garvey, a Family Newsletter was sent home once. At Glendale, a Fact Sheet was sent home once. Nothing was sent home at Mountain View. At Norwalk-La Mirada, a Family Newsletter was sent home once, and Fact Sheets were sent home three times. At Rowland, each item as sent home once (the "other" item was recorded as "Harvest of the Month"). These data representing items #2 and 2a are shown in Table 45. The only fruit featured in the materials sent home with students at *pretest* (item #2b) were apples. At *pretest*, no teacher had sent home materials with their students that featured any vegetable.

Nutrition Education Lessons and Nutrition-Related Field Trips

At *posttest* only (item #2), teachers indicated the number of times students participated in Nutrition Education Lessons and Nutrition-related Field Trips (e.g., farmer's market, farm, community garden, or a grocery store). Only one teacher at Mountain View reported that students participated in a

nutrition-related field trip. Student participation in nutrition education lessons was quite high in all districts, except for Mountain View. These data are shown in Table 46.

Physical Activity Education or Activities (*pretest*)

At *pretest* (Item #3), teachers indicated which physical activity education or activities their students participated in at school and the number of times students engaged in each. These data are shown in Table 47. As shown, teachers at Garvey conducted a physical activity log activity two times. Norwalk-La Mirada teachers conducted this activity 22 times. No teacher conducted a physical activity workbook activity. Teachers at Glendale conducted a physical activity assembly or program 12 times and teachers at Rowland one time. Not shown in Table 6 are "other" activities in the districts. Specifically, Glendale teachers conducted "PE class" three times per week. At Mountain View, teachers mentioned "Mileage Club" twice a week and "PE 35 minutes each day" twice a week. At Rowland, teachers mentioned "PE" twice a week.

An additional item (#4) asked if any materials or information about physical activity was sent home. One teacher at Garvey and one teacher at Mountain View reported that materials/information was sent home about physical activity.

Nutrition and Physical Activity Education or Activities

At *pretest* and at *posttest*, teachers indicated which physical activity and nutrition education activities their students had participated in and the number of times students participated. These data are shown in Table 48; *posttest* data is shaded grey for ease of reference. With the exception of Garden-based Nutrition Education, teachers reported that students participated in quite a number of activities at *posttest*—ranging from a high of 149 taste tests to a low of 38 Physical Activity Log activities. Note at *pretest* the label "newsletter activities" was used and at *posttest*, the more specific description "nutrition activity or homework assignment from the HOTM newsletter" was used.

Nutrition Log and Physical Activity Log Activities

At *pretest* and *posttest*, teachers reported the number of times students participated in a **Nutrition Log Activity** (*pretest* item #1a; *posttest* item #3), and a **Physical Activity Log Activity** (*pretest* item #3; *posttest* item #3); these data are reported in Table 48 (above) and again in Table 49. Also in Table 49, at *pretest* teachers also reported on who taught the activities. Teachers at Glendale reported implementing the Nutrition Log Activity at least six times more than teachers in other districts. Similarly,

Glendale teachers reported implementing the Physical Activity Log Activity more often than other teachers did—approximately four to eight times more than teachers in other districts with the exception of Mountain View. Although the teachers reported the sum of times the students participated in the log activities, they did not report the equivalent, corresponding times the activities were administered by the teacher, coordinator or person in an "other" role.

School Breakfast Program and Milk Policy

At *pretest* only (item #5), teachers indicated if their schools had a breakfast program, either in a cafeteria-style setting or in the classroom. All teachers indicated that their schools did indeed have a breakfast program.

Teachers also reported if their district has a policy restricting the type of milk offered to students and if so, what type of milk is not allowed (*pretest* items #6, 6a). There was no consensus among teachers in any district about policies restricting the type of milk offered to students. Of the ten teachers surveyed 7 (70%) did not know about such a policy. State law restricts milk sales to 2%, 1% or non-fat.

Teacher Training Topics

At *posttest* only (item #4), teachers selected which of nine teacher-training topics they were interested. These data are reported in Table 9. Looking at all districts, teachers are most interested in childhood obesity (n=7), type 2 diabetes in children (n=7), and food preparation in the classroom (n=8). Teachers could also write in "other related topics of interest." All three teachers at Norwalk reported they would like "physical education activity lessons" (not shown in table 50 below).

CONCLUSIONS

The conclusions and comments related to the data analyses are presented in two sections: Student Results and Teacher Results.

Student Results

As a whole, the Coalition across the five districts demonstrated significant positive results in three areas related to the impact objective: fruit and water consumption, and decreased consumption of fried and higher fat snack foods and sweets. Other significant positive results for variables related to consumption identified were socialization-encouragement by teachers for vegetables, student participation in nutrition activities at school, student observation of nutrition posters, nutrition activities at home, and physical activity. As a whole, the Coalition showed significant negative results among students for consumption of 100% fruit juice and breakfast. The high number of nutrition education activities prior to the pretest may have negated any improvements that might otherwise have been demonstrated.

When the Coalition is analyzed by individual districts within it, Glendale reported significant positive results related to the impact objective, showing improvements in the consumption of fruit and vegetables, French fries and chips, soft drinks, and sweets. Norwalk-La Mirada and Rowland reported significant positive results for water consumption; Norwalk-La Mirada reported significant positive results for fruit consumption, and openness to try new fruits; and Rowland reported significant positive results for socialization-encouragement for eating vegetables. Garvey and Mountain View reported significant positive results for decreased sweets consumption, and Mountain View for cheese consumption. For physical activity, seven days prior to the survey, Mountain View and Rowland reported significant improvement in self-reported physical activity for at least 60 minutes per day, and Norwalk-La Mirada showed significant improvement for self-reported outdoor play for at least 30 minutes per day during the seven days prior to the survey.

There were some inverse relationships identified between the intensity of interventions and related outcomes. For example, although Rowland implemented a large number of nutrition education lessons and activities, they reported no significant positive results related to the impact on produce consumption. Conversely, even though Rowland reported their students participated in the physical activity log activity fewer than other districts, they demonstrated significant improvements in student reported physical activity for 60 minutes per day during the seven days prior to the survey. In another

example, the teachers of Mountain View reported the fewest number of nutrition education lessons and activities implemented with students, yet students showed significant positive results for decreased sweets consumption, and for increased cheese consumption. Conversely, they reported implementing the physical activity log only 12 times between the pretest and posttest, which resulted in the significant improvement in students' self-reported physical activity for at least 60 minutes per day, seven days prior to the survey.

Intervention activities conducted prior to the pretest may account for the lack of positive results related to nutrition despite the intensity of their efforts. Both teachers at Rowland conducted nutrition education activities prior to pretesting. However, that explanation does not hold true as an explanation for the inverse relationships at Mountain View, as teachers there did only one nutrition-related activity, and no physical activity education, prior to the pretest.

For some constructs, such as eating breakfast[3], and consumption of French fries and chips[4] and soft drinks[5], the pretest scores were already positive, leaving little room for improvement. Students may have had nutrition education in previous school years, including *Harvest of the Month* program activities.

The conclusions based upon the analysis of the student data are reported in the following categories: Consumption, Openness to Try New Foods, School Influences, Home Influences, and Physical Activity.

CONSUMPTION

Fruits & Vegetables (Tables 1 – 4)

- Only Glendale reported significant increases in student consumption of vegetables, while Glendale, Norwalk – La Mirada, and the Coalition showed significant increases in fruit consumption.
- Rowland, Mountain View, and Garvey reported no significant differences in consumption of vegetables, fruit, or 100% fruit juice.

[3] Overall, 85.5% of students answered the breakfast consumption item the same way at the pretest and posttest.
[4] Although no significant decreases were observed, all districts decreased consumption, except Mountain View, which stayed the same.
[5] Although no significant decreases were observed, students at Garvey, Mountain View and Rowland reported consuming fewer soft drinks at posttest.

- Both the Coalition overall, and Glendale reported a significant decrease in student consumption of 100% fruit juice.
- When consumption of fruit, vegetables, and 100% fruit juice is examined collectively, there were no significant increases in consumption for the Coalition, nor any single school district. However, students in the Coalition, and all districts except Mountain View reported consuming vegetables, fruit and 100% fruit juice, approximately four or more times the day prior to the survey.

Water (Table 5)

- There were significant increases in the consumption of water for the Coalition, Norwalk-La Mirada and Rowland. Although not significant, students in Garvey reported and increase in consumption, whereas students in Glendale and Mountain View reported a decrease in water consumption.

Dairy Products (Tables 6 – 9)

- Mountain View was the only district reporting a statistically significant increase in the consumption of cheese.
- For the Coalition, there was a significant decrease in the self-reported consumption of yogurt, cottage cheese, or yogurt drinks, but not for districts individually.
- When all dairy products (i.e., milk, cheese, yogurt, cottage cheese, yogurt drink) were viewed collectively, there were no significant differences (positive or negative) in consumption for the Coalition, nor any individual districts within the Coalition.

Cereal (Table 10)

- There were no significant increases in the consumption of cereal for the Coalition, or any individual district within the Coalition. However, students at Mountain View reported a significant decline in their consumption of cereal.

Fried & High Fat Snacks (Table 11)

- There was a significant decrease in the consumption of fried and higher fat-containing snack foods for the Coalition overall and Glendale. For all other districts, there was a decline or no change in consumption (i.e., Mountain View), although not significant.
- For those districts reporting no significant changes in consumption of fried and high fat snacks, students reported consuming them on average no more than once the day prior to the posttest survey.

Fruit-Flavored, Punch, Soft Drinks and Sports Drinks (Tables 12 – 14)

- There was a significant decrease in the consumption of non-diet soft drinks for Glendale. However, for the Coalition and the other districts, there were no significant differences.
- There were no significant changes, either positive or negative, in the consumption of fruit-flavored, punch, soft drinks or sports drinks.
- For the Coalition, consumption of non-diet soft drinks on average was less than one time the day prior to the survey.

Sweets (Table 15)

- There were significant decreases in the consumption of sweets (e.g., sweet rolls, doughnuts, cookies) for the Coalition overall, and for Garvey, Glendale, and Mountain View. Although Norwalk-La Mirada and Rowland showed a decrease in consumption of sweets, they were not statistically significant.

Breakfast (Tables 16 – 16a)

- There was a significant decrease in students who reported eating breakfast at pretest and again at posttest for Mountain View and the Coalition overall.
- Most students reported eating breakfast at pretest, so there was little room for improvement.

OPENNESS TO TRY NEW FOODS (Tables 17 – 19)

- Norwalk – La Mirada was the only school district reporting a significant change – increase- in student self-reported openness to try new fruit.
- No district, nor the Coalition, reported a significant change – increase or decrease – in student self-reported openness to try new vegetables.
- When students reported openness to try new fruits and vegetables was analyzed, the only district reporting a significant change was Mountain View, with students reporting a significant decrease in their openness to try new produce.

SCHOOL INFLUENCES (Tables 20 – 28a)

- For the Coalition overall and Rowland, there was a significant increase in students reporting encouragement by their teachers to eat vegetables.
- Students in Glendale, however, reported a significant decrease in socialization- encouragement by teachers to eat fruits.
- The Coalition and all school districts individually reported a significant increase in all nutrition activities at school: a different teacher or guest teaching about produce, making a produce recipe to try in class, teachers teaching about produce, and doing a nutrition activity on a worksheet.
- The influence of the cafeteria workers was mixed. Garvey, Glendale, and Mountain View showed no significant change, while Norwalk – La Mirada, Rowland, and the Coalition all showed a significantly positive increase in students reporting that a cafeteria worker offered them produce to try.
- Students reported observation of nutrition posters in the classroom or around school increased significantly for each district and the Coalition, with the exception of Glendale.

HOME INFLUENCES (Tables 29 – 39)

- For the Coalition and all districts there were significant increases in students reporting taking home a nutrition newsletter and talking with a family member about it. However

there were no significant changes in perceived parent consumption of fruit, vegetables, or combined fruits and vegetables.

- Access to fruit at home increased significantly at Rowland, and access to fruits and vegetables (combined) increased significantly at Glendale and Rowland. However, there were not significant changes for any district or the Coalition overall.
- Garvey, Mountain View and Norwalk – La Mirada showed a decrease in perceived access to produce at home, although the results were not significant.
- Student reports of making a recipe at home increased significantly only for Norwalk – La Mirada and the Coalition.
- Student reports of talking with family members about produce increased significantly only at Mountain View and the Coalition.
- When all nutrition activities at home were viewed collectively, there was a significant improvement for each district and for the Coalition.

PHYSICAL ACTIVITY (Tables 40 – 41)

- The Coalition, and Mountain View and Rowland individually, reported significant increases in the amount of physical activity for both 60 minutes per day, while only Norwalk – La Mirada showed a significant increase in physical activity for 30 minutes per day for the seven days prior to the survey.

Teacher Results

At posttest, the eleven teachers representing the five school districts reported on the nutrition education and physical activity education activities they used in the classroom, the use of the nutrition log and the physical activity log, their school district breakfast program and milk policies, and nutrition-related teacher training topics of personal interest. The conclusions related to those data are presented in the following.

NUTRITION EDUCATION AND PHYSICAL ACTIVITY EDUCATION ACTIVITIES (Tables 42 – 48)

- Prior to the pretest, over 60% of teachers reported conducting a total of 17 nutrition education activities, with Norwalk – La Mirada conducting the most (N=9). One school district, Glendale, administered the pretest prior to conducting any nutrition education activities in the classroom.
- In addition to classroom activities conducted prior to the pretest, over 60% of teachers sent nutrition education materials home prior to the pretest.
- Between the pretest and posttest, taste-testing and food preparation activities were conducted the most frequently across the Coalition.
- Garden-based nutrition education activities and nutrition-related field trips were rarely conducted.
- Mountain View conducted the fewest number of nutrition education lessons (N=13), conducting half of what most other districts taught. Rowland taught almost three times the number of nutrition education lessons as the other districts (N=95), accounting for almost half of all lessons taught by the Coalition. Norwalk – La Mirada taught only ten lessons, on average, per teacher, compared to 13-15 lessons for most other districts.
- Teachers representing the five school districts in the Coalition conducted 37 physical education activities prior to the *pretest*, with Glendale and Norwalk – La Mirada conducting the most. Only Mountain View implemented the pretest prior to conducting any physical activity education.

NUTRITION LOG & PHYSICAL ACTIVITY LOG (Table 49)

- The nutrition log activity and physical activity log activity were conducted almost equally among the Coalition classrooms as reported at posttest.
- The nutrition log and physical activity log activities were taught most often by the teachers; district coordinators taught half as many of those activities.
- The number of times teachers reported the log activities were taught is largely inconsistent with the number of times teachers reported that students participated in those activities.

SCHOOL DISTRICT BREAKFAST PROGRAM AND MILK POLICIES

- All participating districts offered a school breakfast program thereby eliminating that as a factor in explaining district differences in outcomes.
- State law restricts milk sales to 2%, 1%, or non-fat milk. Beyond that, teachers were relatively unaware of district policies restricting sale of other milk products such as flavored milk.

TEACHER TRAINING TOPICS (Table 50)

- Topics of most interest to teachers were food preparation in the classroom, childhood obesity and Type 2 diabetes in children. Other topics seemed to hold little interest for teachers.

DISCUSSION

The following discussion section addresses the limitations of the evaluation, the student survey, data collection, curricular alignment, and the teacher survey.

LIMITATIONS

- There are a variety of challenges posed to evaluating the program, for example, they include the following:
  (a) Lack of standardization in program implementation. Although the nutrition education and physical activity education messages and activities were provided by teachers in the classrooms, as well as other staff members, the quality, intensity and duration of program activities was not well documented. Teachers delivering the program were not given specific instructions of what to tell the students, when to tell them, and how often.
  (b) Existing and continuing educational program. The evaluators acknowledge that teachers have been delivering nutrition education to their students, some using the *Harvest of the Month* materials, at a variety of grade levels in elementary schools of LACOE. The evaluators recognize that they were not evaluating a new program; some students may have been exposed to the same or similar messages before this school

year and evaluation. The evaluation did not account for this factor.

(c) Methodology.

- Schools and classrooms were not selected at random, but by convenience. Although a census of all students in the selected schools and classrooms was applied, the agreement by the schools and teachers to participate may have been impacted by selection bias.
- Students were asked to recall fruit, vegetable, juice and other food and beverage consumption, and their physical activity. There is potential for both recall bias – students not remembering accurately, and response bias – students responding the way they think they should respond. The evaluators did not use observations to assess student consumption.

(d) Instrumentation. The availability of the CDPH IOE template to report the activities and results of the program for the 2011-2012 school year was not delivered prior to the administration of the posttest. The teacher posttest survey items did not mirror the reporting template items — information that could only be provided by the teachers. Therefore, items that appear on the IOE template request additional information not collected from the teachers (e.g., number of lessons taught with a physical activity focus).

(e) Generalizability. The evaluation was conducted in five school districts and in five classrooms; therefore the results may not be generalizable to other school district.

STUDENT SURVEY

- The Los Angeles County Office of Education *Network for a Healthy California* Youth Survey (LACOE NYS) – Grade 5, student-reported consumption of fruits and vegetables and other foods and beverages, openness to try new foods, access to fruits and vegetables at home, perceived parent consumption of fruits and vegetables and physical activity items were used verbatim from the CDHS *Network for a Healthy California* Youth Survey – updated July 2011. Additional items that assessed constructs of socialization-encouragement, participation in nutrition activities, and observation of nutrition posters on display at school,

and participation in nutrition activities with family, completed the LACOE NYS with at total of 41 items. Test-taking fatigue may play a role in the consistency of students' responses at pretest and posttest.

- Hot and cold cereal consumption (item 6) might include oatmeal, grits, rice with milk, or Cheerios® or Cocoa Puffs®, cereal bars, and eaten with or without milk. The item does not differentiate between eating cereal as a meal or a snack, nor does it differentiate between healthier cereals (oatmeal, whole grain) or less healthy cereals (sweetened).
- Some students may not distinguish between a low-fat muffin, pancakes with syrup, buttermilk bars, pop tarts and sweet rolls, and/or doughnuts that may be included in school breakfast program menus.

DATA COLLECTION

- Pretesting was conducted after instruction began in over 60% of the classrooms, making the interpretation of some of the results challenging.
- In some classrooms, teachers were responsible for administering the student survey, while in other classrooms administration was done by a district project coordinator or manager. Who administers the survey may influence student responses; variety in who administers the survey may lead to inconsistencies in how it is administered.
- There was a large window of time in which the pretest (10 weeks) was administered. A variety of nutrition education interventions were been implemented during those periods that might have influenced the results of the student survey.

CURRICULAR ALIGNMENT

- There are items in the CDHS *Network for a Healthy California Youth Survey* and the LACOE NYS that may not be addressed or emphasized in the school - based interventions or curricular resources and materials used. For example breakfast consumption, perceived parent behaviors, and socialization – encouragement, may not be stressed in the interventions, but they are included in the *Network Youth Survey.*
- As the nutrition education activities are not standardized across the Coalition, by frequency

and fidelity of implementation, it is difficult to determine which activities may be having the greatest impact.

RECOMMENDATIONS

The findings discussed above lead to several recommendations for the fourth year of the contract. These are summarized below. Because this evaluation is limited to the evaluation of the impact of the nutrition education activities implemented in schools, recommendations for school policies, foodservice, and other factors that may influence produce consumption are not included. The recommendations are organized into the following sections: Intervention activities, staff training, and evaluation.

INTERVENTION ACTIVITIES

- Across the Coalition, there is a breadth of nutrition education activities implemented in classrooms, in number, variety, content, and fidelity to implementation.

  Recommendation: Nutrition education activities across the Coalition need to be standardized in order to determine which activities are successful in achieving the impact objective.

  Recommendation: Identify a minimum or core of activities that should be implemented across districts (e.g., 5 nutrition education lessons, 4 taste tests, and 3 newsletter assignments). Train teachers to implement the activities to promote consistency across the Coalition.

  Recommendation: Request all participating teachers administer the nutrition and physical activity logs the day immediately prior to the pretest and to the posttest.
- A broad range of influences and related interventions may influence and promote produce consumption and physical activity among students.

  Recommendation: Factors other than school and classroom activities that influence those behaviors need to be identified and integrated into the interventions.

  Recommendation: To the extent possible, Coalition activities should address influences at home, especially parent/guardian and trusted adult consumption of produce, and student

access to produce at home.

Recommendation: Consider collaborating with community vendors to offer the after-school sale of fresh produce near the school site.

Recommendation: Look beyond the classroom to see what can be done to increase produce consumption by students. For example, the school environment (e.g., eating areas), may need to be improved. The timing of recess and lunch may influence student-eating patterns. The availability of a produce bar, baskets of fresh produce, easy-to-eat produce such as pre-packaged celery sticks and cheese or peanut butter, carrots and dip, or fruit cups may increase student consumption.

Recommendation: Develop garden-based activities for a variety of curricular areas (e.g., math, science, language arts); to develop student interest in produce items they grow themselves.

Recommendation: Involve the students' families in the gardening, harvesting and produce preparation processes. Offer classes for family members to learn about growing their own produce.

- As there are variations in implementation across the five school districts, multiple factors may facilitate, or be barriers to, consistent school-, and district-wide teacher implementation of the *Harvest of the Month* and *Nutrition Network* program activities.

  Recommendation: Identify and address the barriers and supports to implementation of the nutrition education activities in the classroom across the Coalition.

- Across the Coalition, student-reported some inconsistencies in the extent to which cafeteria personnel are involved in offering produce to the students.

  Recommendation: Schools should encourage staff working in the cafeteria to offer produce to students and encourage them to try new items.

- Despite taste-testing being conducted numerous times, there did not appear to be a substantial improvement in student openness to try new foods.

  Recommendation: Develop taste-testing activities that allow for tasting produce in a variety of ways, for example, raw, cooked, with dip or dressing, in wraps, and in a variety of recipes.

STAFF TRAINING

- The results for student impact related to the nutrition education may be improved if teachers have more skills, and feel more prepared to implement the program.

  Recommendation: Provide ongoing technical assistance to help increase the intensity and consistency of implementation across the coalition.

- Peers may have more influence on student behavior and beliefs than teachers.

  Recommendation: Train older peers (e.g., 6th grade students with lower grade students) to facilitate some nutrition education activities in the classroom. Sixth grade teachers may use this activity to give students credit for service learning. Alternately train 5th grade students to conduct nutrition education and physical activities in 4th grade classrooms. Have students develop and use innovative approaches including role-playing, songs, poetry and games to teach reliable and valid information and model health skills to younger students.

- Many students have participated in nutrition education in earlier grades, resulting in little room for significant changes.

  Recommendation: It is important for teachers to use a wide variety of materials to maintain student interest and learning. In the event that school districts are flexible in offering a variety of nutrition education curricular resources to their schools, teacher training and dissemination activities may be useful strategies to inform use of the these materials and resources.

EVALUATION

Alignment of Nutrition Education Activities and Evaluation

- Nutrition education activities must be aligned with the evaluation. Without this alignment, it is difficult to interpret some of the results.

  Recommendation: If the student instrument is to remain the same for next year, the nutrition education activities need to address adequately each of the items on the student survey (improving other dietary patterns, such as consumption of breakfast, dairy products and cereals), or omit them from the student survey.

Recommendation: The districts less successful at reporting progress towards the impact objective need to take a closer look at the intervention activities being implemented at those schools reporting significant increases in produce consumption.

Instrumentation

- The IOE reporting template was not provided to contractors until after the posttest was developed and administered to teachers, resulting in the inability to respond to requested items.

  Recommendation: The CA Department of Public Health should finalize the reporting template and provide it to contractors at the end of each reporting period (prior to the new school year). This will enable contractors to develop pretest and posttest instruments aligned directly with the reporting template and provide CDPH with all required information.

Cultural Consistency and Evaluation

- The student survey uses idioms and contexts that may be unfamiliar to individual students completing the survey.

  Recommendation: If the student instrument is to remain the same for next year, use more inclusive terms to evoke reliable and valid student responses. For example:

  - Instead of "parent" use "parent/guardian" or "adult family member" or "trusted adult at home"
  - Include "energy drinks" in item 12
  - Define "breakfast" as some students may interpret certain foods as breakfast foods, those same foods may be eaten by other students any time of day (e.g., soda, snack pastries such as Twinkies®).
  - Consider the use and interpretation of "home"; it may mean a house, apartment, or other shelter that is the usual residence of the student or family, an institution for the homeless, sick (e.g., a nursing home), or ones birthplace or home country.
  - Consider that it may be unsafe for students to play outdoors, and include additional

examples for student physical activity

Data Collection

- There is variation in the implementation of the protocol for the administration of the student survey at pretest and posttest, including who and when the survey is administered.

  Recommendation: The same faculty/staff (e.g., teacher, district project coordinator) need to administer the student survey within each classroom, and across classrooms.

  Recommendation: Conduct pretesting no later than the second week of school. If this is not possible, at a minimum, have pretesting for all schools take place during the same two-week period.

  Recommendation: Instruct teachers not to teach any nutrition education, conduct nutrition-related activities, nor send nutrition information home until pretesting has been conducted in their classrooms.
- It was sometimes difficult to compare district data as one district had 50% more classrooms participate than the other schools.

  Recommendation: Have the same number of classrooms at each school participate in evaluation activities. If school administration wants all classrooms at a given school to participate, allow for two classrooms to be randomly selected for which data will be used.

Network-funded contractor:	Los Angeles COE - 09-11228
Contract number:	09-11228
Information provided by :	R2E2, Maryam Shayegh, Dr. Joanie Verderber
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Section 1

1. Project Description and Goals

Project Name:	Network for a Health California - LACOE Coalition
Target Population:	5th Grade
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	PowerPlay!

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

A sample of 5th grade students enrolled in two classrooms in 1 school in each of 5 districts, and three classrooms in one school in one district participated in the Harvest of the Month (HOTM) or HOTM Tasting Trios Taste-Testing Program, and received at least 5 classroom-based nutrition and physical activity lessons using PowerPlay! materials.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

In addition to the PowerPlay lessons a separate physical activity lesson and log was developed to define physical activity and help students with better recall of their physical activities.

In 1-2 paragraphs, please provide a description of standardized training:

District project coordinators underwent a brief training on administering the student surveys.

In 1-2 paragraphs, please provide a description of standard administration of data

District project coordinators worked closely with classroom teachers on disseminating the pre- and posttest surveys. Pre- and posttest were administered and collected by district project coordinators and/or classroom teachers.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

A food and physical activity log was implemented at pre-and post-test to improve student recall.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of at least 250 5th grade students who participated in Network for a Health California - LACOE Coalition will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

By Sept 30, 2012, a sample of at least 250 5th grade students who participated in Network for a Health California - LACOE Coalition will report an increase in physical activity

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Individual

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	295
How many sites?	5
How many classrooms?	11

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	Network Youth Survey

Were any other measures used?	Teacher Survey: 5th Grade Network for a Healthy California, LACOE 2011-12

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	54
How many lessons from the intervention occurred *after* pre-tests?	194

	Intervention	Control
Pre-test:	9/22/2012 to 11/10/2012	NA
Start of Intervention Date	1/0/1900	NA
End of Intervention Date	1/0/1900	NA
Post-test:	5/30/2012 to 6/7/2012	NA
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...some other method (please specify)

Specify Other: Using standardized administration protocol, either the classroom teacher or a district coordinator administered both the pre- and posttest.

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

See Attached Report

Qualitative:
It appears that overall, the elementary school staff and students are more excited learning about nutrition and physical activity. Many of the principals are eager to promote nutrition and physical activity at school-wide events. The students love participating in the Harvest of the Month program and look forward to trying different produce items. Teachers have indicated that students are bringing healthier snacks to school and they are providing healthier options in their classrooms. Some outstanding moments included receiving comments from participating teachers such as:

"This has been one of the BEST activities/programs that we have had in all of the years that I have been in education!!!! (which is A LOT of years!). The students really learned a lot about eating healthy. Now I see them checking the labels of the food, and milk from the cafeteria. Plus, they enjoy tasting foods that they have not tried before. They are more aware of what they should do to improve their eating habits-----and are passing the information on to their families. We are looking forward to HOTM for next year too!"

"My students learned a lot. I have changed in what I buy for snacks for my students. It used to be candy. Now, I have dried fruit, crackers, fresh fruit, vegetables, etc. The students enjoy them just as much! This was a great opportunity for me, as a teacher with 32 years of experience. The cooking demonstration and physical fitness activities in the chair were outstanding. Thank you so much! I believe it changed my students' health!"

b. Description of how evaluation results will be used:

My goal is to inform our nutrition project coordinators about the results to continuously improve our program design. We will use this information to plan the subsequent interventions and meet earlier to identify a consistent number of nutrition activities. The student and teacher surveys will be reviewed to determine if any revisions are necessary to better align with planned nutrition education activities.

7. Point of Contact

Name:	R2E2, Maryam Shayegh, Dr. Joanie Verderber
Phone Number:	562-922-6306
Email Address:	Shayegh_Maryam@lacoe.edu

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

No

Table A. Frequency (N) of matched students by gender

School District	Male	Female	Total
Garvey	33	24	57
Glendale	32	19	51
Mountain View	28	19	47
Norwalk-La Mirada	45	38	83
Rowland	33	24	57
Total	**171**	**124**	**295**

Table B. Frequency (N) of students participating in pretest, posttest, and matched pairs of students completing pretest and posttest.

School District	Pretest (N)	Posttest (N)	Matched Pairs Total (N)
Garvey	69	63	57
Glendale	58	68	51
Mountain View	56	51	47
Norwalk – La Mirada	95	98	83
Rowland	64	67	57
Total	**342**	**347**	**295**

Table 1. Self-reported vegetable consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	2.05	2.11	0.05	0.797
Glendale	51	1.37	1.98	0.61	**0.027**
Mountain View	46	1.2	1	-0.2	0.431
Norwalk – La Mirada	83	1.06	1.12	0.06	0.705
Rowland	57	1.6	1.44	-0.16	0.426
All Districts	293	1.43	1.5	0.07	0.446

Note: Number of times consumed the previous day; scores range from 0 to 5.

Table 2. Self-reported fruit consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	2.18	2.23	0.05	0.815

Glendale	51	1.9	2.63	0.73	**0.008**
Mountain View	46	1.76	1.52	-0.24	0.319
Norwalk – La Mirada	83	1.23	1.61	0.39	**0.03**
Rowland	57	1.61	1.56	-0.05	0.823
All Districts	294	1.69	1.88	0.2	**0.05**

Note: Number of times consumed the previous day; scores range from 0 to 5.

Table 3. Self-reported fruit juice consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	1.11	0.84	-0.26	0.083
Glendale	51	2.1	1.31	-0.78	**0.002**
Mountain View	47	1.4	1.06	-0.34	0.153
Norwalk – La Mirada	82	1.05	1.21	0.16	0.308
Rowland	56	1.43	1.36	-0.07	0.777
All Districts	293	1.37	1.16	-0.21	**0.022**

Note: Number of times consumed the previous day; scores range from 0 to 5.

Table 4. Self-reported fruit, vegetable, and fruit juice consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	5.36	5.2	-0.16	0.668
Glendale	51	5.37	5.92	0.55	0.316
Mountain View	45	4.33	3.58	-0.76	0.155
Norwalk – La Mirada	82	3.35	3.9	0.55	0.118
Rowland	56	4.64	4.32	-0.32	0.497
All Districts	290	4.5	4.54	0.04	0.834

Note: Scale is comprised of three items, summed; scores range from 0 to 15.

Table 5. Self-reported water consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	3.7	3.82	0.12	0.536
Glendale	51	4	3.67	-0.33	0.154
Mountain View	47	3.32	3.21	-0.11	0.698
Norwalk – La Mirada	83	2.59	3.23	0.64	**0.001**
Rowland	57	3.25	3.82	0.58	**0.017**
All Districts	295	3.29	3.53	0.24	**0.018**

Note: Number of times consumed the previous day; scores range from 0 to 5.

Table 6. Self-reported cheese consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	0.91	0.8	-0.11	0.419
Glendale	51	1.18	1.16	-0.02	0.921
Mountain View	46	0.85	1.3	0.46	**0.018**
Norwalk – La Mirada	81	0.95	0.95	0	1
Rowland	55	0.73	0.71	-0.02	0.907
All Districts	289	0.92	0.97	0.04	0.525

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 7. Self-reported milk consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	2.04	1.96	-0.07	0.604
Glendale	51	1.59	1.51	-0.08	0.591
Mountain View	47	1.36	1.3	-0.06	0.679
Norwalk – La Mirada	83	1.37	1.36	-0.01	0.921
Rowland	57	1.39	1.51	0.12	0.442
All Districts	294	1.54	1.52	-0.02	0.788

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 8. Self-reported yogurt, cottage cheese, or yogurt drink consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	0.52	0.5	-0.02	0.874
Glendale	51	0.78	0.45	-0.33	0.071
Mountain View	46	0.41	0.43	0.02	0.855
Norwalk – La Mirada	82	0.33	0.24	-0.09	0.225
Rowland	57	0.44	0.28	-0.16	0.219
All Districts	292	0.48	0.37	-0.11	**0.034**

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 9. Self-reported dairy product consumption (including any kind of milk, yogurt, cottage cheese, cheese, yogurt drink)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	54	3.48	3.33	-0.15	0.549
Glendale	51	3.55	3.12	-0.43	0.242
Mountain View	45	2.6	3.02	0.42	0.097
Norwalk – La Mirada	80	2.66	2.59	-0.08	0.734
Rowland	55	2.55	2.53	-0.02	0.93
All Districts	285	2.94	2.88	-0.06	0.586

Note: Scale is comprised of three items, summed; scores range from 0 to 9.

Table 10. Self-reported cereal consumption (including hot or cold cereal)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	0.61	0.67	0.05	0.616
Glendale	50	1.02	0.92	-0.1	0.481
Mountain View	47	0.96	0.53	-0.43	**0.003**
Norwalk – La Mirada	83	0.66	0.73	0.07	0.457
Rowland	57	0.63	0.6	-0.04	0.761
All Districts	294	0.76	0.69	-0.06	0.244

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 11. Self-reported French fry and chip consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	0.6	0.39	-0.21	0.057
Glendale	50	1.18	0.64	-0.54	**0.001**
Mountain View	47	1	1	0	1
Norwalk – La Mirada	82	0.76	0.68	-0.07	0.511
Rowland	57	0.84	0.74	-0.11	0.458
All Districts	293	0.85	0.68	-0.17	**0.003**

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 12. Self-reported punch, sports drinks, and other fruit-flavored drink consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	0.7	0.52	-0.18	0.168
Glendale	49	0.96	1.02	0.06	0.766
Mountain View	46	1.11	0.83	-0.28	0.102
Norwalk – La Mirada	82	0.46	0.57	0.11	0.274
Rowland	55	0.71	0.67	-0.04	0.816
All Districts	288	0.74	0.7	-0.05	0.49

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 13. Self-reported soft drink consumption (not including diet drinks)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	0.34	0.21	-0.13	0.196
Glendale	48	0.94	0.54	-0.4	**0.038**
Mountain View	46	0.67	0.57	-0.11	0.521
Norwalk – La Mirada	80	0.41	0.5	0.09	0.381
Rowland	53	0.51	0.53	0.02	0.886
All Districts	283	0.55	0.47	-0.08	0.172

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 14. Self-reported fruit-flavored drink and soft drink consumption (including sports drinks or other fruit-flavored drinks, not including 100% fruit juice or diet drinks)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	55	0.98	0.73	-0.25	0.099
Glendale	47	1.94	1.6	-0.34	0.328
Mountain View	45	1.78	1.4	-0.38	0.157
Norwalk – La Mirada	80	0.86	1.08	0.21	0.107
Rowland	52	1.19	1.08	-0.12	0.589
All Districts	279	1.28	1.15	-0.13	0.177

Note: Scale is comprised of two items, summed; scores range from 0 to 6.

Table 15. Self-reported sweets consumption (including sweet rolls, doughnuts, cookies, brownies, pies, or cake)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	0.72	0.47	-0.25	**0.026**
Glendale	50	1.12	0.72	-0.4	**0.01**
Mountain View	46	1	0.61	-0.39	**0.021**
Norwalk – La Mirada	81	0.8	0.64	-0.16	0.179
Rowland	54	0.7	0.59	-0.11	0.436
All Districts	288	0.85	0.61	-0.25	**0**

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 16. Self-reported breakfast consumption

District	N	N (-)	N (+)	N Tied	p. =
Garvey	55	1	5	49	0.102
Glendale	49	6	2	41	0.157
Mountain View	47	12	1	34	**0.002**
Norwalk – La Mirada	80	2	4	74	0.414
Rowland	51	6	2	43	0.157
All Districts	282	27	14	241	**0.042**

Note: Students reported eating breakfast the previous day (Yes=1 and No=0.)

Table 16a. Mean of self-reported breakfast consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	55	0.87	0.95	0.07	0.103
Glendale	49	0.96	0.88	-0.08	0.159
Mountain View	47	0.98	0.74	-0.23	**0.002**
Norwalk – La Mirada	80	0.95	0.97	0.03	0.418
Rowland	51	0.94	0.86	-0.08	0.159
All Districts	282	0.94	0.89	-0.05	**0.042**

Note: Students reported eating breakfast the previous day (Yes=1 and No=0.)

Table 17. Self-reported openness to new fruits ("I like to try new fruits")

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	1.37	1.47	0.11	0.224
Glendale	50	1.4	1.42	0.02	0.821
Mountain View	47	1.32	1.19	-0.13	0.16
Norwalk – La Mirada	82	1.29	1.45	0.16	**0.042**
Rowland	55	1.31	1.25	-0.05	0.537
All Districts	291	1.33	1.37	0.04	0.326

Note: Openness to try new fruits; scores range from 1 to 3.

Table 18. Self-reported openness to new vegetables ("I like to try new vegetables")

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	1.2	1.21	0.02	0.837
Glendale	50	0.94	1.02	0.08	0.455
Mountain View	46	0.96	0.78	-0.17	0.088
Norwalk – La Mirada	82	1	1.01	0.01	0.88
Rowland	55	1	0.89	-0.11	0.359
All Districts	289	1.02	0.99	-0.03	0.525

Note: Openness to try new vegetables; scores range from 1 to 3.

Table 19. Self-reported openness to new fruits and vegetables (i.e., "I like to try new fruits/vegetables")

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	1.28	1.35	0.07	0.314
Glendale	50	1.17	1.22	0.05	0.564
Mountain View	46	1.13	0.99	-0.14	**0.031**
Norwalk – La Mirada	82	1.15	1.23	0.09	0.171
Rowland	54	1.16	1.08	-0.07	0.393
All Districts	288	1.18	1.19	0.01	0.753

Note: Scale is comprised of two items, summed and divided by two; scores range from 1 to 3.

Table 20. Socialization-encouragement (What students' teachers tell them about eating vegetables)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	25	3	3.36	0.36	0.28
Glendale	21	3.76	3.52	-0.24	0.096
Mountain View	26	3.62	3.58	-0.04	0.77
Norwalk – La Mirada	19	3.58	3.32	-0.26	0.262
Rowland	33	2.79	3.73	0.94	**0**
All Districts	124	3.29	3.52	0.23	**0.036**

Note: Scale is comprised of "Yes" answers to four items, summed; scores range from 0 to 4.

Table 21. Socialization-encouragement (What students' teachers tell them about eating fruits)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	27	3.11	3.44	0.33	0.272
Glendale	21	4	3.81	-0.19	**0.042**
Mountain View	25	3.72	3.72	0	1
Norwalk – La Mirada	26	3.08	3.19	0.12	0.683
Rowland	35	3.31	3.63	0.31	0.215
All Districts	134	3.41	3.55	0.14	0.188

Note: Scale is comprised of "Yes" answers to four items, summed; scores range from 0 to 4.

Table 22. Students reported that a different teacher or guest taught them about fruits or vegetables

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	1.07	1.82	0.75	**0**
Glendale	50	0.26	1.74	1.48	**0**
Mountain View	45	1.24	1.96	0.71	**0**
Norwalk – La Mirada	81	1.2	1.57	0.37	**0.001**
Rowland	55	0.67	2	1.33	**0**
All Districts	287	0.92	1.79	0.87	**0**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 23. Students reported that they or the teacher made a recipe with fruits or vegetables for them to try in class

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	0.3	1.49	1.19	**0**
Glendale	49	0.47	1.84	1.37	**0**
Mountain View	45	0.33	1.8	1.47	**0**
Norwalk – La Mirada	82	0.9	1.8	0.9	**0**
Rowland	57	0.91	1.93	1.02	**0**
All Districts	290	0.62	1.77	1.15	**0**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 24. Students reported their teacher teaching them about fruits and vegetables in class

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	0.63	1.68	1.05	**0**
Glendale	50	0.8	1.64	0.84	**0**
Mountain View	47	0.96	1.74	0.79	**0**
Norwalk – La Mirada	82	0.59	1.56	0.98	**0**
Rowland	55	1.04	1.82	0.78	**0**
All Districts	290	0.78	1.68	0.9	**0**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 25. Students reported that someone working in the cafeteria offered them a fruit or vegetable

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	0.41	0.32	-0.09	0.416
Glendale	50	1.06	1.28	0.22	0.168
Mountain View	47	0.49	0.53	0.04	0.749
Norwalk – La Mirada	81	1.56	1.79	0.23	**0.002**
Rowland	53	0.64	1.4	0.75	**0**
All Districts	287	0.9	1.14	0.23	**0**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 26. Students reported that they did a nutrition activity on a worksheet

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	1.26	1.88	0.61	**0**
Glendale	49	0.86	1.84	0.98	**0**
Mountain View	47	1.17	1.77	0.6	**0**
Norwalk – La Mirada	82	0.74	1.59	0.84	**0**
Rowland	56	0.64	2	1.36	**0**
All Districts	291	0.91	1.79	0.88	**0**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 27. Student participation in nutrition activities at school (guest speaker or guest teacher, recipe preparation with fruits or vegetables in class, teaching about fruits and vegetables, offering of fruit or vegetable by cafeteria worker, nutrition activity on a worksheet)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	54	3.7	7.22	3.52	**0**
Glendale	48	3.5	8.38	4.88	**0**
Mountain View	43	4.19	7.84	3.65	**0**
Norwalk – La Mirada	78	5.01	8.27	3.26	**0**
Rowland	50	3.94	9.18	5.24	**0**
All Districts	273	4.16	8.18	4.02	**0**

Note: Scale is comprised of five items, summed; scores range from 0 to 10.

Table 28. Student observation of nutrition poster(s) displayed in classroom or around school

District	N	N (-)	N (+)	N Tied	p. =
Garvey	47	1	9	37	**0.011**
Glendale	41	2	6	33	0.157
Mountain View	38	0	14	24	**0**
Norwalk – La Mirada	54	2	27	25	**0**
Rowland	48	0	5	43	**0.025**
All Districts	228	5	61	162	**0**

Note: Students reported seeing nutrition posters displayed in the classroom or around school (Yes=1 and No=0).

Table 28a. Means of students observing nutrition poster(s) displayed in classroom or around school

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	47	0.79	0.96	0.17	**0.01**
Glendale	41	0.78	0.88	0.1	0.16
Mountain View	38	0.61	0.97	0.37	**0**
Norwalk – La Mirada	54	0.28	0.74	0.46	**0**
Rowland	48	0.9	1	0.1	**0.024**
All Districts	228	0.66	0.9	0.25	**0**

Note: Students reported seeing nutrition posters displayed in the classroom or around school (Yes=1 and No=0).

Table 29. Perceived parent behavior of fruit consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	48	2.17	2.25	0.08	0.498
Glendale	38	2.21	2.45	0.24	0.13
Mountain View	33	1.94	2	0.06	0.744
Norwalk – La Mirada	53	2.26	2.23	-0.04	0.742
Rowland	42	2.1	2.19	0.1	0.499
All Districts	214	2.15	2.23	0.08	0.199

Note: Student-reported parent consumption of fruit; scores range from 0 to 3.

Table 30. Perceived parent behavior of vegetable consumption

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	53	2.28	2.32	0.04	0.687
Glendale	37	2.14	2.35	0.22	0.222
Mountain View	33	2.18	2.06	-0.12	0.513
Norwalk – La Mirada	57	2.04	2.05	0.02	0.894
Rowland	41	2.1	2.32	0.22	0.071
All Districts	221	2.14	2.22	0.07	0.236

Note: Student-reported parent consumption of vegetables; scores range from 0 to 3.

Table 31. Perceived parent behavior (i.e., fruits and vegetables consumption)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	48	2.23	2.31	0.08	0.337
Glendale	34	2.18	2.43	0.25	0.088
Mountain View	28	2.05	2.05	0	1
Norwalk – La Mirada	48	2.17	2.1	-0.06	0.576
Rowland	35	2.09	2.23	0.14	0.134
All Districts	193	2.15	2.23	0.08	0.144

Note: Scale is comprised of two items, summed and divided by two; scores range from 0 to 3.

Table 32. Perceived access to fruits at home

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	1.82	1.79	-0.04	0.568
Glendale	50	1.74	1.8	0.06	0.411
Mountain View	46	1.85	1.76	-0.09	0.209
Norwalk – La Mirada	80	1.68	1.66	-0.01	0.836
Rowland	53	1.51	1.72	0.21	**0.004**
All Districts	285	1.71	1.74	0.02	0.414

Note: Perceived access to fruits at home; scores range from 0 to 2.

Table 33. Perceived access to vegetables at home

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	55	1.73	1.76	0.04	0.485
Glendale	46	1.5	1.67	0.17	0.073
Mountain View	41	1.71	1.66	-0.05	0.534
Norwalk – La Mirada	69	1.62	1.58	-0.04	0.594
Rowland	49	1.63	1.76	0.12	0.11
All Districts	260	1.64	1.68	0.04	0.228

Note: Perceived access to vegetables at home; scores range from 0 to 2.

Table 34. Perceived access to fruits and vegetables at home

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	54	1.78	1.77	-0.01	0.821
Glendale	46	1.63	1.76	0.13	**0.032**
Mountain View	40	1.79	1.73	-0.06	0.2
Norwalk – La Mirada	69	1.67	1.65	-0.02	0.713
Rowland	46	1.6	1.76	0.16	**0.003**
All Districts	255	1.69	1.73	0.04	0.153

Note: Scale is comprised of two items, summed and divided by two; scores range from 0 to 2.

Table 35. Students reported, taking home a Nutrition Newsletter that they received in class

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	0.54	1.61	1.07	**0**
Glendale	51	0.78	1.27	0.49	**0.001**
Mountain View	47	0.21	1.57	1.36	**0**
Norwalk – La Mirada	82	0.66	1.43	0.77	**0**
Rowland	53	1.17	1.98	0.81	**0**
All Districts	289	0.68	1.56	0.88	**0**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 36. Students reported, talking with a family member about the Nutrition Newsletter

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	0.32	0.63	0.32	**0.007**
Glendale	51	0.55	0.57	0.02	0.875
Mountain View	46	0.26	0.83	0.57	**0**
Norwalk – La Mirada	80	0.51	0.97	0.46	**0**
Rowland	55	0.64	0.96	0.33	**0.015**
All Districts	289	0.46	0.81	0.35	**0**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 37. Students reported, making a recipe at home using fruits or vegetables they tried at school

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	0.61	0.75	0.14	0.298
Glendale	50	0.8	1.04	0.24	0.141
Mountain View	47	0.74	0.7	-0.04	0.772
Norwalk – La Mirada	82	0.72	1.21	0.49	**0**
Rowland	55	0.51	0.71	0.2	0.168
All Districts	291	0.68	0.91	0.24	**0**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 38. Students reported having a family member talk to them about fruits or vegetables

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	1.67	1.81	0.14	0.22
Glendale	51	1.53	1.69	0.16	0.22
Mountain View	47	1.4	1.7	0.3	**0.033**
Norwalk – La Mirada	82	1.59	1.67	0.09	0.289
Rowland	56	1.46	1.48	0.02	0.868
All Districts	293	1.54	1.67	0.13	**0.008**

Note: Number of times activity occurred; scores range from 0 to 2.

Table 39. Scale of nutrition activities at home. Students reported on nutrition activities that occurred at home (taking newsletters home, talking with family member about newsletter, making a recipe using fruits or vegetables tried at school, talking with family member about eating fruits or vegetables)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	3.13	4.79	1.66	**0**
Glendale	50	3.68	4.56	0.88	**0.004**
Mountain View	46	2.63	4.78	2.15	**0**
Norwalk – La Mirada	80	3.48	5.29	1.81	**0**
Rowland	51	3.75	5.18	1.43	**0**
All Districts	283	3.35	4.96	1.6	**0**

Note: Scale is comprised of five items, summed; scores range from 0 to 10.

Table 40. Self-reported physical activity for at least 60 minutes per day during past 7 days prior to survey (including zeros)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	57	2.96	3.02	0.05	0.895
Glendale	50	4.6	4.56	-0.04	0.919
Mountain View	46	2.5	4.13	1.63	**0**
Norwalk – La Mirada	83	2.29	2.84	0.55	0.063
Rowland	56	3.34	4.39	1.05	**0.001**
All Districts	292	3.05	3.67	0.62	**0**

Note: Number of days checked were entered; scores range from 0 to 7.

Table 41. Self-reported outdoor play for at least 30 minutes per day during past 7 days prior to survey (including zeros)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Garvey	56	2.54	3.11	0.57	0.134
Glendale	49	4.18	3.9	-0.29	0.502
Mountain View	46	2.74	2.91	0.17	0.55
Norwalk – La Mirada	81	2.05	2.72	0.67	**0.013**
Rowland	57	3.3	3.28	-0.02	0.96
All Districts	289	2.86	3.13	0.27	0.072

Note: Number of days checked were entered; scores range from 0 to 7

Table 42. Summary of Student Matched Pairs

Construct	Scale	Item #	N	Pretest Mean	Posttest Mean	Δ	p. =
Self-Reported Consumption:							
▪ **Dairy Products**	x	5-Mar	285	2.94	2.88	-0.06	0.586
▪ **Cereal**		6	294	0.76	0.69	-0.06	0.244
▪ **Fried & Higher Fat Snack Foods**[1]		7	293	0.85	0.68	-0.17	**0.003**
▪ **Fruits, Vegetables, and Juice**	x	10-Aug	290	4.5	4.54	0.04	0.834
o **Vegetables**		8	293	1.43	1.5	0.07	0.446
o **Fruits**		9	294	1.69	1.88	0.2	**0.05**
o **100% fruit juice**		10	293	1.37	1.16	-0.21	**0.022**
▪ **Water**		11	295	3.29	3.53	0.24	**0.018**
▪ **Fruit-Flavored & Soft Drinks**[1]	x	13-Dec	279	1.28	1.15	-0.13	0.177
▪ **Sweets**[1]		14	288	0.85	0.61	-0.25	**0**
▪ **Breakfast**		15	282	0.94	0.89	-0.05	**0.042**
Openness to Try New Foods (Fruits & Vegetables)	x	16-17	288	1.18	1.19	0.01	0.753
Access to Produce in the Home	x	18-19	255	1.69	1.73	0.04	0.153
Perceived Parent Behavior	x	20-21	193	2.15	2.23	0.08	0.144
Nutrition Activities at Home	x	38-41	283	3.35	4.96	1.6	**0**
Socialization-Encouragement:							
• **Fruits**	x	24-27	134	3.41	3.55	0.14	0.188
• **Vegetables**	x	28-31	124	3.29	3.52	0.23	**0.036**
Student Participation in Nutrition Activities at School	x	32-36	273	4.16	8.18	4.02	**0**
Student Observation of Nutrition Posters		37	228	0.66	0.9	0.25	**0**
Self-Reported Physical Activity:							
• **Activity At least 60 Minutes/Day in Prior 7 Days**		22	292	3.05	3.67	0.62	**0**
• **Play At Least 30 Minutes/Day in Prior 7 Days**		23	289	2.86	3.13	0.27	0.072

[1] **Note:** a negative change points to a healthy behavior (e.g., eating fewer fried and higher fat snacks).

Table 43. Teachers reporting nutrition education activities at *pretest* and *posttest*

District	Pretest	Posttest
Garvey	1	2
Glendale	0	2
Mountain View	1	2
Norwalk-La Mirada	3	3
Rowland	2	2
All Districts	**7**	**11**

Table 44. Number of times teachers reported specific nutrition education activities and featured produce at *pretest*

District	Nutrition Log		Taste-Testing		Workbook Activity		Food Preparation		Newsletter Activities		Fact Sheets		Garden Activities	
	N	Produce	N	Produce	N	Produce	N	Produce	N	Produce	N	Produce	N	Produce
Garvey*	1	NA	1	NR	0		1	NR	0		0		0	
Glendale	0	NA	0		0		0		0		0		0	
Mountain View	0	NA	0		1	Dairy Council (food groups)	0		0		0		0	
Norwalk-La Mirada	2	NA	3	Apple; Apple; Apple	1	Apple	2	Apple; Apple	0		1	Apple	0	
Rowland	0	NA	2	Apple; Apples, Gooseberry, Mango, Papaya, & Avocado	0		1	Apple	1	Breakfast	0		0	
All Districts	**3**		**6**		**2**		**4**		**1**		**1**		**0**	

Note: **NA** = Not Applicable; **NR** = No Response

*One teacher indicated "other" activity, for produce column noted PE Activity Log

Table 45. Number of teachers reporting nutrition materials or information was sent home and the number of times teachers reported sending nutrition education activities home with students at *pretest*

District	Number of Teachers	Nutrition Education Activities Sent Home			
		Family Newsletters	Flyers/ Brochures	Fact Sheets	Other
Garvey	1	1	0	0	0
Glendale	1	0	0	1	0
Mountain View	0	0	0	0	0
Norwalk-La Mirada	3	1	0	3	0
Rowland	2	1	1	1	1
All Districts	**7**	**3**	**1**	**5**	**1**

Table 46. Number of times teachers reported conducting nutrition education lessons and nutrition-related field trips with students at *posttest*

District	Nutrition Education Lessons	Nutrition-Related Field Trips
Garvey	26	0
Glendale	30	0
Mountain View	13	1
Norwalk-La Mirada	30	0
Rowland	95[a]	0
All Districts	194	1

Note: Norwalk-La Mirada had three classrooms participating compared to only two classrooms for every other district.

[a] One teacher reported conducting this activity *three times per week* since completing the *pretest*

Table 47. Number of times teachers reported conducting physical activity education or activities with students at *pretest*

District	Physical Activity Log Activity	Physical Activity Workbook Activity	Physical Activity Assembly or Program
Garvey	2	0	0
Glendale	0	0	12
Mountain View	0	0	0
Norwalk-La Mirada	22	0	0
Rowland	0	0	1
All Districts	**24**	**0**	**13**

Note: Norwalk-La Mirada had three classrooms participating compared to only two classrooms for every other district.

Table 48. Number of times teachers reported conducting nutrition & physical activity education activities with students at *pretest* and *posttest*

District	Nutrition Log Activity		Physical Activity Log Activity		Garden-based Nutrition Education		Taste-tests		Nutrition Workbook Activity		Assignment from HOTM Newsletter		Food Prep. Activity	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Garvey	1	4	1	4	0	0	1	16	0	12	0	8[b]	1	10
Glendale	0	26	0	17	0	0	0	20	0	15	0	15	0	11
Mountain View	0	4	0	12	0	2	0	8	1	11	0	8	0	2
Norwalk-La Mirada	2	3	3	3	0	0	3	24	1	24	0	15	2	3
Rowland	0	2	0	2	0	0	2	81[a]	0	10	1	10	1	81[a]
All Districts	**3**	**39**	**4**	**38**	**0**	**2**	**6**	**149**	**2**	**72**	**1**	**56**	**4**	**107**

[a] One teacher reported conducting this activity *three times per week* since completing the pretest

[b] Teacher comment: I just talked about the information in the newsletter; no assignment.

Table 49. Teachers reporting administrator of Nutrition Log and Physical Activity Log activities with students at *posttest*

District	Nutrition Log				Physical Activity Log			
	Taught by Teacher	Taught by District Coordinator	Taught by Other	Number of Times Students Participated	Taught by Teacher	Taught by District Coordinator	Taught by Other	Number of Times Students Participated
Garvey	2	0	0	4	2	1	0	4
Glendale	2[a]	1[a]	0	26	1	0	0	17
Mountain View	2[a]	1[a]	0	4	2	1	0	12
Norwalk-La Mirada	3	0	0	3	3	0	0	3
Rowland	0	2	0	2	0	2	0	2
All Districts	**9**	**4**	**0**	**39**	**8**	**4**	**0**	**38**

[a] One teacher reported that both the teacher and district nutrition coordinator taught the log activity

Table 50. Topics of Interest for Teacher Training

District	Childhood Obesity	Type 2 Diabetes in children	Food Preparation in Classroom	*2010 Dietary Guidelines*	Food Allergies	Food Safety	Food Labeling	Garden-based Curriculum	Other Nutrition Education Curriculum
Garvey	1	2	1	1	1	0	1	0	2
Glendale	2	2	1	1	0	0	0	1	1
Mountain View	1	1	1	0	1	2	0	0	0
Norwalk-La Mirada	3	0	3	0	0	0	0	0	0
Rowland	0	2	2	0	0	0	1	0	0
All Districts	**7**	**7**	**8**	**2**	**2**	**2**	**2**	**1**	**3**

Note: Scored 0 if not selected and 1 if selected. Table presents sum of each item.

Network-funded contractor:	Los Angeles USD - 10-10072
Contract number:	10-10072
Information provided by :	Roberta Acantilado
Telephone:	818-609-2569
Date:	7/31/2012
Email:	roberta.acantilado@lausd.net

Section 1

1. Project Description and Goals

Project Name:	Network for a Healthy California--LAUSD
Target Population:	3rd, 4th, and 5th grades
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	PowerPlay!

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Network for a Healthy California—LAUSD utilizes the Harvest of the Month produce and the Harvest of the Month newsletter. Also available are chefs in the classroom, farmers in the classroom, theatrical presentations, and murals. Teachers must teach a minimum of 35 hours of nutrition education lessons over the course of the school year. Lessons are integrated into all content areas, including language arts, science, math, health, physical education, and other subjects.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Network for a Healthy California—LAUSD participating teachers are asked to incorporate physical activity into nutrition education. Teacher workshops provide training regarding methods for incorporating physical activity.

In 1-2 paragraphs, please provide a description of standardized training:

Network for a Healthy California—LAUSD has online training modules that are mandatory for all participating teachers. In addition, there are in–person teacher training workshops. Of the 7,386 participants who were enrolled in the Network, 6,205 (84%) completed the training modules.

In 1-2 paragraphs, please provide a description of standard administration of data

All data was collected using the Network Youth Survey instrument with a supplemental questionnaire for appeal ratings for different fruits and vegetables (Food Preference Survey), and was administered by Sentient Research staff, our evaluation subcontractor. All Sentient Research employees were trained on a data collection protocol, so data was collected exactly the same in each classroom in both Network and Comparison schools.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All participating teachers must provide at least 35 hours of nutrition education per year. All teachers are expected to utilize the Harvest of the Month produce each month and Harvest of the Month newsletter. Teachers are requested to send home the family newsletter. HOTM Newsletters are also mailed to parent centers at participating schools. Teachers decide how to integrate the Harvest of the Month into their core lessons. Teachers who participated in the Network evaluation reported spending an average of 5.9 hours each month on nutrition education activities (range 3-20 hours).

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 3rd, 4th, and 5th grade students who participated in Network for a Healthy California--LAUSD will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

By Sept 30, 2012, a sample of 3rd, 4th, and 5th grade students who participated in Network for a Healthy California--LAUSD will report an increase in physical activity.

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

By Sept 30, 2012, a sample of 3rd, 4th, and 5th grade students who participated in Network for a Healthy California--LAUSD will report a decrease in the consumption of sugar sweetened beverages.

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Schools

4. Describe how assignment to these groups was carried out:

a. Intervention:	Random Sample
How many matched surveys?	437
How many sites?	6
How many classrooms?	22

b. Control:	Random Sample
How many matched surveys?	407
How many sites?	5
How many classrooms?	20

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey	
Goal 2/Objective 2	Network Youth Survey	

Were any other measures used?	Food Preference Survey: A supplemental questionnaire of appeal ratings for different fruits and vegetables.

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	Varies by teacher

	Intervention			Control		
Pre-test:	10/6/2011	to	10/14/2011	10/17/2011	to	10/5/2011
Start of Intervention Date	10/17/2011			NA		
End of Intervention Date	6/17/2012			NA		
Post-test:	6/5/2012	to	6/14/2012	6/5/2012	to	6/13/2012
Follow-up:						

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	Paper and pencil survey	

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Students in the Network and Comparison groups were similar in terms of gender and grade level (see Table 1). Student gender in both groups was fairly evenly divided between males and females and there was no statistically significant difference in either student gender or grade level between the groups.

The 3rd grade sample was excluded from the analysis because the Youth Survey was designed for 4th and 5th grade levels. However, tables for 3rd graders and 3rd through 5th graders are included in this report. The results reported herein reflect the 4th and 5th grade samples only with the exception of results from the Food Preference Survey.

There were some significant differences in food intake between the Network and Comparison groups (see Table 2). The significant differences include students in the Network group who experienced a marginal significant decrease in milk consumption (-0.08) compared to the Comparison group (0.11), a significant increase in the consumption of French fries/chips (0.34) compared to the Comparison group (0.12) and a significant increase in consumption of doughnuts/cookies (0.21) compared to the Comparison group who had a decrease in consumption of doughnuts/cookies (-0.03). While the changes from baseline to endline for the Network and Comparison groups were often too similar to be significant, the Network group had higher levels of consumption of most healthy foods (cheese, yogurt, cereal, vegetables, water, and fruit) at both baseline and endline.

Within the Network group, students had a small positive trend in consumption of several healthy foods, such as cheese (increase of 0.27), yogurt (increase of 0.05), vegetables (increase of 0.20), fruits (increase of 0.31), and water (increase of 0.17). Moreover, student increases in consumption of cheese, vegetables, and fruits at endline compared to baseline were statistically significant among Network students (p values <0.01, 0.04, and <0.01, respectively). However, there was also an increase in French fries/chips (increase of 0.34), soda (increase of 0.12), and doughnuts/cookies (increase of 0.21). Students in the Network group had slight decreases in the consumption of milk (-0.08), cereal (-0.04), and fruit juice (-0.14), but these decreases were not significant. Approximately 88% of students in the Network group reported eating breakfast in the previous day at baseline, while 86% reported eating breakfast at endline. This shows a slight decrease from baseline to endline, however not significant. There was a slight decrease (-3.7%) in students who reported liking to try new vegetables, though this decrease from baseline to endline was not significant. Finally, there was a significant (p=0.04) increase (4.8%) in students who report liking to try new fruits from 39% at baseline to 44% at endline.

Network students consumed more fruits and vegetables each day than any other food measured, though many students still consume too few vegetables and fruits (see Table 2). The students surveyed in this group consumed fruits 2.28 times per day and vegetables 1.78 times each day at endline. It is unclear from these data, however, what the serving size was, so it is impossible to determine definitively if consumption is adequate. It is promising, however, that Network students

increased their consumption of both fruits and vegetables from baseline to endline. Network students also reported drinking water nearly 4 times per day (3.79) with an increase of 0.17 from baseline to endline.

Network students reported eating substantial amounts of unhealthy foods in the previous day. On average, students ate French fries/chips, punch/sports drinks, and doughnuts/cookies slightly more than one time per day (1.16, 1.16, and 1.11 times, respectively), and had soda slightly less than once (0.69 times) in the previous day. Furthermore, it appears that Network students may consume too much fruit juice, since students reported having fruit juice 1.37 times in the previous day, and the recommended daily intake of fruit juice for children is 6 ounces (Assuming one serving exceeded 6 ounces).

Within the Comparison group, there were small increases in the consumption of cheese (0.34), milk (0.11), cereal (0.11), French fries/chips (0.12), vegetables (0.10), fruits (0.10), and water (0.06). Only an increase in cheese consumption was statistically significant. Comparison group students had a slight decrease in consumption of yogurt (-0.03), cereal (-0.07), fruit juice (-0.12), punch/sports drinks (-0.07), soda (-0.03.), and doughnuts/cookies (-0.03), none of which were statistically significant. Similar to the Network students, approximately 88% of students in the Comparison group reported eating breakfast in the previous day. This percentage dropped very slightly from baseline to endline, however not significantly.

There was not a significant difference between the Network and Comparison groups in parental consumption of fruits or vegetables as reported by students or in the availability of fruits or vegetables at home (see Table 3).

Within the Network group, there was a small, but non-significant increase in the amount of fruits consumed by parents. At both baseline and endline, Network students reported that their parents ate fruits and vegetables “sometimes” or “most days a week.” At both baseline and endline, Network students reported having fruits and vegetables at home to eat “almost always” or “always.” From baseline to endline, Network students reported a significant increase in the availability of fruits in their home and an increase, though not significant, in vegetables in their home.

Within the Comparison group, there was a marginal significant decrease in the amount of fruit consumed by parents, and an insignificant decrease in parents’ consumption of vegetables. At both baseline and endline, on average, students reported that their parents ate fruits and vegetables “sometimes” or “most days a week.” These students also reported a small but significant increase in the availability vegetables at home, and fruit availability did not change from baseline to endline. At both baseline and endline, Comparison students, on average reported having fruits and vegetables at home to eat “sometimes.”

There were no significant differences between the Comparison group and Network group in parental consumption of fruits and vegetables or the availability of fruits and vegetables at home.

There was a significant increase in the Network versus the Comparison group in preferences of fruits and vegetables (see Table 4). These significant differences were found for fruits and vegetables featured in the HOTM that included blueberries, broccoli, dried apricots, nectarines, parsnips, raspberries, spinach, and turnips. The Network group also showed a significant increase from the

Comparison group in appeal for non-HOTM featured items which included green beans and jicama. There were no significant differences in the preference for other HOTM featured items between the Network and Comparison group which included asparagus, beets, carrots, corn, dried fig, dried plum, grapefruit, melon, and salad greens.

Within the Network group, there was a significant increase (6.8%) in students who reported liking broccoli compared to a decrease (-3.3%) in liking broccoli in the Comparison group. Similarly, there was a significant increase of 2.7% in students who reported liking blueberries, compared to a 3.3% decrease in the Comparison group. While both Network and Comparison groups increased their preference for spinach, there was a far larger and significant increase in the Network group with a 13.2% increase in students who reported liking spinach compared to a 2.3% increase in liking spinach in the Comparison group. Similarly, there was a significant increase in Network students who reported liking dried apricots (43.6%) compared to Comparison group students (27.4%). Preference for parsnips significantly increased 9.7% among the Network group, while in the Comparison group, students' preference for parsnips significantly decreased by 2.8%.

Though not statistically significant, student's preference for asparagus, beets, carrots, cauliflower, corn, dried figs, plums, melon, mushrooms, and persimmons increased in the Network group more than in the Comparison group. Preferences for salad greens and radishes increased more in the Comparison group students compared to Network group students and preference for grapefruit decreased in both groups.

Both the Network and Comparison groups increased the days per week they exercise for 60 minutes or more in the previous week with a statistically significant increase within the Comparison group (see Table 5). The increase in exercise for 60 minutes or more in the previous week between the Network and Comparison groups was also significant ($p=0.01$) indicating greater improvement from baseline within the Comparison group than in the Network group.

Within the Network group, students reported a significant increase in playing outdoors from baseline to endline. However, a similar trend was observed for the Comparison group. There were no significant differences in these increases between the Network and Comparison group. Overall, both Network and comparison groups did not meet the recommended one hour of exercise per day, 7 days a week for children, but showed notable improvement.

The program objectives which stated that, 1) by May 21, 2012, a sample of 350 students who participated in LAUSD Network program will report an aggregated increase in physical activity, and 2) by May 21, 2012, a sample of 350 students who participated in the LAUSD Network Program will report an aggregated increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption. These objectives were met. Students in the Network group increased both physical activity for 60 minutes per day and playing outdoors for 30 minutes per day, though only outdoor play for 30 minutes or more showed a significant increase. As reported earlier, Network students also increased their consumption of both fruits and vegetables from baseline to endline, though only fruit consumption was significant.

b. Description of how evaluation results will be used:

In general, most differences between Network and Comparison groups were not statistically significant, but many results were in the expected direction. Indeed, the findings indicated greater

improvements in the consumption of fruits and vegetables in the Network group compared to the Comparison group. Conversely, the findings also showed improvements in the consumption of fruit juice and water, with students reporting drinking less juice and more water in the Network group compared to the Comparison group. These positive trends are encouraging. There was also, however an increase in doughnuts/cookies, French fries/chips, soda and punch/sports drink consumption, indicating a negative trend.

The increase in unhealthy snacks, like punch and cookies suggest that improvements need to be made to decrease the availability of unhealthy snacks both in schools and at home. These prepackaged items may be convenient for several reasons including lower cost, long shelf life, and easy to store and pack in a child's lunch or snack bag.

Though not significant, there was an increase in the consumption of some unhealthy foods and beverages, such as cookies and punch/sports drinks. Furthermore, it is unclear if Network students are consuming the recommended levels of certain healthy foods including yogurt and cereal, fruits and vegetables. Having healthy foods accessible as snacks for students more often would result in increased consumption.

Recommendation 1: Continue to focus on increased fruit and vegetable consumption.

Despite some gains, Network students are still not consuming sufficient amounts of either fruits or vegetables. A multi-component approach is called for to address this, including strategies that involve parents and communities. For instance, give parents information about having fruits and vegetables available in the home, offer tips on replacing unhealthy snacks with these foods, and advise parents on how and where to access healthy food and how to obtain CalFresh benefits to make healthier choices affordable.

Recommendation 2: Continue to focus on decreasing unhealthy food consumption. Find ways to demonstrate to students and parents the importance of replacing unhealthy foods (like French fries/chips) and unhealthy drinks (like fruit punch and soda), with healthy alternatives. For example, consider a greater focus on Rethink Your Drink for next year.

Recommendation 3: Increase focus on physical activity.

The results of this evaluation showed notable improvements in physical activity among Network students from baseline to endline, however, only increases in outdoor play were significant, and changes were not as large for the Network group as for the Comparison group. But despite these improvements, the current reported level of physical activity among students still falls short of the recommended minimum of 1 hour of exercise per day, 7 days a week. Physical activity appears to be the element of the Network program that needs the most improvement. Consider promoting evidence-based physical activity programs in participating schools.

Recommendation 4: Help teachers efficiently incorporate nutrition and physical activity into their schedules. A lack of time seems to be a major obstacle for Network teachers, with less than half of teachers reporting being able to complete all of the activities they had planned. Consider giving teachers frequent, easy tips on how to integrate nutrition and physical activity into all different subjects and daily schedules.

Recommendation 5: Develop strategies to increase the impact of the Network in families and communities. Students spend most of their time outside of school. Utilize the parent newsletter and/or homework assignments to encourage parents to make healthier choices in terms of food and physical activity. Also intensify efforts with parent centers, and help to promote local resources to parents. Consider forming relationships with community-based organizations to help stretch limited Network resources.

Recommendation 6: Continue to utilize the Food Preference Questionnaire in evaluation measures for subsequent reporting periods. While this survey does not directly measure the consumption of fruits and vegetables, an assessment of the appeal of different fruits and vegetables can be associated with consumption. Many results from these additional measures were in the expected direction and very encouraging. Indeed, students may find it easier to express which fruits and vegetables they like and dislike than recalling what they consumed yesterday.

Recommendation 7: Consider evaluating middle or high school students. Elementary school students seem to have some difficulty recalling the number of times they ate a certain food in the previous day, and even more difficulty recalling how many days they engaged in physical activity in the previous week. Middle school or high school students would likely have better recall of their behavior. This strategy would also give the LAUSD Network an idea of how the program is working with other age groups.

7. Point of Contact

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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

X	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	

	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Did you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Tables

Table 1. Demographic characteristics of 3rd-5th grade children in Network LAUSD evaluation, by intervention group, 2011-2012

	Network group (n=437)		Comparison group (n=407)		
Characteristic	n	%	n	%	P Value
Gender					0.24
Male	227	51.9	195	47.9	
Female	210	48.1	212	52.1	
Grade					0.63
3rd	146	33.4	134	32.9	
4th	120	27.5	102	25.1	
5th	171	39.1	171	42.0	

Table 2. Food intake based on 24 hour recall among 4th-5th grade children in Network LAUSD evaluation by intervention group, 2011-2012

	Network group (n=291)				Comparison group (n=273)				
Characteristic	Mean	(	SE	)	Mean	(	SE	)	P Value*
Consumption of Cheese									
Pre-test	0.84	(	0.05	)	0.75	(	0.05	)	
Post-test	1.11	(	0.05	)	1.09	(	0.05	)	
Difference	0.27				0.34				0.47
P Value**	<.01				<.01				
Consumption of Milk									
Pre-test	1.57	(	0.06	)	1.40	(	0.06	)	
Post-test	1.49	(	0.05	)	1.52	(	0.06	)	
Difference	-0.08				0.11				0.03
P Value**	0.17				0.08				
Consumption of Yogurt									
Pre-test	0.46	(	0.04	)	0.37	(	0.04	)	
Post-test	0.47	(	0.04	)	0.34	(	0.04	)	
Difference	0.05				-0.03				0.14
P Value**	0.24				0.53				
Consumption of Cereal									
Pre-test	0.93	(	0.05	)	0.83	(	0.05	)	
Post-test	0.89	(	0.04	)	0.77	(	0.05	)	
Difference	-0.04				-0.07				0.81
P Value**	0.45				0.28				
Consumption of French fries/Chips									
Pre-test	0.82	(	0.05	)	0.87	(	0.05	)	
Post-test	1.16	(	0.05	)	0.98	(	0.05	)	
Difference	0.34				0.12				<.01
P Value**	<.01				0.06				
Consumption of Vegetables									
Pre-test	1.57	(	0.09	)	1.49	(	0.08	)	
Post-test	1.78	(	0.09	)	1.59	(	0.08	)	
Difference	0.20				0.10				0.45
P Value**	0.04				0.36				
Consumption of Fruits									
Pre-test	1.98	(	0.10	)	1.88	(	0.09	)	
Post-test	2.28	(	0.09	)	2.01	(	0.09	)	
Difference	0.31				0.10				0.27
P Value**	<.01				0.18				
Consumption of Fruit Juice									
Pre-test	1.51	(	0.08	)	1.40	(	0.08	)	
Post-test	1.37	(	0.08	)	1.28	(	0.08	)	
Difference	-0.14				-0.12				0.83
P Value**	0.13				0.22				
Consumption of Water									
Pre-test	3.61	(	0.09	)	3.69	(	0.09	)	
Post-test	3.79	(	0.08	)	3.75	(	0.08	)	
Difference	0.17				0.06				0.41
P Value**	0.08				0.58				
Consumption of Punch/Sports Drink									
Pre-test	1.04	(	0.06	)	1.17	(	0.06	)	
Post-test	1.16	(	0.06	)	1.11	(	0.06	)	
Difference	0.12				-0.07				0.06
P Value**	0.09				0.34				

Consumption of Soda									
Pre-test	0.57	(	0.05	)	0.63	(	0.06	)	
Post-test	0.69	(	0.05	)	0.60	(	0.05	)	
Difference	0.12				-0.03				0.07
P Value**	0.05				0.57				
Consumption of doughnuts/cookies									
Pre-test	0.91	(	0.06	)	0.94	(	0.06	)	
Post-test	1.11	(	0.06	)	0.91	(	0.06	)	
Difference	0.21				-0.03				0.03
P Value**	<.01				0.70				
Consumption of breakfast									
Pre-test	87.9%				87.2%				
Post-test	85.6%				86.5%				
Difference	-2.3%				-0.7%				0.63
P Value**	0.30				0.78				
Try new fruits, always or almost always									
Pre-test	39.2%				35.9%				
Post-test	44.0%				35.9%				
Difference	4.8%				0.0%				0.32
P Value**	0.04				0.81				
Try new vegetables, always or almost always									
Pre-test	26.5%				19.5%				
Post-test	22.8%				15.4%				
Difference	-3.7%				-4.1%				0.45
P Value**	0.07				0.17				

Abbreviations. SE=Standard Error
Note. Scale range for fruit, vegetable, and fruit juice consumption 0-5 (none to item consumed 5 or more times in the past 24 hours); Scale range for milk, cheese, cereal, chips/french fries, punch/sports drink, soda, and sweet rolls/cookie consumption 0-3 (none to item consumed 3 ore more times in the past 24 hours)
*P value indicates whether the change from pre-test to post-test was significantly different across the two groups
**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 3. Fruit and vegetable availability at home and parent consumption among 4th-5th grade children in network LAUSD evaluation by intervention group, 2011-2012

Characteristic	Network group (n=291) Mean	SE	Comparison group (n=273) Mean	SE	P Value*
How often do parents eat fruit					
Pre-test	2.15	0.05	2.18	0.06	
Post-test	2.25	0.05	2.12	0.05	
Difference	0.03		-0.14		0.57
P Value**	0.64		0.05		
How often do parents eat vegetables					
Pre-test	2.26	0.05	2.26	0.05	
Post-test	2.23	0.05	2.18	0.05	
Difference	0.03		-0.10		0.33
P Value**	0.99		0.16		
Are fruits available at home					
Pre-test	1.71	0.03	1.76	0.03	
Post-test	1.81	0.03	1.76	0.03	
Difference	0.11		0.00		0.29
P Value**	<.01		0.82		
Are vegetables available at home					
Pre-test	1.60	0.03	1.57	0.04	
Post-test	1.65	0.03	1.68	0.03	
Difference	0.05		0.08		0.18
P Value**	0.15		0.05		

Abbreviations. SE=Standard Error

Note. Scale range for parental consumption of fruits/vegetables 0-4 (never to every day of the week); Scale range for availability of fruits vegetables 0-2 (never to always)

*P value indicates whether the change from pre-test to post-test was significantly different across the two groups

**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 4. Fruit and vegetable preferences among 3rd-5th grade children in Network LAUSD evaluation by intervention group, 2011-2012

Characteristic	Network group (n=437) %	Comparison group (n=407) %	P Value*
I like asparagus			
Pre-test	29.2%	30.0%	
Post-test	33.3%	31.5%	
Difference	4.1%	1.4%	0.26
P Value**	<.01	<.01	
I like beets			
Pre-test	22.9%	18.6%	
Post-test	32.5%	26.6%	
Difference	9.6%	8.0%	0.59
P Value**	<.01	<.01	
I like blueberries			
Pre-test	84.3%	86.9%	
Post-test	87.1%	83.6%	
Difference	2.7%	-3.3%	0.04
P Value**	<.01	<.01	
I like broccoli			
Pre-test	77.9%	80.1%	
Post-test	84.7%	78.8%	
Difference	6.8%	-1.3%	0.02
P Value**	<.01	<.01	
I like carrots			
Pre-test	90.1%	89.0%	
Post-test	94.2%	89.9%	
Difference	4.2%	0.8%	0.32
P Value**	<.01	0.02	
I like cauliflower			
Pre-test	44.0%	45.2%	
Post-test	54.9%	48.4%	
Difference	11.0%	3.2%	0.07
P Value**	<.01	<.01	
I like corn			
Pre-test	94.9%	93.2%	
Post-test	96.1%	93.6%	
Difference	1.2%	0.5%	0.62
P Value**	0.09	0.13	
I like dried apricot			
Pre-test	19.0%	23.1%	
Post-test	43.6%	27.4%	
Difference	24.6%	4.4%	<.01
P Value**	<.01	<.01	
I like dried fig			
Pre-test	14.3%	19.5%	
Post-test	18.5%	19.9%	
Difference	4.2%	0.4%	0.14

P Value**	<.01	0.10	
I like plum	43.4%	45.8%	
Pre-test	47.5%	46.2%	
Post-test	4.2%	0.5%	0.28
Difference	<.01	0.10	
P Value**			
I like grapefruit			
Pre-test	81.1%	80.6%	
Post-test	75.9%	77.2%	
Difference	-5.2%	-3.4%	0.15
P Value**	0.04	0.03	
I like green beans			
Pre-test	55.1%	49.4%	
Post-test	63.0%	53.0%	
Difference	7.9%	3.6%	0.05
P Value**	<.01	0.01	
I like jicama			
Pre-test	45.6%	40.2%	
Post-test	65.7%	44.4%	
Difference	20.2%	4.2%	<.01
P Value**	<.01	<.01	
I like melon			
Pre-test	89.8%	91.6%	
Post-test	91.5%	90.3%	
Difference	1.7%	-1.3%	0.47
P Value**	0.01	0.52	
I like mushrooms			
Pre-test	31.6%	34.1%	
Post-test	32.2%	34.4%	
Difference	0.5%	0.3%	0.27
P Value**	0.22	0.10	
I like nectarines			
Pre-test	48.8%	51.9%	
Post-test	55.5%	49.5%	
Difference	6.6%	-2.4%	<.01
P Value**	<.01	<.01	
I like parsnips			
Pre-test	12.7%	13.7%	
Post-test	22.4%	10.9%	
Difference	9.7%	-2.8%	<.01
P Value**	<.01	<.01	
I like persimmons			
Pre-test	19.5%	15.3%	
Post-test	19.5%	10.5%	
Difference	0.1%	-4.8%	0.17
P Value**	0.10	<.01	
I like radishes			
Pre-test	43.6%	39.3%	
Post-test	44.1%	43.1%	

Difference	0.6%	3.9%	0.67
P Value**	0.10	<.01	
I like raspberries			
Pre-test	84.6%	85.8%	
Post-test	89.0%	84.0%	
Difference	4.4%	-1.8%	<.01
P Value**	<.01	0.02	
I like salad greens			
Pre-test	74.1%	69.5%	
Post-test	78.4%	74.1%	
Difference	4.4%	4.6%	0.48
P Value**	<.01	0.01	
I like spinach			
Pre-test	59.1%	58.6%	
Post-test	72.2%	60.9%	
Difference	13.2%	2.3%	<.01
P Value**	<.01	0.03	
I like turnips			
Pre-test	24.0%	23.1%	
Post-test	33.8%	24.1%	
Difference	9.8%	1.0%	<.01
P Value**	<.01	0.01	

*P value indicates whether the change from pre-test to post-test was significantly different across the two groups

**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 5. Physical activity based on a 7-day recall among 4th-5th grade children in network LAUSD evaluation by intervention group, 2011-2012

Characteristic	Network group (n=291) Mean	(SE)	Comparison group (n=273) Mean	(SE)	P Value*
Physical activity for at least 60 mins in the past week					
Pre-test	4.49	(0.13)	4.04	(0.13)	
Post-test	4.69	(0.12)	4.74	(0.13)	
Difference	0.24		0.76		0.01
P Value**	0.11		<.01		
Played outdoors for at least 30 mins in the past week					
Pre-test	4.27	(0.14)	4.02	(0.14)	
Post-test	4.55	(0.13)	4.64	(0.13)	
Difference	0.38		0.69		0.17
P Value**	0.02		<.01		

Abbreviations. SE=Standard Error

Note. Scale range for physical activity and outdoor play 0-7 (none to at least 60 minutes of exercise all 7 days of the past week)

*P value indicates whether the change from pre-test to post-test was significantly different across the two groups

**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 6. Food intake based on 24 hour recall among 3rd-5th grade children in Network LAUSD evaluation by intervention group, 2011-2012

	Network group (n=437)				Comparison group (n=407)				
Characteristic	Mean	(	SE	)	Mean	(	SE	)	P Value*
Consumption of Cheese									
Pre-test	0.82	(	0.04	)	0.78	(	0.04	)	
Post-test	1.06	(	0.04	)	1.07	(	0.05	)	
Difference	0.24				0.30				0.49
P Value**	<.01				<.01				
Consumption of Milk									
Pre-test	1.56	(	0.05	)	1.46	(	0.05	)	
Post-test	1.50	(	0.04	)	1.53	(	0.05	)	
Difference	-0.06				-0.01				0.09
P Value**	0.25				0.21				
Consumption of Yogurt									
Pre-test	0.49	(	0.04	)	0.43	(	0.04	)	
Post-test	0.51	(	0.04	)	0.40	(	0.03	)	
Difference	0.04				0.08				0.52
P Value**	0.71				0.57				
Consumption of Cereal									
Pre-test	0.96	(	0.04	)	0.89	(	0.04	)	
Post-test	0.90	(	0.04	)	0.80	(	0.04	)	
Difference	-0.05				-0.09				0.61
P Value**	0.28				0.08				
Consumption of French fries/Chips									
Pre-test	0.79	(	0.04	)	0.88	(	0.05	)	
Post-test	1.01	(	0.04	)	0.88	(	0.04	)	
Difference	0.22				0.00				<.01
P Value**	<.01				0.99				
Consumption of Vegetables									
Pre-test	1.81	(	0.08	)	1.67	(	0.08	)	
Post-test	1.83	(	0.08	)	1.49	(	0.07	)	
Difference	0.02				-0.18				0.12
P Value**	0.86				0.05				
Consumption of Fruits									
Pre-test	2.11	(	0.08	)	1.96	(	0.08	)	
Post-test	2.30	(	0.08	)	1.97	(	0.07	)	
Difference	0.19				0.01				0.16
P Value**	0.04				0.89				
Consumption of Fruit Juice									
Pre-test	1.58	(	0.07	)	1.56	(	0.07	)	
Post-test	1.40	(	0.07	)	1.33	(	0.07	)	
Difference	-0.19				-0.23				0.69
P Value**	0.01				<.01				
Consumption of Water									
Pre-test	3.57	(	0.08	)	3.62	(	0.08	)	
Post-test	3.67	(	0.07	)	3.66	(	0.07	)	
Difference	0.10				0.05				0.65
P Value**	0.23				0.58				
Consumption of Punch/Sports Drink									
Pre-test	1.10	(	0.05	)	1.20	(	0.05	)	
Post-test	1.14	(	0.05	)	1.05	(	0.04	)	
Difference	0.03				-0.15				0.03
P Value**	0.57				0.01				

Consumption of Soda								
Pre-test	0.57	(	0.04	)	0.66	(	0.05	)	
Post-test	0.58	(	0.04	)	0.62	(	0.04	)	
Difference	0.01				-0.04				0.45
P Value**	0.81				0.42				
Consumption of doughnuts/cookies									
Pre-test	0.95	(	0.05	)	1.00	(	0.05	)	
Post-test	0.98	(	0.05	)	0.92	(	0.05	)	
Difference	0.03				-0.07				0.20
P Value**	0.57				0.22				
Consumption of breakfast									
Pre-test	89.0%				87.7%				
Post-test	87.0%				88.7%				
Difference	-2.0%				1.0%				0.31
P Value**	0.32				0.62				
Try new fruits, always or almost always									
Pre-test	40.3%				36.2%				
Post-test	42.4%				34.6%				
Difference	2.1%				-1.6%				0.47
P Value**	0.17				0.82				
Try new vegetables, always or almost always									
Pre-test	27.7%				22.2%				
Post-test	24.3%				16.7%				
Difference	-3.4%				-5.5%				0.31
P Value**	0.04				0.06				

Abbreviations. SE=Standard Error
Note. Scale range for fruit, vegetable, and fruit juice consumption 0-5 (none to item consumed 5 or more times in the past 24 hours); Scale range for milk, cheese, cereal, chips/french fries, punch/sports drink, soda, and sweet rolls/cookie consumption 0-3 (none to item consumed 3 ore more times in the past 24 hours)
*P value indicates whether the change from pre-test to post-test was significantly different across the two groups
**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 7. Physical activity based on a 7-day recall among 3rd-5th graderchildren in network LAUSD evaluation by intervention group, 2011-2012

Characteristic	Network group (n=437) Mean	(SE)	Comparison group (n=407) Mean	(SE)	P Value*
Physical activity for at least 60 mins in the past week					
Pre-test	4.29	(0.11)	3.82	(0.11)	
Post-test	4.53	(0.11)	4.72	(0.11)	
Difference	0.25		0.95		<.01
P Value**	0.06		<.01		
Played outdoors for at least 30 mins in the past week					
Pre-test	4.09	(0.11)	3.89	(0.12)	
Post-test	4.36	(0.11)	4.55	(0.11)	
Difference	0.36		0.68		0.05
P Value**	<.01		<.01		

Abbreviations. SE=Standard Error

Note. Scale range for physical activity and outdoor play 0-7 (none to at least 60 minutes of exercise all 7 days of the past week)

*P value indicates whether the change from pre-test to post-test was significantly different across the two groups

**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 8. Fruit and vegetable availability at home and parent consumption among 3rd-5th grade children in network LAUSD evaluation by intervention group, 2011-2012

Characteristic	Network group (n=437) Mean	SE	Comparison group (n=407) Mean	SE	P Value*
How often do parents eat fruit					
Pre-test	2.21	0.04	2.18	0.05	
Post-test	2.24	0.04	2.17	0.05	
Difference	0.03		-0.09		0.62
P Value**	0.62		0.22		
How often do parents eat vegetables					
Pre-test	2.26	0.05	2.25	0.05	
Post-test	2.23	0.04	2.22	0.05	
Difference	-0.02		-0.03		0.92
P Value**	0.86		0.56		
Are fruits available at home					
Pre-test	1.72	0.02	1.70	0.03	
Post-test	1.79	0.02	1.78	0.02	
Difference	0.08		0.08		0.85
P Value**	0.01		0.01		
Are vegetables available at home					
Pre-test	1.57	0.03	1.55	0.03	
Post-test	1.64	0.03	1.65	0.03	
Difference	0.07		0.10		0.48
P Value**	0.03		<.01		

Abbreviations. SE=Standard Error

Note. Scale range for parental consumption of fruits/vegetables 0-4 (never to every day of the week); Scale range for availability of fruits vegetables 0-2 (never to always)

*P value indicates whether the change from pre-test to post-test was significantly different across the two groups

**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 9. Food intake based on 24 hour recall among 3rd grade children in Network LAUSD evaluation by intervention group, 2011-2012

Characteristic	Network group (n=146) Mean	(SE)	Comparison group (n=134) Mean	(SE)	P Value*
Consumption of Cheese					
Pre-test	0.79	(0.08)	0.84	(0.08)	
Post-test	0.97	(0.08)	1.05	(0.09)	
Difference	0.18		0.22		0.83
P Value**	0.08		0.05		
Consumption of Milk					
Pre-test	1.55	(0.08)	1.57	(0.08)	
Post-test	1.53	(0.08)	1.55	(0.08)	
Difference	-0.02		-0.02		0.99
P Value**	0.89		0.83		
Consumption of Yogurt					
Pre-test	0.66	(0.07)	0.07	(0.07)	
Post-test	0.60	(0.07)	0.06	(0.06)	
Difference	-0.06		-0.01		0.65
P Value**	0.50		0.92		
Consumption of Cereal					
Pre-test	1.01	(0.07)	1.01	(0.08)	
Post-test	0.93	(0.07)	0.87	(0.07)	
Difference	-0.07		-0.13		0.47
P Value**	0.41		0.14		
Consumption of French fries/Chips					
Pre-test	0.73	(0.08)	0.92	(0.09)	
Post-test	0.71	(0.07)	0.68	(0.07)	
Difference	-0.02		-0.24		0.10
P Value**	0.83		<.01		
Consumption of Vegetables					
Pre-test	2.28	(0.15)	2.05	(0.15)	
Post-test	1.92	(0.14)	1.32	(0.14)	
Difference	-0.36		-0.73		0.09
P Value**	0.04		<.01		
Consumption of Fruits					
Pre-test	2.37	(0.14)	2.12	(0.08)	
Post-test	2.32	(0.13)	1.87	(0.07)	
Difference	-0.05		-0.25		0.37
P Value**	0.75		0.12		
Consumption of Fruit Juice					
Pre-test	1.71	(0.14)	1.89	(0.15)	
Post-test	1.45	(0.11)	1.43	(0.12)	
Difference	-0.28		-0.45		0.36
P Value**	0.02		<.01		
Consumption of Water					
Pre-test	3.49	(0.13)	3.45	(0.14)	
Post-test	3.44	(0.12)	3.48	(0.14)	
Difference	-0.05		0.03		0.43
P Value**	0.74		0.85		
Consumption of Punch/Sports Drink					
Pre-test	1.22	(0.10)	1.26	(0.10)	
Post-test	1.08	(0.08)	0.93	(0.09)	
Difference	-0.14		-0.31		0.27

P Value**	0.22			<.01				
Consumption of Soda								
Pre-test	0.56	(	0.07)	0.71	(	0.08)		
Post-test	0.36	(	0.05)	0.66	(	0.08)		
Difference	-0.21			-0.05				0.19
P Value**	<.01			0.56				
Consumption of doughnuts/cookies								
Pre-test	1.03	(	0.09)	1.11	(	0.10)		
Post-test	0.73	(	0.07)	0.95	(	0.10)		
Difference	-0.31			-0.16				0.30
P Value**	<.01			0.11				
Consumption of breakfast								
Pre-test	91.0%			88.7%				
Post-test	90.4%			93.2%				
Difference	-0.6%			-4.5%				
P Value**	0.82			0.13				0.47
Try new fruits, always or almost always								
Pre-test	42.5%			36.8%				
Post-test	39.3%			32.1%				
Difference	-3.2%			-4.7%				0.91
P Value**	0.75			0.19				
Try new vegetables, always or almost always								
Pre-test	30.1%			27.8%				
Post-test	27.4%			24.6%				
Difference	-2.7%			-3.2%				0.46
P Value**	0.29			0.05				

Abbreviations. SE=Standard Error
Note. Scale range for fruit, vegetable, and fruit juice consumption 0-5 (none to item consumed 5 or more times in the past 24 hours); Scale range for milk, cheese, cereal, chips/french fries, punch/sports drink, soda, and sweet rolls/cookie consumption 0-3 (none to item consumed 3 ore more times in the past 24 hours)
*P value indicates whether the change from pre-test to post-test was significantly different across the two groups
**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 10. Physical activity based on a 7-day recall among 3rd grade children in network LAUSD evaluation by intervention group, 2011-2012

Characteristic	Network group (n=146) Mean	(SE)	Comparison group (n=134) Mean	(SE)	P Value*
Physical activity for at least 60 mins in the past week					
Pre-test	3.89	(0.20)	3.36	(0.21)	
Post-test	4.21	(0.21)	4.67	(0.20)	
Difference	0.26		1.36		<.01
P Value**	0.30		<.01		
Played outdoors for at least 30 mins in the past week					
Pre-test	3.74	(0.21)	3.61	(0.24)	
Post-test	3.97	(0.20)	4.38	(0.21)	
Difference	0.31		0.67		0.33
P Value**	0.22		0.01		

Abbreviations. SE=Standard Error

Note. Scale range for physical activity and outdoor play 0-7 (none to at least 60 minutes of exercise all 7 days of the past week)

*P value indicates whether the change from pre-test to post-test was significantly different across the two groups

**P value indicates whether the change from pre-test to post-test was significantly different within each group

Table 11. Fruit and vegetable availability at home and parent consumption among 3rd grade children in network LAUSD evaluation by intervention group, 2011-2012

Characteristic	Network group (n=146) Mean	SE	Comparison group (n=134) Mean	SE	P Value*
How often do parents eat fruit					
Pre-test	2.34	0.08	2.19	0.09	
Post-test	2.22	0.07	2.26	0.09	
Difference	-0.16		0.05		0.17
P Value**	0.14		0.62		
How often do parents eat vegetables					
Pre-test	2.28	0.08	2.22	0.08	
Post-test	2.23	0.08	2.31	0.09	
Difference	-0.04		0.11		0.76
P Value**	0.77		0.30		
Are fruits available at home					
Pre-test	1.73	0.04	1.57	0.06	
Post-test	1.77	0.04	1.83	0.03	
Difference	0.04		0.28		0.02
P Value**	0.44		<.01		
Are vegetables available at home					
Pre-test	1.51	0.05	1.51	0.06	
Post-test	1.63	0.05	1.63	0.05	
Difference	0.10		0.07		0.26
P Value**	0.10		0.03		

Abbreviations. SE=Standard Error

Note. Scale range for parental consumption of fruits/vegetables 0-4 (never to every day of the week); Scale range for availability of fruits vegetables 0-2 (never to always)

*P value indicates whether the change from pre-test to post-test was significantly different across the two groups

**P value indicates whether the change from pre-test to post-test was significantly different within each group

Network-funded contractor:	Long Beach, City of, Department of Health & Human Services Agency - 08-85135
Contract number:	08-85135
Information provided by :	Lara Turnbull
Telephone:	562-570-4294
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Section 1

1. Project Description and Goals

Project Name:	Long Beach Jr. Beach Runners Program
Target Population:	7-12 / 3-5th grade
Primary Curriculum Used:	PowerPlay!
Secondary Curriculum Used:	ReTHINK Your Drink and a Physical Activity Curriculum developed and implemented by Parks and Recreation

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

As part of the Jr. Beach Runners Program, 8 one-hour lessons were developed utilizing activities from the Network's Children's Power Play Community Youth Organization Idea and Resource Kit as well as the Los Angeles Regional Collaborative's ReTHINK Your Drink campaign. Each lesson included a physical activity warm up (PP "Warm up for Power!") and featured different fruits and veggies from multiple Network approved cookbooks (PP Kid's Get Cookin'!, Cook Fuel, Champions for Change Healthy Latino Recipes and Every Day Healthy Meals). The recipes selected from each cookbook complimented the lesson topics and each lesson built upon the concepts taught in the previous lesson. All of the lessons focused on fruits and vegetables!

The nutrition education portion of the Jr. Beach Runners Program was implemented by Network Staff and a MPH Intern (supervised by the Network Funded Project Director). The physical activity component of the program was developed and implemented by Parks and Recreation and ICES Education Staff.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Utilizing a Jr. Marathon Training Curriculum, elements of SPARK and Fitness Gram activities Parks and Recreation developed the PA intervention for the Jr. Beach Runner’s Program. The first half of the program focused on games and activities that allowed the children to reach a goal of running (by converting activities to miles) 25.2 miles, then they all participated in the LB Marathon 1-mile Fun Run for a total of a full marathon (26.2 miles). The second half of the program focused on developing the skills measure as part of the California Fitness Gram test conducted in grades 5, 7 and 9.

In 1-2 paragraphs, please provide a description of standardized training:

All of the staff who conducted the Nutrition Education component of the program were trained by the Network funded Project Director and utilized the same instructors’ manual.

In 1-2 paragraphs, please provide a description of standard administration of data collection

Network staff read each question and answers options out loud and then each child selects the best answer for them. Surveys are reviewed (onsite) by Network staff for any blanks or unclear responses to have clarified on a one-to-one basis as necessary. This process is used for each site.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All sites received the same lessons in the same format. Each site sampled the same recipe and received the same material.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of at least 200 3-5 grade students who participated in Long Beach Jr. Beach Runners Program will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

By Sept 30, 2012, a sample of at least 200 3-5 grade students who participated in Long Beach Jr. Beach Runners Program will report an increase in their daily physical activity.

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

By Sept 30, 2012, a sample of 3-5 grade students who participated in Long Beach Jr. Beach Runners Program will report a decrease in their consumption of sugar sweetened beverages and an increase in their consumption of water and knowledge of what is a healthy beverage choice.

IOE Objective 3 (Other) Optional:

By Sept 30, 2012, a sample of 3-5 grade students who participated in Long Beach Jr. Beach Runners Program will report an increase in their knowledge of the benefits of eating foods high in Vitamin C and Fiber.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group	

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Other (Specify in next field)	Specify Other: Park or After School Site where intervention took place.

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample	
How many matched surveys?	174	
How many sites?	12	
How many classrooms?	0	
b. Control:		
How many matched surveys?	0	
How many sites?	0	
How many classrooms?	0	

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	Preferences

Were any other measures used?	Knowledge - four questions were asked to measure their knowledge of the recommendations for physical activity, the benefits of Vitamin C and Fiber and healthy drink choices.

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	5-8, new participants were surveyed prior to the start of lessons 1-3

	Intervention			Control
Pre-test:	7/13/2011	to	9/23/2011	NA
Start of Intervention Date	8/1/2011 - any child who completed survey after this date was not in attendance for any prior lesson.			NA
End of Intervention Date	3/8/2012			NA
Post-test:	3/12/2012	to	3/29/2012	NA
Follow-up:	7/9/2012	to	8/20/2012	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

This reporting period we had 174 matching pre/post surveys (173 for preference and knowledge) from children who participated in the FY11-12 Long Beach Jr. Beach Runners. We measured changes in daily physical activity and consumption of fruits, vegetables, healthy and unhealthy foods using the Network for a Healthy California's Youth Survey. We also, using the NYS, measured changes in access at home and reported fruit and vegetable consumption among parents of the children participating in the Jr. Beach Runners Program. Four contractor developed (and Network approved) knowledge questions were used to measure changes in participants understanding of how many minutes of physical activity they should have each day, the benefits of eating foods high in Vitamin C and Fiber, and to measure if they could identify the "healthiest" beverage option.

The nutrition component consisted of 8 one-hour lessons (plus pre/post survey meetings). Each lesson included a food tasting and focused on the importance of eating fruits and vegetables as well as physical activity.

Results:

Knowledge (4 contractor developed questions) – We had (statistically) significant increases in knowledge for each of the four questions that were included in the survey (P-Value of 0.000). Upon completion of the program our participants were able to correctly identify the number of minutes of physical activity kids should have each day (Q1 – P-Value of .000), the benefits of Vitamin C and Fiber (Q 2-3, P-Value of .001-.000), and were able to identify that water was the healthiest beverage choice (Q4 – P-Value of .004).

Physical Activity – We had significant increases in physical activity measured as part of our pre/post surveys. Upon completion of the program, the participants reported an increase in the number of days they were moderately/vigorously active for at least 60 minutes (recommendations for children and teens), as well as the number of days spent playing outdoors for at least 30 minutes. P-Value for each question was .000.

Consumption – We saw significant increases in the consumption of cheese (P-Value .034), total fruit and vegetable, not counting juice (P-Value of .040), and total "healthy foods" defined as cheese, milk, yogurt, cereal, vegetables, fruits, 100% juice, and water (P-Value of .006). We had a significant increase (P-Value of .016) in participant's perceived parental consumption of vegetables at home. Participants also reported a significant decrease (P-Value of .014) in the amount of sugar sweetened punch, sports drinks and fruit-flavored drinks they consumed. They also reported a significant decrease in the amount of soda they drank (P-Value of .030).
What is perhaps most striking in our results, especially when you consider our preference results, was that we saw virtually no change to the response on whether or not they are trying new foods at home. In fact, for trying new vegetables, access to fruits to eat at home and total access at home we saw a decrease. Despite the kids reporting and increased preference (as demonstrated on their preference survey and also by their verbal responses during class), they do not seem to be eating more fruits and vegetables!

Preference – To measure preference of featured fruits and vegetables the kids marked a response for each item as either "I like it a lot", "I like it a little", "I don't like it", or "I don't know." For each response a corresponding face as either filled in, marked with an 'X', or checked. This was included as part of both their pre and post survey and the same format was used for their "I tasted it!" journal completed after each tasting (and hopefully shared with their moms/dads). Fruits and

Vegetables were featured during each lesson as part of a recipe; many of them were featured multiple times.
We saw a significant increase in the children's reported preference for fruits (P-Value of .033) and Vegetables (P-Value of .008). When measured individually for increased preference, onions (featured 3 times, P-Value of .019), Bell Peppers (featured 3 times, P-Value of .002), Raisins (featured 1 time, P-Value of .002) and Avocado (featured 1 time, P-Value of .001) were statistically significant.
The most common fruit or vegetable to be marked as "I don't know" on the pre-survey was jicama, followed by zucchini and snap peas. Interestingly, many of the participants still marked "I don't know" for jicama on the post-survey. Jicama was served as part of the Veggie Pita Pocket sandwich sampled as part of lesson #4 and we believe either the kids don't recall what it was or when they tried it.
For snap peas this was an error on our part as the recipe we selected was "sesame chicken with peppers and snow peas" and snap peas were never actually featured.

We are happy to report that we continue to see positive changes in the messaging around the park and after school sites where we teach, in the foods we see being offered and promoted to our kids from staff, and many staff have shared personal stories about how they have adopted healthier lifestyles as a result of being part of the Jr. Beach Runners Program!
But, this year the story that had the greatest impact on our team this year was the changes in one of our participants and his family that they attribute to him involvement in the Jr. Beach Runners Program (JBR).
A few months ago, while at a staff meeting here at the Long Beach Health Department I was approached by one of the medical assistants who works in our preventive health clinic. Her child attends Hudson and has been participating in the JBR program, only she didn't realize that it was the LBDHHS Healthy Active Long Beach staff who implemented it (she thought it was school staff). After hearing me present information on our work she said she just wanted to thank me, and the rest of the team, and that she wanted us to know what a huge impact we have had on her child and her entire family. She said a few months into the school year her son started to come home and talk about all of the great, healthy food he was trying at his after school program. He also started sharing with his family what he was learning about why it was important to eat fruits and vegetables, be active every day and limit sugar (especially soda). She said he literally started asking his mom to please not buy soda for the house and asked if they could please start cooking more foods together instead of eating out. She said that her son has lost >20lbs! She also said that as a result his confidence in sports has increased and he is more active.
It is sometimes difficult to measure impact using pen and paper surveys, and while having the kids yell out "yummy" and asking for seconds of healthy food samples is encouraging we are often left with the question of "did we really make a lasting difference?" The story shared by our colleague, a mom of one of our Jr. Beach Runners, let us know what we do does matter and that we are getting thru to our kids! We love this program and hope that it can continue to grow and reach all eligible kids throughout Long Beach!

b. Description of how evaluation results will be used:

The results from our impact evaluation will be used to shape future Jr. Beach Runners Program lessons as well as other Healthy Active Long Beach nutrition workshops and classes.

What stood out to us the most this year was the significant increase in preference for fruits and vegetables that our participants report but the static, and sometimes decreased, consumption and access to fruits and vegetables that they report they have at home. We believe that while we are having a positive effect on the participants desire for fruits and vegetables, we are not convincing the parents that their kids want these items or that consuming fruits and vegetables is beneficial for the whole family. We are working with our partners at Long Beach Parks and Recreation to try and

identify opportunities for increased parental involvement in the program in the hopes it will result in a greater impact to overall consumption.

We are also conducting a second abbreviated summer session of the Jr. Beach Runners this fiscal year (July/August) and have incorporated a letter writing activity into each lesson as well as a take home activity book that we hope will be shared with their moms and dads at home. In each letter the child describes what they learned during that lesson, what they sampled, what fruit or veggie sampled they liked best and requests that (specific) fruit or veggies be purchased and made available at home. We are using the youth survey again for this brief session (5 lessons) to see if we see any difference, especially among the returning Jr. Beach Runners (>80% also participated in the FY11-12 Jr. Beach Runner's Program).

7. Point of Contact

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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

Four knowledge questions developed and approved by the Network. Also measured changes in preference for the fruits and vegetables featured as part of the 8-lesson series.

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

Observation and "stories" are recorded and used for determining effectiveness beyond the pen/paper survey.

Youth Survey Results

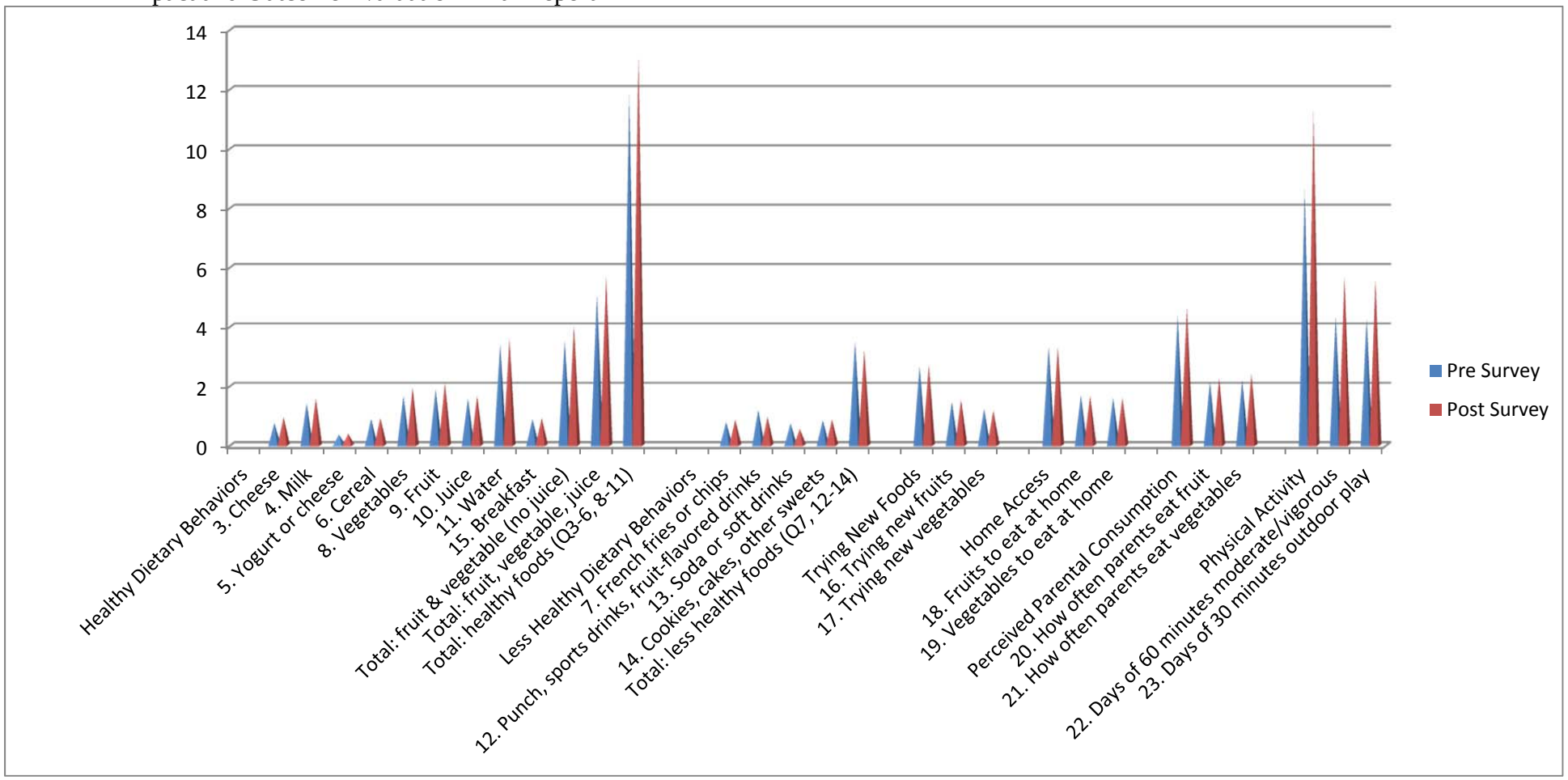
	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.75	0.94	0.19	0.034
4. Milk	1.41	1.57	0.16	0.059
5. Yogurt or cheese	0.36	0.39	0.03	0.664
6. Cereal	0.89	0.91	0.02	0.778
8. Vegetables	1.66	1.93	0.27	0.067
9. Fruit	1.87	2.10	0.23	0.101
10. Juice	1.57	1.66	0.09	0.478
11. Water	3.41	3.57	0.16	0.274
15. Breakfast	0.88	0.91	0.03	0.275
Total: fruit & vegetable (no juice)	3.51	4.02	0.50	0.040
Total: fruit, vegetable, juice	5.09	5.69	0.61	0.056
Total: healthy foods (Q3-6, 8-11)	11.81	13.12	1.31	0.006
Less Healthy Dietary Behaviors				
7. French fries or chips	0.78	0.85	0.07	0.379
12. Punch, sports drinks, fruit-flavored drinks	1.19	0.95	-0.24	0.014
13. Soda or soft drinks	0.73	0.54	-0.19	0.030
14. Cookies, cakes, other sweets	0.84	0.86	0.02	0.814
Total: less healthy foods (Q7, 12-14)	3.49	3.22	-0.28	0.265
Trying New Foods	2.67	2.70	0.03	0.733
16. Trying new fruits	1.47	1.53	0.06	0.186
17. Trying new vegetables	1.20	1.16	-0.04	0.483
Home Access	3.32	3.30	-0.02	0.812
18. Fruits to eat at home	1.68	1.66	-0.02	0.676
19. Vegetables to eat at home	1.60	1.60	0.00	1.000
Perceived Parental Consumption	4.38	4.67	0.29	0.078
20. How often parents eat fruit	2.15	2.26	0.11	0.224
21. How often parents eat vegetables	2.20	2.41	0.21	0.016
Physical Activity	8.60	11.23	2.63	0.000
22. Days of 60 minutes moderate/vigorous	4.33	5.66	1.33	0.000
23. Days of 30 minutes outdoor play	4.27	5.57	1.30	0.000

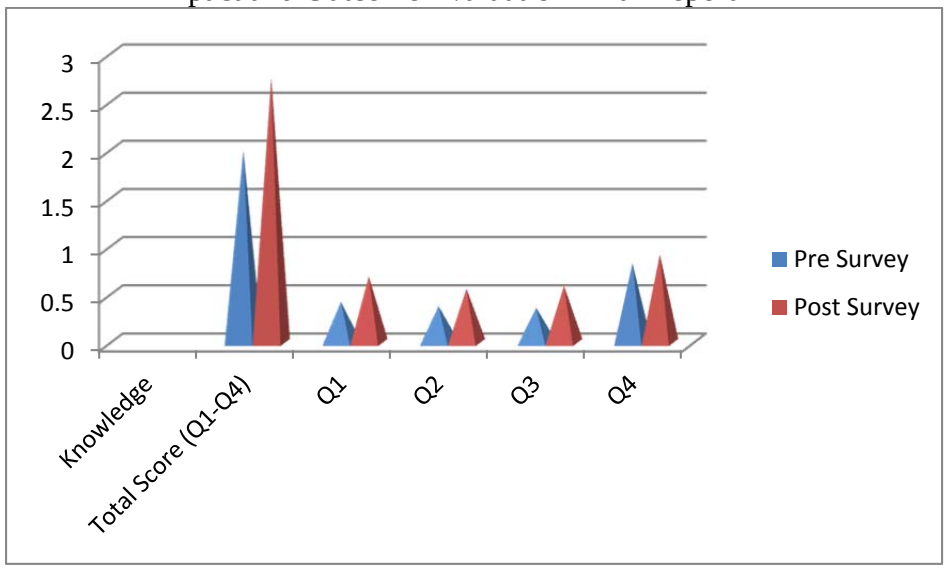
Demographics

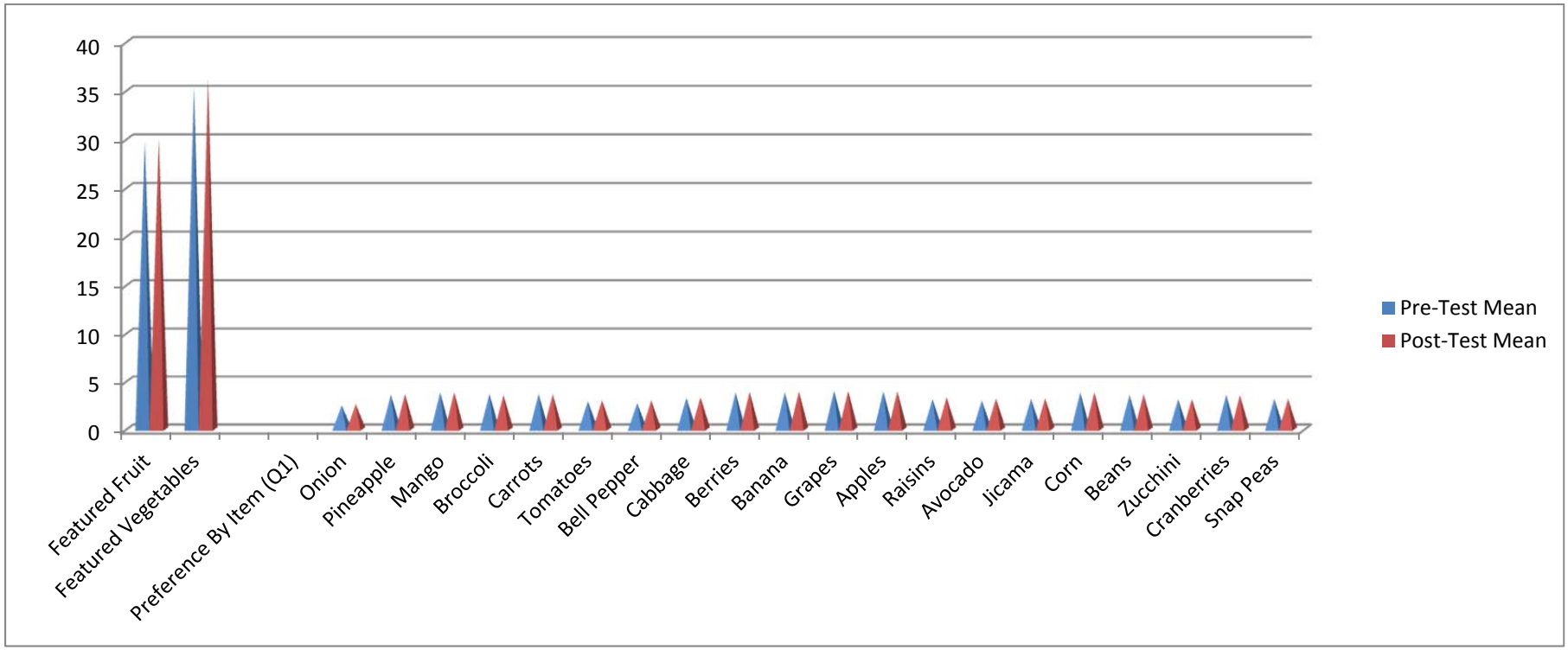
Average Age	8.9
Gender	
Males	79
Females	95

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Knowledge				
Total Score (Q1-Q4)	1.99	2.75	0.75	0.000
Q1	0.42	0.69	0.26	0.000
Q2	0.38	0.56	0.18	0.001
Q3	0.36	0.59	0.23	0.000
Q4	0.82	0.91	0.09	0.004


14
12
10
8
6
4
2
0
Healthy Dietary Behaviors
3. Cheese
4. Milk
5. Yogurt or cheese
6. Cereal
8. Vegetables
9. Fruit
10. Juice
11. Water
15. Breakfast
Total: fruit & vegetable (no juice)
Total: fruit, vegetable, juice
Total: healthy foods (Q3-6, 8-11)
Less Healthy Dietary Behaviors
7. French fries or chips
12. Punch, sports drinks, fruit-flavored drinks
13. Soda or soft drinks
14. Cookies, cakes, other sweets
Total: less healthy foods (Q7, 12-14)
Trying New Foods
16. Trying new fruits
17. Trying new vegetables
Home Access
18. Fruits to eat at home
19. Vegetables to eat at home
Perceived Parental Consumption
20. How often parents eat fruit
21. How often parents eat vegetables
Physical Activity
22. Days of 60 minutes moderate/vigorous
23. Days of 30 minutes outdoor play
Pre Survey
Post Survey


3
2.5
2
1.5
1
0.5
0
Knowledge
Total Score (Q1-Q4)
Q1
Q2
Q3
Q4
Pre Survey
Post Survey


40
35
30
25
20
15
10
5
0
Featured Fruit
Featured Vegetables
Preference By Item (Q1)
Onion
Pineapple
Mango
Broccoli
Carrots
Tomatoes
Bell Pepper
Cabbage
Berries
Banana
Grapes
Apples
Raisins
Avocado
Jicama
Corn
Beans
Zucchini
Cranberries
Snap Peas
Pre-Test Mean
Post-Test Mean

Network-funded contractor:	Long Beach Unified School District
Contract number:	10-10052
Information provided by :	Robin Sinks
Telephone:	(562) 997-0632
Date:	7/23/2012
Email:	rsinks@lbschools.net

Section 1

1. Project Description and Goals

Project Name:	Nutrition Education in *HOTM* classrooms
Target Population:	9-11 year olds/4th-5th grade classrooms
Primary Curriculum Used:	A wide variety of skills-based curricula used
Secondary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

In the Long Beach Unified School District (LBUSD), the *Harvest of the Month (HOTM)* program is one intervention in a multi-dimensional approach to nutrition education. Participation in the program is voluntary; elementary classroom teachers sign up with their site administrator or Nutrition Education Site Coordinator, who passes on the registration for the entire school site to the LBUSD *Network for a Healthy California* staff (4 staff members, one serving as the primary *HOTM* contact).

- Prior to the start of a new school year, an eight month schedule of produce is selected by LBUSD's *Network* staff in collaboration with LBUSD Nutrition Center staff. The produce selected is closely aligned to the *Network's HOTM* seasonal schedule, taking into consideration availability, cost, ease of preparation and distribution, and the ability to ensure that the produce selected each month can be provided again to students in their school meals.
- Once the produce schedule has been determined, LBUSD *Network* staff design *HOTM* Student Workbooks, adapted from the available *Network*-approved resources, for each grade level (K-5) that addresses each month's produce and is aligned to academic standards. These workbooks are printed in-house and distributed to each participating school site for distribution to each participating classroom. Each student uses his/her workbook throughout the eight month program.
- Once the produce schedule has been determined, LBUSD *Network* staff select *Network*-approved children's books which are age-appropriate and align to the selected produce. Those titles are distributed to each participating school site to be shared among teachers in each grade level. Grade levels with more than five classrooms receive an additional set of these books.
- Each month by email, participating classroom teachers receive a *HOTM* Educator Newsletter that provides nutrient and historical information on the produce highlighted that month.
- Each month by email, participating teachers receive a "Virtual Fieldtrip," a locally-developed PowerPoint presentation highlighting where the produce may be grown, how it is processed, nutrient information, and fun facts. Each is approved by LBUSD's Program Manager.
- Each month on a predetermined date, samples of the highlighted produce are delivered to the elementary school site cafeteria for distribution to the participating classrooms throughout that week. Every effort is made to ensure the produce is fresh, can be distributed in a safe and sanitary manner, and can be made available to each student for a tasting.

- Participating teachers utilize the *HOTM* Educator Newsletter, Children's Book, Student Workbook, and taste sample in one or more lessons highlighting the selected produce, addressing essential nutrition concepts and health-related skills (accessing valid information, analyzing influences, decision-making, goal-setting, interpersonal communication, practicing health-enhancing behaviors, and health promotion).
- Each month by email, participating classroom teachers receive a *HOTM* Family Newsletter that focuses on the produce highlighted that month. In addition, each school site receives a supply of printed *HOTM* Parent Newsletters to be made available to parents on the counter in the front office, in the Parent Room, at meetings, etc., in an effort to ensure a home-school connection.

During the 2011-12 school year, 39 *Network*-eligible elementary school sites participated (945 classrooms; 26,625 K-5th grade students). Each May a link to an electronic survey is emailed to all participating teachers to secure feedback on the resources provided, the communication amongst teachers and cafeteria staff, and suggestions for program improvement. For purposes of the Impact Evaluation, two teachers (one 4th grade and one 5th grade) from ten elementary school sites volunteered to administer the *Network* Youth Survey prior to the start of the *HOTM* program and, then again, after the last *HOTM* tasting and lessons, a total of 20 Impact Evaluation classrooms.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

N/A

In 1-2 paragraphs, please provide a description of standardized training:

A 2-hour training session for site representatives was provided prior to the start of the school year to review the goals of the *Network* program, the components of the *HOTM* program, and the logistics of scheduling and produce delivery/distribution. Most participating schools sent a representative; those unable to attend were provided with one-on-one training by a LBUSD *Network* staff member.

Monthly emails were sent to each participating teacher to remind them of the produce delivery date, provide them with the *HOTM* Educator, Family Newsletter and Virtual Fieldtrip. The email also encouraged teachers to work closely with others at their grade level to ensure sharing of the children's book and a positive tasting experience for each student.

A 2-hour training session for participating classroom teachers was provided several times throughout the year. Attendance was voluntary. LBUSD *Network* staff reviewed the goals of the *Network* program, the components of the *HOTM* program, and provided an opportunity for teachers to share how they had utilized their resources and extended their lessons.

In 1-2 paragraphs, please provide a description of standard administration of data collection

Network staff read each question and answers options out loud and then each child selects the best answer for them. Surveys are reviewed (onsite) by Network staff for any blanks or unclear responses to have clarified on a one-to-one basis as necessary. This process is used for each site.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Participation in the Impact Evaluation is voluntary. The key component required for participation in the Impact Evaluation was participation in the eight months of *HOTM*.

The twenty teachers in Impact Evaluation classrooms each had access to:

- the California Health Education Content Standards,
- LBUSD-approved Health Education textbooks,
- all of the *HOTM* resources,
- PowerPlay! School Idea and Resource Kit for his/her grade level, and
- Information and lesson plans on MyPlate.

All Impact Evaluation teachers were encouraged to attend teacher trainings and participate in the variety of nutrition education activities. In LBUSD, there is no district mandate to attend trainings, participate in nutrition education activities, or provide a prescribed number of minutes of instruction. Those that do participate are encouraged, not mandated, to utilize all the resources provided, as appropriate.

Each Impact Evaluation teacher documented his/her nutrition education throughout the year on a form provided by LBUSD *Network* staff, checking off which *HOTM* components were used, which PowerPlay! lessons were provided, which other instructional material was used and which nutrition education events were held each month.

- All twenty Impact Evaluation teachers utilized the *HOTM* Educator Newsletter and the taste testing. *HOTM* lessons ranged from 30-120 minutes and averaged 45 minutes.
- Most utilized the *HOTM* student workbook (18).
- Half utilized the *HOTM* children's storybook (10) and *HOTM* Virtual Fieldtrip (10).
- Most Impact Evaluation teachers utilized the PowerPlay! Lessons (16) with 4th grade teachers using 3-5 of the lessons and 5th grade teachers using 6-8 of the lessons.
- Most utilized the USDA's MyPlate (16), the district's Health textbook (12), and the CDE's Fruit and Vegetable Photo Cards (11).
- About a third utilized the Dairy Council of California's curricular materials (7), other storybooks (7), lessons from LBUSD teacher trainings (6), and other visuals (6).
- All twenty Impact Evaluation classrooms participated in nutrition education events around Back to School, the STEPS campaign, and National Nutrition Month.
- Most classrooms participated in Walk to School (18), Screen Free Week (14), Open House (16), and Southland Opera's nutrition assembly (18).
- Half of the classrooms (10) participated in the Dairy Council of California's Mobile Dairy Classroom ("the cow").

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 50 4th/5th grade students who participated in nutrition education in *HOTM* classrooms will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

N/A

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

N/A

IOE Objective 3 (Other) Optional:

N/A

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	495
How many sites?	10
How many classrooms?	20

b. Control: N/A

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	*Network* Youth, Preferences, and Self-Efficacy Surveys
Goal 2/Objective 2	N/A

Were any other measures used? No

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	8

	Intervention			Control
Pre-test:	10/6/2011	to	10/14/2011	N/A

Start of Intervention Date	10/19/2011			N/A	
End of Intervention Date	5/18/2012			N/A	
Post-test:	5/23/2012	to	6/1/2012	N/A	
Follow-up:	N/A			N/A	

c. Describe how the data were collected.

Intervention:	Paper and pencil survey, reading support provided to struggling readers, as needed	
Comparison/control:	N/A	

d. How were the surveys administered?

The four (4) LBUSD *Network* staff provided standardized direction to students in participating classrooms. Students individually completed their surveys with guidance, as requested. The same staff member gives the pre-test and post-test in her assigned classroom to maintain uniformity.

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

***Network* Youth Survey:**

The change in means for the **Healthy Dietary Behaviors** (questions 3-6, 8-11) total increased by 1.00 points after the intervention. The p-value is significant, indicating that there is evidence that the consumption of healthy foods & beverages increased due to the intervention.

- Consumption of **cheese** increased by 0.13 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.
- Consumption of milk decreased by 0.03 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Consumption of yogurt and cheese increased by 0.02 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Consumption of **cereal** increased by 0.10 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.
- Consumption of **vegetables** increased by 0.31 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.
- Consumption of **fruit** increased by 0.37 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.
- Consumption of juice decreased by 0.01 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Consumption of water increased by 0.13 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Consumption of **total fruit and vegetables (no juice)** increased by 0.67 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.

- Consumption of **total fruit and vegetables, and juice** increased by 0.67 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.

The change in means for **Eating Breakfast** (question 15) total decreased by 0.01 points after the intervention. The p-value is not significant, indicating that there is no evidence that eating breakfast increased due to the intervention.

The change in means for the **Less Healthy Dietary Behaviors** (questions 7, 12-14) total increased by 0.10 points after the intervention. The p-value is not significant, indicating that there is no evidence that the consumption of less healthy dietary behaviors increased due to the intervention.

- Consumption of **french fries or chips** increased by 0.13 after the intervention. The p-value is significant. While there was not an intervention effort targeting this specific behavior, the increase is counter to expectations in general.
- Consumption of punch, sports drinks, fruit-flavored drinks increased by 0.04 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Consumption of soda or soft drinks increased by 0.09 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Consumption of **cookies, cakes, other sweets decreased** by 0.15 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.

The change in means for **Trying New Foods** (questions 16, 17) total increased by 0.13 points after the intervention. The p-value is significant, indicating that there is evidence that trying new foods increased due to the intervention.

- Trying **new fruits** increased by 0.08 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.
- Trying new vegetables increased by 0.05 after the intervention. The p-value is not significant indicating that the data do not give any reason to conclude that the intervention had an effect.

The change in means for **Home Access to Fruits and Vegetables** (questions 18, 19) total increased by 0.10 after the intervention. The p-value is significant, indicating that there is evidence that access to fruits and vegetables at home was due to the intervention.

- Access of fruit to eat at home increased by 0.01 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Access of **vegetables to eat at home** increased by 0.10 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.

The change in means for **Perceived Parental Consumption** (questions 20,21) total increased by 0.19 points after the intervention. The p-value is significant, indicating that there is evidence that perceived parental consumption was due to the intervention.

- Perceived parental consumption of fruit increased by 0.10 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Perceived parental consumption of vegetables increased by 0.10 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.

The change in means for **Physical Activity** (questions 22, 23) total increased by 1.89 points after the intervention. The p-value is significant, indicating that there is evidence that the participation in physical activity increased due to the intervention.

- The number of days of **60 minutes of moderate/vigorous physical activity** increased by

0.98 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.

- The number of days of **30 minutes of outdoor play** increased by 0.91 after the intervention. The p-value is significant indicating that the data do give any reason to conclude that the intervention had an effect.

Preferences Survey:

The change in means for the **Featured Fruit** total increased by 0.31 points after the intervention. The p-value is significant, indicating that there is evidence that the preference for fruit increased due to the intervention.

The change in means for the **Featured Vegetables** total decreased by 0.08 points after the intervention. The p-value is significant, indicating that there is evidence that the preference for vegetables decreased due to the intervention.

- Preference for **apples** increased by 0.04 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)
- Preference for bananas increased by 0.03 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)
- Preference for broccoli increased by 0.05 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. Trying broccoli without a dip or sauce may be a new experience for many of the students and it may take multiple exposures to increase preference. (highlighted in the *HOTM* program this year)
- Preference for carrots increased by 0.01 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)
- Preference for **corn** increased by 0.06 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)
- Preference for **cucumbers** increased by 0.16 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (highlighted in the *HOTM* program this year)
- Preference for grapes increased by 0.03 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. The pre-test value of 3.92 is extremely high so there was little chance of supporting a significant change. (highlighted in the *HOTM* program this year)
- Preference for **green beans** increased by 0.16 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (highlighted in the *HOTM* program this year)
- Preference for jicama decreased by 0.16 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. Trying jicama without a dip or chili powder may be a new experience for many of the students and it may take multiple exposures to increase preference. In addition, feedback on the produce indicated that it may have been a bit old/dry or may have soured somewhat. (highlighted in the *HOTM* program this year)
- Preference for **kiwi** increased by 0.10 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)
- Preference for **mandarins/tangerines** increased by 0.10 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (highlighted in the *HOTM* program this year)
- Preference for **oranges** increased by 0.05 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)

- Preference for peas increased by 0.04 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)
- Preference for **raisins** increased by 0.18 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (highlighted in the *HOTM* program this year)
- Preference for **spinach** increased by 0.12 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)
- Preference for strawberries increased by 0.01 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. The pre-test value of 3.89 is extremely high so there was little chance of supporting a significant change. (not highlighted in the *HOTM* program this year)
- Preference for tomatoes remained the same after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. Many of the students had not had experiences eating raw tomatoes (especially grape tomatoes) and it may take multiple exposures to increase preference. (highlighted in the *HOTM* program this year)
- Preference for zucchini increased by 0.03 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect. (not highlighted in the *HOTM* program this year)

Self-Efficacy for Shopping and Asking Survey:

The change in means for the **Self Efficacy** total increased by 0.11 points after the intervention. The p-value is not significant, indicating that there is no evidence that self-efficacy increased due to the intervention.

- Self-efficacy for shopping increased by 0.19 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.
- Self-efficacy for asking decreased by 0.04 after the intervention. The p-value is not significant indicating that the data do not give reason to conclude that the intervention had an effect.

Summary:

Students participating in the Impact/Outcome Evaluation process (pre- and post-test) participated in at least five (5) of the eight (8) months of the program.

- The data from the *Network* Youth Survey indicate that the intervention showed significant changes in increasing healthy dietary behaviors, trying new foods, home access, perceived parental consumption and physical activity. Data also indicate that while there was an increase in the consumption of less healthy dietary behaviors (french fries or chips [significant], punch/sport drinks/fruit-flavored drinks [not significant], soda or soft drinks [not significant], there was a significant decrease in the consumption of cookies/cakes/other sweets.
  Interestingly, the intervention was not formally structured to address the consumption of sweets or physical activity. The impact on these behaviors may be due to other interventions/programs implemented in the district.

- The data from the Preferences Survey indicate that the intervention showed significant changes in increasing preferences for cucumbers, green beans, mandarins and raisins (featured produce in this year's *HOTM* program), as well as apples, corn, kiwi, oranges, and spinach (not featured in this year's *HOTM* program). There was no significant change in the preference for broccoli, grapes, and tomatoes (featured produce in this year's *HOTM* program). There was a decrease in preference for jicama (another featured produce), though not significant.

- The data from the Self Efficacy Survey indicate that the intervention showed no significant changes around shopping for or asking for fruits and vegetables.

b. Description of how evaluation results will be used:

Evaluation results will be shared with administrators, Nutrition Education Site Coordinators and classroom teachers in an effort to ensure they have an understanding not only of program implementation but also of its impact/potential impact on student behaviors. The results of the Impact Evaluation will be reviewed by LBUSD's *Network* staff to identify potential program enhancements. Lessons learned from the evaluation of the Harvest of the Month program will include enhancement of teacher trainings to include not only the nutrition information about the highlighted produce, but will also include strategies for helping students learn how to make decisions to increase fruit/vegetable consumption, set goals to increase consumption, and become more confident to ask for fruits/vegetables and to select them (practicing healthy behaviors). Student materials will include not only the nutrition information but opportunities to practice the health-related skills. Parent materials will reflect the work being done with teachers and students.

7. Point of Contact

Name:	Robin Sinks
Phone Number:	(562) 997-0632
Email Address:	rsinks@lbschools.net

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. N/A

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* N/A

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

X	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
X	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	For asking and shopping, page 154 in the Compendium

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

N/A

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

No

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.85	0.98	0.13	0.014
4. Milk	1.60	1.57	-0.03	0.549
5. Yogurt or cheese	0.37	0.38	0.02	0.655
6. Cereal	0.72	0.82	0.10	0.018
8. Vegetables	1.61	1.92	0.31	0.000
9. Fruit	1.84	2.21	0.37	0.000
10. Juice	1.41	1.40	-0.01	0.912
11. Water	3.49	3.62	0.13	0.094
15. Breakfast	0.86	0.84	-0.01	0.464
Total: fruit & vegetable (no juice)	3.45	4.12	0.67	0.000
Total: fruit, vegetable, juice	4.87	5.53	0.67	0.000
Total: healthy foods (Q3-6, 8-11)	11.96	12.96	1.00	0.000
Less Healthy Dietary Behaviors				
7. French fries or chips	0.73	0.86	0.13	0.009
12. Punch, sports drinks, fruit-flavored drinks	0.95	0.99	0.04	0.444
13. Soda or soft drinks	0.56	0.65	0.09	0.056
14. Cookies, cakes, other sweets	0.85	0.69	-0.15	0.002
Total: less healthy foods (Q7, 12-14)	3.10	3.20	0.10	0.387
Trying New Foods	2.46	2.58	0.13	0.011
16. Trying new fruits	1.38	1.46	0.08	0.005
17. Trying new vegetables	1.08	1.13	0.05	0.152
Home Access	3.33	3.43	0.10	0.015
18. Fruits to eat at home	1.74	1.75	0.01	0.553
19. Vegetables to eat at home	1.57	1.67	0.10	0.001
Perceived Parental Consumption	4.38	4.58	0.19	0.045
20. How often parents eat fruit	2.13	2.23	0.10	0.060
21. How often parents eat vegetables	2.22	2.32	0.10	0.060
Physical Activity	5.91	7.80	1.89	0.000
22. Days of 60 minutes moderate/vigorous	3.08	4.06	0.98	0.000
23. Days of 30 minutes outdoor play	2.83	3.74	0.91	0.000

Demographics

Average Age	9.5
Gender	
Males	308
Females	300

Preferences Results

Preferences (Q6)				
Featured Fruit	13.79	14.09	0.31	0.000
Featured Vegetables	13.38	13.30	-0.08	0.021
Preference By Item (Q6)				
Apples	3.80	3.84	0.04	0.048
Bananas	3.72	3.75	0.03	0.182
Broccoli	3.28	3.33	0.05	0.126
Carrots	3.61	3.61	0.01	0.820
Corn	3.72	3.78	0.06	0.004
Cucumbers	3.32	3.49	0.16	0.000
Grapes	3.92	3.95	0.03	0.057
Green Beans	2.85	3.01	0.16	0.000
Jicama	3.53	3.37	-0.16	0.507
Kiwi	3.52	3.61	0.10	0.001
Mandarins/Tangerines	3.75	3.85	0.10	0.000
Oranges	3.86	3.91	0.05	0.003
Peas	2.88	2.92	0.04	0.228
Raisins	3.13	3.31	0.18	0.000
Spinach	2.94	3.06	0.12	0.001
Strawberries	3.89	3.90	0.01	0.337
Tomatoes	2.96	2.96	0.00	0.956
Zucchini	2.95	2.99	0.03	0.949

Self Efficacy (shop/ask) Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Self Efficacy				
For Shopping	12.36	12.56	0.19	0.192
For Asking	20.75	20.71	-0.04	0.873
Total Score	33.14	33.26	0.11	0.736

Network-funded contractor:	Merced COE - 10-10071
Contract number:	10-10071
Information provided by :	Jaci Westbrook
Telephone:	209-381-5974
Date:	7/31/2012
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Section 1

1. Project Description and Goals

Project Name:	Merced County Office of Education Harvest of the Month
Target Population:	10yrs-12yrs/4th & 5th grade
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	PowerPlay!

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

We do not have a standardized nutrition education intervention. We offer several opportunities and resources to participating teachers for them to determine how to integrate activities, lessons, information and materials into their classroom. We provide them necessary tools to effectively conduct nutrition education. The main component of our program is a Harvest of The Month (HOTM) packet. The HOTM packet is supplied to each of the teachers on a monthly basis. This packet provides the teacher with everything they will need for the month pertaining to the featured produce. It includes: an educator newsletter, one parent newsletter for each student to take home, fun food fact calendar, age-appropriate story books with nutrition themes, and a kid-friendly recipe page which showcases the taste test and two-three recipe opportunities that the teacher may choose to make in their classrooms with student assistance.

Over the years, we have seen how impactful being "hands on" with making and tasting healthy recipes can be. A great deal of our program is focused toward “cooking in the classroom” using the kid-friendly recipes. All of the kid-friendly recipes require limited ingredients and little to no prep work which makes it easy for the teachers to include in their busy days.

This year we provided participating teachers with the option of receiving a taste test box every week. Each box came with the necessary ingredients and supplies that the teacher would need to conduct the taste test in their classroom. The first box of the month was the actual taste test of the produce. Enough of the featured fresh produce for each student to taste. The subsequent boxes in the weeks to follow were filled with ingredients to make kid-friendly recipes where the students had the opportunity to taste the featured produce in a fun way they could then ask for at home. All the recipes were provided to the parents on the back of the parent provided newsletter.

As an additional way to support the students’ decisions to try the fruit or vegetable of the month we had stickers especially made for trying new foods. The stickers have cartoon fruits and vegetables on them and in big letters, the phrase “I Tried It.” Last year we provided the teachers with stickers in each taste test box; however this year the teachers were provided an option of providing the stickers to their students.

To further support the teachers’ efforts in the classroom with Harvest of the Month, staff went into the classroom and conducted a lesson on MyPlate followed by a healthy taste test demonstration. In a few instances, staff conducted activities around MyPlate using realistic food models (purchased from Nasco). The students would build a healthy plate using the models and then staff incorporated a story from one of the many literature books that had been provided in the HOTM packets. Through these lessons we were able to encourage linking what was occurring at school to making healthy choices at home.

To create a coordinated approach for a healthier environment the Harvest of the Month was also promoted at various school related events. For the cafeteria taste tests we provided resources, signage and supplies to the Food Service staff to help them incorporate a fun, healthy and appealing taste test display and booth. At the beginning of the school year each cafeteria was given an assortment of posters and decorations to help support their nutritional messages–this included us giving them a MyPlate banner to promote the new food group messages to promote to students.

Of the handful of cafeteria taste tests that we supported, one school choose to do much more than just a taste test of the produce. They conducted taste tests of a few of the kid friendly recipes! They even requested ingredients for a recipe featuring the HOTM produce that they found themselves.

At the health fairs a set up for a taste test booth was in similar fashion to a cafeteria taste test. At Ballico school we set up a fully decorated taste test table where we featured an Apple Berry Parfait for all of the participants to try. We then offered informational brochures about fruits and vegetables and slide guide cards to inform our audience about the necessary amounts of fruits and vegetables that they should be consuming. We provided parents with healthy cookbooks

to further support the produce consumption at home. The students could then participate in physical activity thru an obstacle course. The obstacle course was set up as a relay so that students could enter the obstacle course two-at-a-time. The students participating in the obstacle course had to first make their way through the first activity of the course using the monster feet, followed by the scooting to the next obstacle on the flat board scooters, then jumping over hurdles, next hippity-hopping to a tunnel, and finally crawling through the tunnel to grab a fruit and veggie beach ball and hurl it into the giant basketball hoop as the grand finale. They had a blast!

Other school events included supporting A-Z Salad bars at two elementary schools in Weaver School District. We helped minimally prepare the event at Pioneer School by simply supplying the produce that they needed to complete their salad bar. The second, at Farmdale School, included a nutrition-themed booth to showcase to the students. The booth asked students healthy questions that tested their knowledge of many HOTM items. They received a small prize if they answered the question correctly, or just for participating. They then were able to participate in an obstacle course for physical activity.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

We promote physical activity (PA) to our teachers in the same manner that we provide nutrition education. We do not have a standard PA intervention.

The topic was covered at both teacher trainings. Physical activity resources were provided to particpating teachers to integrate with their nutrition education during warmer weather. An activity called Roaring Rapids was provided. While the resource is a Team building activity, the components are the colors of MyPlate. The activity consisted of different colored bowls that are placed upside down so that they students can walk on them. They are to be placed in a pattern so the children can lead one another across the “roaring rapids” to safety. The bowls are the same colors as the food groups on MyPlate. We were able to devise several patterns and games to include nutrition education with this activity. We provided a demonstration of the activities at each training. We also asked the teachers to come up with ways that they thought they could incorporate this resource into their nutrition education and physical activity programs.

We also promoted physical activity by participating in school and community health fairs. We did this by having a relay-type obstacle course where the students could be physically active.

In 1-2 paragraphs, please provide a description of standardized training:

We provided one-on-one training with our teachers at the time of their scheduled pretest. During this time, we informed them regarding what the IOE study entailed and what we would need from them.

In 1-2 paragraphs, please provide a description of standard administration of data

The pretests included the classroom teacher and two Network staff to facilitate the questionnaire to the students. The students were provided an explanation regarding what the questionnaire included. We made sure that all of the surveys were filled out completely and answered all the student questions. Most of the surveys were administered one classroom at a time. There was one instance of two fifth grade teachers at Frank Sparkes Elementary who preferred to do the pretest and the posttest with both of their classes together.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

We do not have a set standardization among our teachers. Every opportunity, resource or lesson that is provided to them is offered and they have the choice of integrating it into their grade level components. They are not required to do anything. We realize that this makes it very hard to evaluate, however, we have found that if we "require" and make components mandatory for the teachers, our participation goes drastically down. This is correlated to the rigorous demands of our schools on program Improvement, larger class sizes and overall moral at each site. We continue to

encourage some fun and healthy options in the school day!

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of school grade students who participated in Merced County Office of Education Harvest of the Month will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Schools

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	322
How many sites?	5
How many classrooms?	13

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	Preferences

Were any other Knowledge and Process Evaluation

measures used?

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention	Control
Pre-test:	8/31/2011 to 9/29/2011	NA
Start of Intervention Date	8/31/2011	NA
End of Intervention Date	5/31/2012	NA
Post-test:	5/15/2012 to 5/31/2012	NA
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Under the "Healthy Dietary Behaviors" section, there was just one category that showed statistical significance and that was for the juice. The consumption of juice had decreased over the time duration from the pretest to the posttest. This could be attributed to juice not being readily available to the students whether it is at school or home.

In the "Less Healthy Dietary Behaviors" category there was a statistically significant decrease in all of the categories with the exception of the number 13 – soda and soft drinks. This can be attributed to these items not being offered to the students as rewards or at parties by the teachers/schools. One of our participating school districts implemented a newly remodeled Wellness Policy that drastically diminished the amount of parties that the teachers could have for their students, thus decreasing the students' access to unhealthy foods and beverages at the school setting. It could also be attributed to our nutrition education emphasizing that these foods are not ideal choices for the students. Yet again, it could also be attributed to the emphasis we placed on healthful eating at the parent meetings that we presented.

In the "Trying New Foods" category the overall notion of trying new foods had a statistically significant change, but it decreased. Students seemed to be more willing to try new foods at the beginning of the year, rather than now. Also trying new fruits showed to have statistically significant decreased. This particular result does not seem to support what we have heard from teachers and even some students who say that they are more willing to try new foods and that has shown with being given the opportunity to taste weekly HOTM produce.

In the "Physical Activity" category there was a statistically significant increase in the overall amount play that the students participated in. There was also a statistically significant increase in the amount of outdoor play that the students participated in as well. We work with a high population of ESL students and since last year when we asked the students this question, we felt that the students did not really understand how the question was written. As an outcome of that we did not get results that supported what we felt and knew what was happening at the school sites and in the classroom. We took that into consideration and paid extra attention in explaining these two questions to the students.

In addition to the Network Youth Survey, we also asked the students to complete a preference survey and knowledge survey. The findings from the preference survey showed us that the students 'affinity for blueberries and raspberries significantly increased. We can attribute this to our feature of berries on our HOTM schedule during the month of May which is also when we conducted the posttests with the students. The knowledge survey did not produce any statistically significant results.

b. Description of how evaluation results will be used:

I think we are finally on the right track of where we would like to be with our evaluation. Even though we didn't have significant results in every aspect of our survey and all of its components, I

think it is a vast improvement from past years and at least it shows that the students are more living more healthful lives even if it not due entirely to our intervention. That is what our program is all about, so I think it is a sign of more positive behavior change to come. Since our results were not entirely reflective of what we feel is happening at the school setting, I think it is necessary to continue to place an emphasis on the importance of healthfulness to the students and encourage them to make better decisions where their health is concerned.

7. Point of Contact

Name:	Jaci Westbrook
Phone Number:	209-381-5974
Email Address:	jwestbrook@mcoe.org

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

N/A

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

0

c. Did you use the Network Youth Survey or the Network High School Survey

Yes

d. Optional Surveys

X	Food Preferences Survey	
X	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.87	0.79	-0.08	0.191
4. Milk	1.47	1.54	0.07	0.228
5. Yogurt or cheese	0.46	0.41	-0.05	0.301
6. Cereal	0.72	0.71	-0.02	0.766
8. Vegetables	1.75	1.76	0.01	0.903
9. Fruit	1.92	1.90	-0.02	0.882
10. Juice	1.52	1.30	-0.22	0.016
11. Water	3.50	3.62	0.12	0.258
15. Breakfast	0.92	0.88	-0.04	0.080
Total: fruit & vegetable (no juice)	3.66	3.66	0.00	1.000
Total: fruit, vegetable, juice	5.19	4.97	-0.22	0.313
Total: healthy foods (Q3-6, 8-11)	12.20	11.97	-0.24	0.477
Less Healthy Dietary Behaviors				
7. French fries or chips	0.79	0.67	-0.13	0.028
12. Punch, sports drinks, fruit-flavored drinks	0.99	0.80	-0.19	0.007
13. Soda or soft drinks	0.69	0.60	-0.08	0.143
14. Cookies, cakes, other sweets	0.71	0.50	-0.21	0.001
Total: less healthy foods (Q7, 12-14)	3.19	2.58	-0.61	0.000
Trying New Foods	2.53	2.40	-0.13	0.037
16. Trying new fruits	1.41	1.32	-0.09	0.019
17. Trying new vegetables	1.13	1.08	-0.04	0.295
Home Access	3.40	3.34	-0.06	0.284
18. Fruits to eat at home	1.74	1.73	-0.01	0.706
19. Vegetables to eat at home	1.64	1.60	-0.03	0.328
Perceived Parental Consumption	4.43	4.56	0.12	0.278
20. How often parents eat fruit	2.24	2.22	-0.02	0.776
21. How often parents eat vegetables	2.18	2.27	0.09	0.164
Physical Activity	6.96	7.66	0.70	0.013
22. Days of 60 minutes moderate/vigorous	3.53	3.79	0.26	0.078
23. Days of 30 minutes outdoor play	3.44	3.86	0.43	0.010

Demographics

Average Age	9.6
Gender	
Males	174
Females	195

Knowledge Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Total Score	2.46	2.49	0.03	0.630
Q1	0.20	0.17	-0.04	0.191
Q2	0.23	0.24	0.02	0.553
Q3	0.91	0.92	0.01	0.632
Q4	0.88	0.90	0.02	0.249
Q5	0.25	0.26	0.01	0.748

Fruit & Vegetable Preference Results

Preferences (Q6)				
Featured Fruit	38.56	39.12	0.55	0.062
Featured Vegetables	34.61	35.22	0.61	0.419
Preference By Item (Q6)				
Avocados	2.93	2.94	0.01	0.698
Beets	2.68	2.57	-0.11	0.154
Blueberries	3.52	3.63	0.11	0.015
Broccoli	3.35	3.37	0.02	0.642
Cantaloupe	3.42	3.43	0.01	0.859
Carrots	3.60	3.54	-0.06	0.151
Cauliflower	2.94	2.97	0.03	0.516
Corn	3.80	3.77	-0.03	0.205
Dried Plums	2.89	2.93	0.04	0.627
Grape Fruit	3.48	3.44	-0.04	0.826
Honeydew Melon	3.55	3.58	0.03	0.801
Jicama	3.37	3.48	0.11	0.227
Kiwi Fruit	3.68	3.72	0.04	0.136
Mandarins	3.77	3.76	-0.01	0.410
Radishes	2.74	2.64	-0.09	0.235
Raspberries	3.55	3.64	0.09	0.033
Salad Greens	3.19	3.18	-0.01	1.000
Spinach	2.86	2.95	0.09	0.096
Squash	2.74	2.72	-0.02	0.781
Strawberries	3.85	3.88	0.03	0.208
Tomatoes	3.08	3.06	-0.02	0.827
Watermelon	3.91	3.92	0.02	0.485

FFY12 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Monrovia USD - 10-10069
Contract number:	10-10069
Information provided by :	Lizett Olivares
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Date:	7/31/2012
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1. Project Description and Goals

Project Name:	HOTM Cooking in the Classroom
Target Population:	4th grade students
Primary Curriculum Used:	HOTM integrated with California Health Education Content Standards
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

There were seven nutrition education focused lessons in this intervention. All seven lessons included a HOTM featured produce recipe, a California Health Education Content Standard, a Nutrition Competency, and a student activity that allows students to practice the skill from the standard. The lessons were 45 minutes in length and included full student participation in the preparation of the recipe. The featured HOTM produce includes: Root vegetables, beans, kiwi, grapefruit, broccoli, salad greens, dried fruit, and berries. The contractor developed lesson plans were approved monthly prior to conducting the lessons.

Activities that supported the intervention included: teachers conducting additional nutrition education and taste tests inside and outside of the classroom with HOTM and beyond, HOTM workbooks, nutrition services sampled the HOTM at least one time per month on the lunch menu, the Network featured taste testings of the HOTM produce at school events such as family nights, open house, and parent meetings, and the Network offered parent nutrition education lessons at the intervention sites that included a few recipes with the featured HOTM produce.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

no physical activity intervention

In 1-2 paragraphs, please provide a description of standardized training:

Prior to conducting the lessons, nutrition educators received approximately two hours of comprehensive training for each nutrition education lesson. The trainings were provided by a registered dietitian, a credentialed teacher, and two lead nutrition educators on staff. Each training included nutrition information content, an overview of the California Health Education Standard and Nutrition competency addressed, how to deliver the information to students, and how to prepare and distribute the HOTM recipe to students. Nutrition educators were actively involved in the training by role playing and independently studying the lesson plans. There were a total of 7 trainings. Furthermore, the trainings were conducted using powerpoint and a model/demonstration of how the lesson should be presented from start to finish. The lesson plans followed an adaptation of the TESS method which is an evidenced-based lesson template that includes a preview, review (to follow after the first lesson), introduction of the objective, nutrition content, student application, preparation of a recipe, closure, recipe evaluation with copy of the recipe, and take home exercises.

In 1-2 paragraphs, please provide a description of standard administration of data

Pre and Post assessment surveys were administered by the educators using the adminsitration protocol for the Youth Survey. Educators read aloud each question to the participants and provided clarification as needed.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All Educators received the same training, followed the same lesson plan, recipe, and were expected to teach at the same classroom each month. In addition, the registered dietitian and lead nutrition educators observed each educator at the intervention sites on a monthly basis to monitor accuracy and consistency.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 150 4th grade students who participated in HOTM Cooking in the Classroom will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample
How many matched surveys?	255
How many sites?	4
How many classrooms?	11

b. Control:	Convenience Sample
How many matched surveys?	180
How many sites?	4
How many classrooms?	8

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Other-Specify	Specify Other: FFY2011 Network Youth Survey
Goal 2/Objective 2	Other-Specify	Specify Other: FFY2011 Network Youth Survey

Were any other measures used?	no

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	7

	Intervention			Control		
Pre-test:	10/3/2012	to	10/3/2011	10/3/2011	to	10/3/2011
Start of Intervention Date	10/4/2011			NA		
End of Intervention Date	5/4/2012			NA		
Post-test:	5/8/2012	to	5/31/2012	5/8/2012	to	5/31/2012
Follow-up:	to			to		

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	Paper and pencil survey	

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Over 500 students in Baldwin Park Unified School District participated in this contractor intervention. Four hundred and thirty five (435) matched samples were obtained for both intervention and control groups. Two hundred and fifty five (255) student participants from 11 classrooms received the HOTM Cooking in the Classroom nutrition education lessons. Pre and post data was collected from the intervention group over a seven month period. Pre and post data from 180 students at 7 non-Network classrooms were collected and used for comparison. The intervention group received seven standards-based HOTM Cooking in the Classroom lessons. The Network for a Healthy California's Youth Survey was used to assess students.

The intervention group had significant differences between pre and post-surveys in the following areas: Increased fruit consumption 1.72 to 1.93 ($p<0.047$); increased overall physical activity (6/77 to 8.28 $p< 0.000$); increased access of fruits and vegetables at home (1.63 to 1.76 $p<0.001$ fruit and 1.56 to 1.66 $p<0.026$ vegetables); decreased overall unhealthy food consumption (3.35 to 2.90

p<0.007), decrease in punch/sports drinks/fruit-flavored drinks (1.02 to 0.87 p<0.036), and decreased consumption in cookies/cakes/other sweets (0.95 to 0.69 p< 0.001) as compared to the control group who only demonstrated improvements in decreasing cookies/cakes/other sweets (1.06 to 0.77 p<0.002), and increased access of fruits at home (1.61 to 1.72 p<0.046). Observed differences between the two groups in physical activity were noted. Baldwin Park Unified School District is an active recipient of the Healthy and Active Communities grant (HEAC), but lost their funding during this intervention year. However, the intervention sites continued to show significant physical activity increases. The nutrition education lesson topics focused on practicing eating more fruits and vegetables beyond meal times at home or school. The evidence provided could support that participating children were choosing more fruit over unhealthy food choices and/or that they were opting not to consume unhealthy food choices at celebrations or when eating out as compared to the control group. Further, the control group continued to get worse in healthy food consumption, although the results did not reach a significant decrease. The data from this intervention shows that Network programming and the comprehensive nutrition education we provide to students has a direct impact on food and drink choices.

In year one of our three-year follow-up study, students did not make any significant eating behavior changes in the intervention group between pre-and post-test surveys. The control group in year one had significantly worse eating habits from the pre to post-test survey (see data files for FFY11 results). The two year follow-up comparison demonstrates that students in the intervention group significantly increased water consumption 3.16 to 3.66 (p<0.003) as compared to the control group who decreased in water consumption 3.05 to 2.98 (p< 0.767). This could be related to the consistent messaging provided in the HOTM Cooking in the Classroom curriculum that promotes water and naturally sweetened beverages such as 100 percent juice or milk for drink consumption. As widely published data has shown, behavior change takes time and over a three year period, we may see additional improvements in food and drink consumption in the intervention group. The control group over the two year period showed significant decreases in punch, sports drinks, and fruit flavored drinks 1.21 to 0.89 (p<.0.004), breakfast consumption 0.94 to 0.81 (p<0.000), and access to fruit to eat at home 1.78 to 1.68 (p<0.43), respectively. Soda consumption increased in the control group over two years 0.56 to 0.94 (p<.000). This evidence supports overall decreases in healthy food and drink consumption in the control group over a two year period. Although the two year intervention data did not demonstrate significant increases in student vegetable consumption, there were evident improvements in yogurt, cheese, fruit, and water. Further, access at home to students of fruits 1.57 to 1.74 (p<0.015) and vegetables 1.57 to 1.74 (p<0.004) increased significantly in the intervention group compared to the control group [fruit 1.78 to 1.68 (p<0.043), vegetable 1.61 to 1.64 (p<0.644)]. Students may be advocating for fruits and vegetables, parents may be getting the take home messages from printed materials sent home or from parent nutrition workshops/classes, or students may be more receptive to noticing fruits and vegetables at home based on the marketing and education of the Network activities.

Overall, it should be noted that there were no significant decreases in consumption for these categories in the intervention group for two years in a row. In the two year follow-up, physical activity remained significantly high in both the intervention and control group despite decreases in the control group in year two. This may be a result of high scores during year one of the study. The nutrition lessons conducted at the intervention sites may be associated with preventing significantly decreases in healthy food consumption and not significantly increasing unhealthy food consumption in participating students as compared to the control group participants. Furthermore, the continued

success of the Healthy Parents, Healthy Communities parent intervention in our districts may be indirectly influencing fruit and vegetable consumption and self-efficacy at home. It is not known if the same parents of these students attended the parent workshops, but it may be difficult for 3rd graders to assess access of fruits and vegetables at home (baseline data from year one of follow-up study). Lastly, teachers are actively involved in implementing the HOTM program by providing additional nutrition education and taste testings with integrated instruction. They are also encouraged to portray consistent healthy messages throughout the school. At the conclusion of three year follow up study, the cumulative data may be consistent the Monrovia USD 4th and 5th grade youth intervention from 2006-2008 that demonstrated significant increases in fruit and vegetable consumption and self-efficacy among 4th and 5th students.

At the intervention sites, we received a significant amount of anecdotal data as well as quantitative measures that helped us identify how well the students enjoyed the HOTM and featured recipes. Over 90 percent of students at the intervention sites approved the recipes and were willing to share the information they learned at home. Parents continued to be eager about attending Network hosted parent meetings at the respective school sites so they could learn how to prepare the recipes their children loved. They also expressed that they felt more confident in shopping for the ingredients and making their recipes because their children felt more confident from what they learned in each lesson. Teachers requested Cooking in the Classroom recipes because even students who were absent for the Cooking in the Classroom lesson wanted to take the recipe home. Teachers also reported students bringing healthier options for snack, lunch, and field trips lunches. Further, teachers reported that students were more conscious about having healthy options at their classroom and school celebrations. Children were observed reading nutrition facts labels by teachers, chefs, parents, and principals. Lastly, the training provided to the nutrition educators for conducting assessments as well as teaching the nutrition education was more comprehensive this school year.

b. Description of how evaluation results will be used:

The data collected from this impact evaluation will be used as part of a three year follow-up study. There is increasing evidence that the HOTM Cooking in the Classroom lessons may have a positive influence in the student population at the four Network school sites. Further, at least one of the control school sites will receive the Network program and intervention. This may help us compare the difference between two years of no intervention versus one year of intervention at the respective school sites. A total of eight school sites will be part of the intervention, four of which have had no Network activities in previous years. The third year intervention will include students entering 5th grade. They will receive four contractor-developed HOTM Cooking in the Classroom lessons and 4 teacher-lead HOTM nutrition education lessons with the Tasting Trio. We will also attempt to train the cafeteria and playground staff to enhance HOTM promotion during lunch time. Featured recipes will be evaluated to ensure they are practical, affordable, and culturally appropriate and the nutrition education content provided by our Network staff will continue to follow the same lesson design as the previous year. We will continue to send home the student recipe evaluation with the take home messages of the nutrition lesson. We will also continue to demonstrate the featured recipes at parent meetings and school site events to increase exposure and awareness to families of these students.

7. Point of Contact

Name:	Lizett Olivares
Phone Number:	(626) 471-2991
Email Address:	lolivares@monroviaschools.net

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

Olivares, L. Morrison, T., Brown, J. (March 2012) Obesity Prevention for California's Low Income School Children: Successful Programs around the State. Presentation at the Network for a Healthy California conference, San Diego, California.

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

0

c. Did you use the Network Youth Survey or the Network High School Survey

Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

student observations, anecdotal data, student comments

Monrovia USD FFY12 Intervention Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.13	11.15	0.02	0.962
3. Milk	1.63	1.44	-0.20	0.014
4. Yogurt or cheese	0.53	0.63	0.09	0.125
5. Cereal	0.77	0.79	0.02	0.794
7. Vegetables	1.66	1.63	-0.03	0.782
8. Fruit	1.72	1.93	0.22	0.047
10. Juice	1.43	1.24	-0.18	0.094
11. Water	3.40	3.51	0.12	0.280
Total: fruit & vegetable (no juice)	3.38	3.56	0.18	0.280
Total: fruit, vegetable, juice	4.81	4.82	0.00	0.986
Unhealthy Foods	3.35	2.90	-0.45	0.007
6. French fries or chips	0.78	0.76	-0.01	0.851
9. Punch, sports drinks, fruit-flavored drinks	1.02	0.87	-0.15	0.036
12. Soda or soft drinks	0.62	0.58	-0.04	0.487
13. Cookies, cakes, other sweets	0.95	0.69	-0.25	0.001
Physical Activity	6.77	8.28	1.50	0.000
14. Days of 60 minutes moderate/vigorous	3.60	4.15	0.55	0.000
15. Days of 30 minutes outdoor play	3.19	4.13	0.94	0.000
Other				
16. Breakfast	0.88	0.85	-0.02	0.388
17. Trying New Foods	1.31	1.26	-0.05	0.196
Perceived Parental Consumption	4.59	4.57	-0.02	0.865
18. How often parents eat fruit	2.27	2.26	-0.01	0.933
19. How often parents eat vegetables	2.20	2.26	0.06	0.362
Access	3.20	3.43	0.23	0.001
20. Fruits to eat at home	1.63	1.76	0.13	0.001
21. Vegetables to eat at home	1.56	1.66	0.10	0.026

Demographics

Average Age	9.0
Gender	
Males	114
Females	141

Monrovia USD FFY12 Control Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.54	10.22	-1.32	0.034
3. Milk	1.55	1.34	-0.21	0.115
4. Yogurt or cheese	0.65	0.59	-0.06	0.809
5. Cereal	0.82	0.71	-0.11	0.738
7. Vegetables	1.59	1.58	-0.01	0.278
8. Fruit	1.85	1.61	-0.24	0.140
10. Juice	1.53	1.17	-0.36	0.010
11. Water	3.51	3.20	-0.31	0.082
Total: fruit & vegetable (no juice)	3.44	3.19	-0.26	0.693
Total: fruit, vegetable, juice	4.98	4.36	-0.62	0.108
Unhealthy Foods	3.57	3.27	-0.30	0.067
6. French fries or chips	0.77	0.73	-0.04	0.279
9. Punch, sports drinks, fruit-flavored drinks	1.06	0.92	-0.15	0.137
12. Soda or soft drinks	0.67	0.88	0.21	0.086
13. Cookies, cakes, other sweets	1.06	0.77	-0.29	0.002
Physical Activity	6.56	7.00	0.44	0.188
14. Days of 60 minutes moderate/vigorous	3.47	3.68	0.20	0.214
15. Days of 30 minutes outdoor play	3.07	3.31	0.24	0.302
Other				
16. Breakfast	0.86	0.84	-0.03	0.696
17. Trying New Foods	1.25	1.22	-0.03	0.458
Perceived Parental Consumption	4.66	4.69	0.03	0.691
18. How often parents eat fruit	2.16	2.26	0.10	0.712
19. How often parents eat vegetables	2.39	2.33	-0.05	0.260
Access	3.23	3.36	0.13	0.236
20. Fruits to eat at home	1.61	1.72	0.11	0.045
21. Vegetables to eat at home	1.61	1.61	0.00	0.889

Demographics

Average Age	9.0
Gender	
Males	99
Females	81

Monrovia USD FFY12 Two Year Follow-up Results: Intervention

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	10.96	11.39	0.44	0.154
3. Milk	1.36	1.51	0.14	0.435
4. Yogurt or cheese	0.74	0.62	-0.12	0.928
5. Cereal	0.83	0.80	-0.03	0.603
7. Vegetables	1.66	1.70	0.04	0.637
8. Fruit	1.68	1.90	0.22	0.193
10. Juice	1.51	1.22	-0.29	0.712
11. Water	3.16	3.66	0.50	0.034
Total: fruit & vegetable (no juice)	3.31	3.58	0.27	0.278
Total: fruit, vegetable, juice	4.85	4.82	-0.03	0.537
Unhealthy Foods	3.20	3.16	-0.04	0.510
6. French fries or chips	0.69	0.81	0.11	0.020
9. Punch, sports drinks, fruit-flavored drinks	0.95	0.95	0.00	0.929
12. Soda or soft drinks	0.68	0.63	-0.06	0.544
13. Cookies, cakes, other sweets	0.88	0.75	-0.13	0.840
Physical Activity	3.79	9.09	5.31	0.000
14. Days of 60 minutes moderate/vigorous	2.07	4.48	2.41	0.000
15. Days of 30 minutes outdoor play	1.71	4.61	2.90	0.000
Other				
16. Breakfast	0.84	0.85	0.01	0.820
17. Trying New Foods	1.27	1.35	0.08	0.211
Perceived Parental Consumption	4.37	4.42	0.04	0.255
18. How often parents eat fruit	2.12	2.19	0.07	0.254
19. How often parents eat vegetables	2.22	2.13	-0.09	0.192
Access	3.09	3.42	0.33	0.154
20. Fruits to eat at home	1.57	1.74	0.17	0.854
21. Vegetables to eat at home	1.54	1.67	0.13	0.040

Demographics

Average Age	8.0
Gender	
Males	83
Females	58

Monrovia USD FFY12 Two Year Follow-up Results: Control

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	14.16	9.00	-5.16	0.000
3. Milk	1.58	1.38	-0.20	0.042
4. Yogurt or cheese	0.81	0.52	-0.29	0.004
5. Cereal	1.03	0.69	-0.34	0.000
7. Vegetables	2.20	1.56	-0.64	0.001
8. Fruit	1.99	1.63	-0.36	0.045
10. Juice	1.68	1.20	-0.49	0.001
11. Water	3.05	2.98	-0.07	0.767
Total: fruit & vegetable (no juice)	4.19	3.19	-1.00	0.001
Total: fruit, vegetable, juice	5.92	4.43	-1.49	0.000
Unhealthy Foods	3.50	3.42	-0.08	0.760
6. French fries or chips	0.83	0.78	-0.05	0.583
9. Punch, sports drinks, fruit-flavored drinks	1.21	0.89	-0.32	0.004
12. Soda or soft drinks	0.56	0.94	0.38	0.000
13. Cookies, cakes, other sweets	0.97	0.84	-0.14	0.200
Physical Activity	4.51	6.59	2.09	0.000
14. Days of 60 minutes moderate/vigorous	2.37	3.50	1.12	0.000
15. Days of 30 minutes outdoor play	2.16	3.09	0.93	0.000
Other				
16. Breakfast	0.94	0.81	-0.13	0.000
17. Trying New Foods	1.30	1.22	-0.08	0.169
Perceived Parental Consumption	4.79	4.61	-0.18	0.222
18. How often parents eat fruit	2.29	2.14	-0.15	0.117
19. How often parents eat vegetables	2.35	2.28	-0.07	0.456
Access	3.39	3.36	-0.03	0.744
20. Fruits to eat at home	1.78	1.68	-0.09	0.043
21. Vegetables to eat at home	1.61	1.64	0.03	0.644

Demographics

Average Age	7.9
Gender	
Males	72
Females	83

FFY12 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Montebello USD - 09-11260
Contract number:	09-11260
Information provided by :	Kristin Fyfe
Telephone:	323-887-7966
Date:	7/25/2012
Email:	fyfe_kristin@montebello.k12.ca.us

1. Project Description and Goals

Project Name:	Harvest of the Month
Target Population:	5th Grade
Primary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Teachers conduct Harvest of the Month lessons from MUSD packets each month with LIAs' student workbooks. Each teacher also participated in Eat Your Books, which entailed reading the Network-approved book and teaching the complementary lesson. There were two levels of the intervention: half of the intervention schools (Montebello Park Elementary [MPE], Wilcox Elementary [WIE], and Winter Gardens Elementary [WGE]) had 3 or 4 formative assessment trainings, while the other half (Bell Gardens Elementary [BGE], La Merced Elementary [LME], and Laguna Nueva School [LNS]) did not. The formative assessment trainings gave teachers a chance to team up with peers to develop integrated nutrition education lessons that included several checks for student understanding throughout. The formative assessment group teachers then used these checks for understanding to decide which topics to revisit and to hone the methods they use to teach nutrition. The standard opportunities for developing capacity for teaching nutrition were available to all teachers. These included guest lessons, coaching from Site Lead Teacher, tips from HOTM packets and district-wide trainings held by Nutrition Services.

Some of the intervention students' parents may have participated in the parent nutrition classes that were held at BGE, LNS, MPE, and WGE. Back to School Night, National School Lunch Week, National School Breakfast Week, National Nutrition Month, and Open House were open for all schools to participate.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

HOTM packets included physical activity lessons, including a mini "hike" around campus and researching what physical activity opportunities their communities provide (classes, trails, parks, etc.). The LIAs' student workbooks also weave physical activity tips in the nutrition lessons.

In 1-2 paragraphs, please provide a description of standardized training:

All Site Lead Teachers are trained at the beginning and throughout the year to coach their teachers in delivering nutrition lessons. Guest lessons are available to all teachers, and involve collaborating with a Network grant staff member to adapt the lesson ideas in the HOTM packet to be most appropriate for that particular class. Then the Network grant staff member teaches the lesson to the class with the teacher's active observation and/or participation. The HOTM packets contain strategies on how to teach the many lessons provided. There are also district-wide trainings on use of academic language and science when teaching nutrition.

In 1-2 paragraphs, please provide a description of standard administration of data

A Network staff member read each question of the survey to students and clarified any questions the students had.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Aside from the formative assessment trainings, teachers at all schools had access to the same resources. Their process evaluation data also indicate that the amount of nutrition education their students received was very similar.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 5th grade students who participated in Harvest of the Month will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used? Pre-test and Post-test with interventions of different intensities with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Random Sample

How many matched surveys?	148
How many sites?	6
How many classrooms?	6

b. Control: Convenience Sample

How many matched surveys?	51
How many sites?	2
How many classrooms?	2

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1: Network Youth Survey

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	2
How many lessons from the intervention occurred *after* pre-tests?	14

	Intervention			Control		
Pre-test:	11/9/2011	to	12/13/2011	12/1/2009	to	10/15/2009
Start of Intervention Date	9/20/2011			NA		
End of Intervention Date	6/15/2012			NA		
Post-test:	5/31/2012	to	6/15/2012	6/1/2010	to	6/15/2010
Follow-up:						

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	Paper and pencil survey

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

We used paired t-tests to compare pre- and post-test responses. In the group at the formative assessment level of the intervention, there was a significant increase in the amount of cheese consumed ($t(71) = 2.39$, $p<.05$). Water consumption also significantly increased ($t(71) = 2.02$, $p<.05$). Physical activity increased in days of 60 minutes of moderate/vigorous activity ($t(71) = 3.95$, $p<.01$), days of 30 minutes of outdoor play ($t(71) = 3.60$, $p<.01$), and total ($t(71) = 4.23$, $p<.01$). No other results from this group were statistically significant.

In the group at the level of the intervention without formative assessment, there were no statistically significant results.

In the control group, there was a significant increase in yogurt or cheese ($t(50) = 2.28$, $p<.05$) and a significant increase in punch, sports drinks, fruit-flavored drinks ($t(50) = 2.40$, $p<.05$). There was a significant decrease in recalling the teacher saying fruits and vegetables are good for you ($t(50) = 2.45$, $p<.05$), that they are healthy ($t(50) = 2.20$, $p<.05$), and that they taste good ($t(50) = 2.71$, $p<.01$).

We had to use control group data from Pico Rivera two years ago because it was more fitting than the current potential control groups to which we would have access, such as schools in the surrounding area that do not qualify for the Network grant due to greater affluence. The Network grant is present in all schools in MUSD, and even the teachers that do not consistently participate tend to try Harvest of the Month or other activities a few times in the year.

It appears that between the two levels of the intervention, the formative assessment group was influenced greatly by the last HOTM lesson they had, which emphasized outdoor activity and drinking water. This could indicate that the formative assessment teachers were more diligent about reading through the entire packet for extension lessons, and that the water and outdoor physical activity components made a difference at post-test because they were newly introduced right before the post-test as opposed to discussed all year. The increase in cheese for the formative assessment intervention group and the control group could be something as simple as having pizza for school lunch the previous day, considering there were just more student who indicated they had it once. We did not see an increase in sugar sweetened beverages for either intervention group where we otherwise might have seen it, given the control group's results.

We received overwhelmingly positive teacher feedback in our surveys. Many teachers shared observations of children bringing more fruits and vegetables instead of processed foods for snacks and eating more fruits and vegetables at school meals. Virtually all teachers said students are more willing to try new fruits and vegetables. Many indicated it helped their students bond and demonstrate supportive behavior when encouraging fellow students to sample the taste test items or to eat healthy foods outside of the taste test. One teacher said that although she had a particularly difficult class this year, she really saw results with their nutrition-related behavior. They brought fruits and vegetables in for snacks, and when one student brought a bag of chips, other students commented that it was a big bag for one person. He responded that he had brought it to share. This type of data could be coded by theme (e.g. more willing to try f&v) and quantified for reporting as they do in many social sciences, but it takes longer because of the sheer quantity and the nature of the analysis, so it could not be completed by the IOE due date.

b. Description of how evaluation results will be used:

The results indicate the intervention students are eating fruits and vegetables more than 4 times a day, which may reach or come close to the recommended total number of fruit and vegetable servings per day. Based on that and the physical activity results for the formative assessment intervention group, it appears the program was successful in promoting produce consumption and physical activity. However, the ratio of vegetables to fruits appears to be a little too low, and the data suggests the consumption of foods in the "Unhealthy Foods" category is too high. Next year we will focus more strongly on MyPlate and have them categorize the foods they eat in a day into a MyPlate worksheet with "extras" on the side so they can see how balanced their food intake is. This should also shed light onto what their diet looks like in terms of servings rather than "times" they ate something, to see if "one time" meant a large salad or a carrot stick; a large bag of chips or just a few Cheetos.

7. Point of Contact

Name:	Kristin Fyfe
Phone Number:	323-887-7966
Email Address:	fyfe_kristin@montebello.k12.ca.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. N/A

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* N/A

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

N/A

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

N/A

Results

MUSD Intervention Group with Formative Assessment

	Pre-Test Mean	Post-Test Mean	Difference	P-Value	T Value
Healthy Foods	11.09	11.84	0.76	0.246	1.17
3. Cheese	0.69	1.00	0.31	0.019	2.39
4. Milk	1.38	1.52	0.14	0.191	1.32
5. Yogurt or cottage cheese	0.33	0.33	0.00	1.000	0.00
6. Cereal	0.72	0.61	-0.11	0.288	1.07
8. Vegetables	1.47	1.60	0.13	0.535	0.62
9. Fruit	1.86	1.79	-0.07	0.753	0.32
10. 100% Fruit Juice	1.28	1.35	0.07	0.747	0.32
Total: Fruit & Vegetable	4.63	4.68	0.04	0.921	0.10
11. Water	3.32	3.74	0.42	0.047	2.02
Unhealthy Foods	3.59	3.73	0.14	0.634	0.48
7. French fries or chips	1.10	1.00	-0.10	0.481	0.71
12. Punch, sports drinks, fruit-flavored drinks	1.04	1.11	0.07	0.660	0.44
13. Soda or soft drinks	0.68	0.88	0.19	0.123	1.56
14. Cookies, cakes, other sweets	0.79	0.79	0.00	1.000	0.00
Other	3.08	3.15	0.07	0.650	0.46
15. Breakfast	0.85	0.82	-0.03	0.596	0.53
16. Trying New Fruits	1.32	1.35	0.03	0.734	0.34
17. Trying New Vegetables	0.92	0.99	0.07	0.388	0.87
Total: Trying New Produce	2.24	2.33	0.10	0.467	0.73
Access	3.31	3.31	0.00	1.000	0.00
18. Fruits to eat at home	1.77	1.77	0.00	1.000	0.00
19. Vegetables to eat at home	1.54	1.55	0.01	0.829	0.22
Perceived Parental Consumption	4.28	4.54	0.26	0.133	1.52
20. How often parents eat fruit	2.16	2.24	0.08	0.471	0.72
21. How often parents eat vegetables	2.10	2.16	0.06	0.617	0.50
Physical Activity	4.81	7.29	2.49	0.000	4.23
22. Days of 60 minutes moderate/vigorous	2.44	3.75	1.31	0.000	3.95
23. Days of 30 minutes outdoor play	2.36	3.54	1.18	0.001	3.60

Demographics

Average Age	10.0
Gender	
Males	37
Females	35

Results

MUSD Intervention Group without Formative Assessment

	Pre-Test Mean	Post-Test Mean	Difference	P-Value	T Value
Healthy Foods	10.52	10.95	0.42	0.493	0.69
3. Cheese	0.78	0.71	-0.07	0.611	0.51
4. Milk	1.49	1.28	-0.21	0.088	1.73
5. Yogurt or cottage cheese	0.39	0.30	-0.09	0.321	1.00
6. Cereal	0.76	0.75	-0.01	0.916	0.11
8. Vegetables	1.16	1.25	0.09	0.606	0.52
9. Fruit	1.41	1.74	0.33	0.151	1.45
10. 100% Fruit Juice	1.29	1.28	-0.01	0.947	0.07
Total: Fruit & Vegetable	3.87	4.31	0.44	0.299	1.05
11. Water	3.15	3.47	0.32	0.100	1.67
Unhealthy Foods	3.03	2.96	-0.07	0.818	0.23
7. French fries or chips	0.88	0.74	-0.14	0.257	1.14
12. Punch, sports drinks, fruit-flavored drinks	0.81	0.92	0.11	0.486	0.70
13. Soda or soft drinks	0.67	0.57	-0.11	0.349	0.94
14. Cookies, cakes, other sweets	0.71	0.72	0.01	0.911	0.11
Other	3.29	3.30	0.01	0.913	0.11
15. Breakfast	0.80	0.84	0.04	0.471	0.73
16. Trying New Fruits	1.34	1.41	0.07	0.357	0.93
17. Trying New Vegetables	1.12	1.05	-0.07	0.357	0.93
Total: Trying New Produce	2.45	2.44	-0.01	0.904	0.12
Access	3.43	3.27	-0.17	0.184	1.34
18. Fruits to eat at home	1.81	1.71	-0.10	0.146	1.47
19. Vegetables to eat at home	1.63	1.55	-0.08	0.340	0.96
Perceived Parental Consumption	4.42	4.39	-0.03	0.923	0.10
20. How often parents eat fruit	2.26	2.24	-0.03	0.868	0.17
21. How often parents eat vegetables	2.07	1.96	-0.11	0.521	0.64
Physical Activity	8.32	7.87	-0.45	0.361	0.92
22. Days of 60 minutes moderate/vigorous	4.13	3.85	-0.28	0.310	1.02
23. Days of 30 minutes outdoor play	4.19	4.01	-0.17	0.579	0.56

Demographics

Average Age	10.2
Gender	
Males	47
Females	28

Results

Pico Rivera Control Group

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods	5.96	6.67	0.71	0.058
3. Milk	1.45	1.59	0.14	0.240
4. Yogurt or cheese	0.48	0.78	0.30	0.027
5. Cereal	0.61	0.69	0.08	0.471
7. Vegetables	1.69	1.73	0.04	0.819
8. Fruit	1.62	1.90	0.28	0.114
Total: fruit & vegetable	1.15	1.23	0.08	0.617
	3.28	3.56	0.28	0.285
Unhealthy Foods				
6. French fries or chips	3.11	3.15	0.04	0.883
9. Punch, sports drinks, fruit-flavored drinks	0.84	0.98	0.14	0.241
11. Soda or soft drinks	0.79	1.15	0.35	0.020
12. Cookies, cakes, other sweets	0.60	0.38	-0.22	0.078
	0.92	0.69	-0.24	0.122
Physical Activity				
13. Days of 60 minutes moderate/vigorous	8.16	8.61	0.45	0.453
14. Days of 30 minutes outdoor play	4.29	4.39	0.10	0.765
	3.86	4.22	0.35	0.356
Other				
15. Breakfast	1.96	2.12	0.16	0.073
16. Trying New Foods	0.82	0.86	0.04	0.420
	1.14	1.25	0.12	0.110
Perceived Parental Consumption				
17. How often parents eat fruit	4.75	4.60	-0.15	0.323
18. How often parents eat vegetables	2.37	2.30	-0.07	0.538
	2.36	2.21	-0.14	0.183
Access				
19. Fruits to eat at home				
20. Vegetables to eat at home	1.88	1.86	-0.02	0.710
21. Fruit OR Vegetables to eat at home	1.65	1.69	0.04	0.622
Fruit AND Vegetables to eat at home (19 & 20)	1.88	1.76	-0.12	0.083
	3.53	3.55	0.02	0.844
Bullying/Teasing				
22. Bullied	0.74	0.59	-0.15	0.096
23. Teased about food eaten at school	0.65	0.56	-0.09	0.103
	0.15	0.15	0.00	1.000
Self-Efficacy				
24. Write favorite fruit/vegetable on shopping list	14.90	13.73	-1.18	0.193
25. Ask someone to buy favorite fruit/vegetable	3.57	3.96	0.39	0.431
26. Pick out favorite fruit/vegetable and put in cart	3.41	3.08	-0.33	0.332
27. Ask someone to cook favorite fruit/vegetable for dinner	4.12	3.45	-0.67	0.112
	3.80	3.24	-0.57	0.239
Teacher Questions				
28. Fruits and vegetables are good for you	3.29	2.83	-0.46	0.118
29. Fruits and vegetables are healthy	0.98	0.81	-0.16	0.018

30. Fruits and vegetables taste good	0.98	0.84	-0.14	0.032
31. Eat fruits and vegetables every day	0.67	0.42	-0.24	0.009
	0.7	0.7	0	1

Demographics

Average Age	10.5
Gender	
Males	25
Females	26

Results

MUSD Intervention Group without Formative Assessment

	Pre-Test Mean	Post-Test Mean	Difference	P-Value	T Value
Healthy Foods	10.52	10.95	0.42	0.493	0.69
3. Cheese	0.78	0.71	-0.07	0.611	0.51
4. Milk	1.49	1.28	-0.21	0.088	1.73
5. Yogurt or cottage cheese	0.39	0.30	-0.09	0.321	1.00
6. Cereal	0.76	0.75	-0.01	0.916	0.11
8. Vegetables	1.16	1.25	0.09	0.606	0.52
9. Fruit	1.41	1.74	0.33	0.151	1.45
10. 100% Fruit Juice	1.29	1.28	-0.01	0.947	0.07
Total: Fruit & Vegetable	3.87	4.31	0.44	0.299	1.05
11. Water	3.15	3.47	0.32	0.100	1.67
Unhealthy Foods	3.03	2.96	-0.07	0.818	0.23
7. French fries or chips	0.88	0.74	-0.14	0.257	1.14
12. Punch, sports drinks, fruit-flavored drinks	0.81	0.92	0.11	0.486	0.70
13. Soda or soft drinks	0.67	0.57	-0.11	0.349	0.94
14. Cookies, cakes, other sweets	0.71	0.72	0.01	0.911	0.11
Other	3.29	3.30	0.01	0.913	0.11
15. Breakfast	0.80	0.84	0.04	0.471	0.73
16. Trying New Fruits	1.34	1.41	0.07	0.357	0.93
17. Trying New Vegetables	1.12	1.05	-0.07	0.357	0.93
Total: Trying New Produce	2.45	2.44	-0.01	0.904	0.12
Access	3.43	3.27	-0.17	0.184	1.34
18. Fruits to eat at home	1.81	1.71	-0.10	0.146	1.47
19. Vegetables to eat at home	1.63	1.55	-0.08	0.340	0.96
Perceived Parental Consumption	4.42	4.39	-0.03	0.923	0.10
20. How often parents eat fruit	2.26	2.24	-0.03	0.868	0.17
21. How often parents eat vegetables	2.07	1.96	-0.11	0.521	0.64
Physical Activity	8.32	7.87	-0.45	0.361	0.92
22. Days of 60 minutes moderate/vigorous	4.13	3.85	-0.28	0.310	1.02
23. Days of 30 minutes outdoor play	4.19	4.01	-0.17	0.579	0.56

Demographics

Average Age	10.2
Gender	
Males	47
Females	28

Network-funded contractor:	Monterey County Health Department - 10-10158
Contract number:	10-10158
Information provided by :	Niaomi Hrepich
Telephone:	(831) 796-2872
Date:	7/16/2012
Email:	hrepichns@co.monterey.ca.us

Section 1

1. Project Description and Goals

Project Name:	Impact Evaluation
Target Population:	4th graders 9-11yrs
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	PowerPlay!

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Network staff provided HOTM lessons and tastings 6-7 times in each class during the school year. These lessons focused on seasonal fruits and veggies, facts, tastings, etc. On separate occasions, each educator provided a consistent nutrition lesson to each class. These lessons focused on Rethink Your Drink, Eating Breakfast and Whole Grains. Each class got these lessons, consistent messaging and activities from the same educator.

Staff piloted a Daily Food Diary into this year's evaluation. The Diary was given to each student, reviewed with the teacher and at times the educator had students fill out some of it while presenting the nutrition lesson. Some of the teachers/classes used it more than others. We hope to include The Daily Food Diary again in the next school year and incorporate the material into the nutrition lessons with the students.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Physical activity was encouraged in our Daily Food Diary Packet and discussed and demonstrated with the students at most of the HOTM nutrition interventions. Staff also included physical activity in the Rethink Your Drink Lesson and in a couple of the PP! lessons done.

In 1-2 paragraphs, please provide a description of standardized training:

Network staff provided one on one training to the teachers on what Impact Evaluation entailed, focusing on fruits and vegetables and the nutrition components we identified to teach over the past year. Staff reviewed importance, timing, intervention and activities involved over the school year and what goals we were trying to accomplish.

In 1-2 paragraphs, please provide a description of standard administration of data

All surveys were given to the students by the Network staff. Staff was present when surveys were administered in case questions arose from the students.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

This year Network staff really tried to provide consistent nutrition lessons in the classrooms. Providing the same lessons to each class was a strong component.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 240 grade students who participated in Impact Evaluation will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? 0

4. Describe how assignment to these groups was carried out:

a. Intervention: Random Sample

How many matched surveys?	196
How many sites?	4
How many classrooms?	10

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	0

Were any other measures used? N/A

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention	Control
Pre-test:	9/27/2011 to 10/17/2011	NA
Start of Intervention Date	10/1/2011	NA
End of Intervention Date	5/25/2012	NA
Post-test:	5/23/2012 to 6/1/2012	NA
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Over the past school year, we have seen statistically significant changes in many categories of the survey. One of the overall changes has been an increase in healthy dietary behaviors in our group of students. The students are reporting an increase in healthy foods intake, not just fruits and vegetables but also cereals, cheese and milk and a decrease in unhealthy foods such as cookies, cakes and chips. The students reported a statistically significant increase p-value 0.000 for fruit intake. Fruit has increased by 1/2 serving a day. We may attribute this to the nutrition interventions that include increasing fruit and vegetables each day trying to include in breakfast or with snacks. Overall, fruit and vegetable intake (not including juice) increased significantly p-value 0.001. Students reported at the end of the intervention of eating more than 4 servings of fruits and vegetables daily. This is a drastic improvement considering most pre-teens only eat 2 servings daily.

The survey results are showing a statistically significant p-value 0.000 decrease in intake of unhealthy foods. Not only have unhealthy foods such as chips, cookies and other sweets decreased but juice, punch, sports drinks, soda and soft drinks have also declined. The staff may be able to assume that this decrease in sugar sweetened beverages is related to the interventions on rethink your drink with the students. Our results also showed an increase in water and milk which were encouraged as part of the rethink your drink lesson in place of the sugar sweetened beverages.

Physical activity showed a statistically significant increase p-value 0.001. Overall, students reported an increase of more than a day a week increase of physical activity. Not only did the days that students spent 30 minutes playing outside increase but the days that students spent 60 minutes of moderate/vigorous activity increased as well. The changes in physical activity of the students could have been due to the inclusion of demonstrations and encouragement of physical activity and importance to an overall healthy diet during our interventions.

Since we have been partnering with the school districts and cafeterias involved in Impact Evaluation, we have begun to see some small changes. Network staff is a member of one of the wellness councils where we have been able to provide a lot of technical assistance. Some of the info given to the food service director (FSD) was the grant for salad bars in schools. The FSD applied for the grant and has now received 3 salad bars for the elementary schools in her school district (two of the schools are IE schools).

Network staff has also noticed that cafeteria staff is more proactive in how they can make foods healthier and requesting purchasing of healthy foods. They are also trying to make the cafeteria a better learning environment, including MyPlate, Eating Breakfast, PP! posters, etc. and some have tried taste testings with students as well. The food service directors are also exploring how to include more from scratch cooking as well.

As for the classroom changes, some of the teachers really push the students and take the nutrition and physical activity message further. For example, one teacher took the compostable 2oz container that we provide our taste testings in and had the students poke holes in the bottom, add soil and a seed,

water and use the lid as a drain holder. The students grew a plant and then they took those out into the larger barrels and replanted so the plants could grow large.

b. Description of how evaluation results will be used:

The results from the youth survey this year will be reviewed with all staff included in the evaluation. We will look to make changes to our future interventions with what we learn this year. We may try other nutrition lessons, we are planning to include more physical activity demonstrations as well. With the daily food diary that we piloted this year, we are going to try and include it next year with our interventions with the students as a goal setting method.

7. Point of Contact

Name:	Niaomi Hrepich
Phone Number:	(831) 796-2872
Email Address:	hrepichns@co.monterey.ca.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.63	0.86	0.23	0.007
4. Milk	1.33	1.51	0.18	0.033
5. Yogurt or cheese	0.63	0.51	-0.12	0.134
6. Cereal	0.79	0.82	0.02	0.795
8. Vegetables	1.70	1.92	0.22	0.083
9. Fruit	1.86	2.37	0.51	0.000
10. Juice	1.69	1.36	-0.34	0.025
11. Water	3.28	3.53	0.25	0.064
15. Breakfast	0.85	0.91	0.06	0.158
Total: fruit & vegetable (no juice)	3.56	4.29	0.73	0.001
Total: fruit, vegetable, juice	5.24	5.67	0.43	0.147
Total: healthy foods (Q3-6, 8-11)	11.91	12.95	1.04	0.029
Less Healthy Dietary Behaviors				
7. French fries or chips	0.82	0.65	-0.17	0.032
12. Punch, sports drinks, fruit-flavored drinks	0.96	0.75	-0.21	0.024
13. Soda or soft drinks	0.61	0.48	-0.12	0.146
14. Cookies, cakes, other sweets	0.87	0.60	-0.27	0.002
Total: less healthy foods (Q7, 12-14)	3.24	2.45	-0.79	0.000
Trying New Foods	2.46	2.47	0.01	0.901
16. Trying new fruits	1.33	1.37	0.05	0.319
17. Trying new vegetables	1.14	1.09	-0.04	0.481
Home Access	3.29	3.41	0.13	0.129
18. Fruits to eat at home	1.72	1.76	0.04	0.401
19. Vegetables to eat at home	1.55	1.64	0.09	0.108
Perceived Parental Consumption	4.33	4.85	0.52	0.133
20. How often parents eat fruit	2.09	2.27	0.18	0.018
21. How often parents eat vegetables	2.20	2.53	0.33	0.224
Physical Activity	5.21	6.43	1.22	0.001
22. Days of 60 minutes moderate/vigorous	2.70	3.27	0.58	0.002
23. Days of 30 minutes outdoor play	2.53	3.17	0.64	0.002

Demographics

Average Age	9.1
Gender	
Males	131

Females	117

Network-funded contractor:	Newport-Mesa USD vol - 10-10116
Contract number:	10-10116
Information provided by :	Geoff Ianniello
Telephone:	(714) 424-7557
Date:	7/23/2012
Email:	gianniello@nmusd.us

Section 1

1. Project Description and Goals

Project Name:	Nutrition Institute
Target Population:	18-60+
Primary Curriculum Used:	LAUSD Network Parent Nutrition Education Workshop Series
Secondary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Newport Mesa's "Nutrition Institute" is a series of five, ninety-minute nutrition education classes that cover such topics as My Plate, nutrients, food labels, meal planning and eating out and snacks.

The bilingual lessons are Network-approved and were developed by the Los Angeles Unified School District. (http://www.healthylausd.net/workshops/workshopMaterials.htm)

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Each of the five classes had a PA component using Network materials including the "Shape of Yoga".

At one of the classes, the OC Regional Network Physical Activity Specialist conducted a twenty-minute training.

In 1-2 paragraphs, please provide a description of standardized training:

Parents at all Nutrition Institute sites meet in the school multi-purpose room.

The same district translator worked with the Network staff at each of the five classes to translate the information into Spanish.

In 1-2 paragraphs, please provide a description of standard administration of data

All participating Nutrition Institute parents took a pretest survey one week prior to the first nutrition education intervention. The survey was available in English and Spanish.

Parents were issued a random identification number.

After the conclusion of the last nutrition education intervention, parents then took a posttest survey.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

The five nutrition education interventions were conducted the same way at every site.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of Adults who participated in Nutrition Institute will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Convenience sampling

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	93
How many sites?	4
How many classrooms?	4

b. Control: Convenience Sample

How many matched surveys?	44
How many sites?	1
How many classrooms?	8

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Fruit and Vegetable Checklist (cups)
Goal 2/Objective 2	Fruit and Vegetable Inventory

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	5

	Intervention			Control		
Pre-test:	10/12/2011	to	4/26/2011	11/1/2011	to	11/30/2011
Start of Intervention Date	10/19/2011			NA		
End of Intervention Date	5/31/2012			NA		
Post-test:	12/7/2012	to	6/7/2012	1/1/2013	to	1/30/2013
Follow-up:	n/a	to	n/a	n/a	to	n/a

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	Paper and pencil survey	

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Data analysis of questions on the survey included paired samples t-tests within groups to determine if change from pre to post scores was statistically significant at $p < .05$. In addition, one-way ANOVA was conducted to test for statistical significance between Intervention and Control groups at $p < .05$.

Conclusions

Analysis of questionnaires used to assess dietary behaviors, fruit and vegetable consumption, and change in factors that influence consumption suggest positive effect of Network activities on parents' fruit and vegetable consumption. Overall, there were increased changes from pre to post surveys that were large enough to show statistical significance.

More specifically, the measurement of fruit and vegetable consumption, utilizing the Fruit and Vegetable Checklist (FVC) to measure a more direct focus on dietary behaviors, showed an increase in consumption among parents in the Intervention group.

Dietary Behaviors Assessment

Statistical significance ($p < .05$) was found from pre to post survey on dietary behaviors of participants from the Intervention group. A comparison of the pre and post frequency distributions suggests an increase that was statistically significant in positive behaviors of consumption of fruits and vegetables as snacks, eating more than one kind of fruit and vegetable each day, and consumption of multiple vegetables during the main meal for the Intervention group. Statistical significance between Control and Intervention group was found regarding all items assessing dietary behaviors.

Fruit and Vegetable Consumption

Based on Network coding, categorical results for overall fruit consumption and vegetable consumption were calculated for both Intervention and Control group. Results based on paired-samples t-test show a significant increase for the Intervention group in regards to overall fruit and vegetable consumption. On the other hand, results for the Control group show a significant decrease in regards to overall fruit and vegetable consumption.

There were significant differences with respect to mean cup servings of fruit and vegetable consumption found between Intervention and Control group. Participants from the Intervention group showed a significant increase from pre to post survey with respect to daily consumption of multiple cup servings of fruits and vegetables. Control group participants also showed a significant decrease from pre to post with respect to mean vegetable servings per day.

The Intervention group slightly increased the amount of citrus fruit or citrus juice consumption from pre to post survey; however, the difference was not large enough to be statistically significant. The vast majority of participants from both groups indicated 'Yes' on the pre-survey, indicating an already existing high level of citrus fruit or citrus juice consumption. There was no significant difference between Intervention and Control groups with regards to citrus fruit or citrus juice consumption.

Fruit and Vegetable Inventory (FVI)

The Fruit and Vegetable Inventory (FVI) seeks to measure change in behavior, such as increased consumption of fruits and vegetables and a change in factors that influence fruit and vegetable consumption including knowledge, self-efficacy, preferences, outcome expectations, and availability.

A comparison of participant scores in answering questions measuring their knowledge, beliefs, and awareness related to fruit and vegetable intake including increase of perceived benefits, control, and dietary quality showed significant differences between the Intervention and Control groups in regards to buying more vegetables the next time at the store and planning meals with more vegetables during the upcoming week. The vast majority of participants in the Intervention group showed a significant increase in the desired perception that eating fruits and vegetables may help the body. Further analysis comparing pre to post survey scores showed a significant increase for the Intervention group in regards to participants' perception of fruits or vegetables as snacks. Furthermore, the control group showed a significant decrease in perceiving buying more vegetables the next time participants shop.

Based on results, there was also a significant increase in perception of diet quality for the Intervention group. Based on one-way ANOVA (p-value$<.05$), results showed a statistically significant difference between Intervention and Control group on perception of diet quality.

Lastly, participants of the Intervention group showed a significant increase from pre to post survey in readiness to eat more fruits and vegetables. Based on one-way ANOVA (p-value$<.05$), statistically significant differences were observed between Intervention and Control group in regards to readiness to eat more vegetables. There were statistically significant decreases from pre to post for the Control group on the perceived control of dietary purchases and food preparation. Statistical significance between the Intervention and Control group was found for both categories: perceived control of buying food and food preparation.

b. Description of how evaluation results will be used:

The evaluation results will be used to strengthened parent education and also seek out lessons that impact areas that need improvement

7. Point of Contact

Name:	Geoff Ianniello
Phone Number:	(714) 424-7557
Email Address:	gianniello@nmusd.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. n/a

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* n/a

c
- Food Behavior Checklist
- Fruit and Vegetable Checklist
- Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

Fruit and Vegetable Checklist and Fruit and Vegetable Inventory

Please note: these two don't seem to show up on the tab labeled "adult", even when checked?

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Average Scores for Dietary Behaviors by Group- Pre and Post Survey

Questions	Intervention N=93				Control N=44			
	Pre Mean	Post Mean	Diff	P-value	Pre Mean	Post Mean	Diff	P-value
Q1 Do you eat fruits or vegetables as snacks?**	2.75	3.44	+0.69	.000*	3.02	2.80	-0.22	.058
Q4 Do you eat more than one kind of fruit each day?**	2.59	3.22	+0.63	.000*	2.56	2.33	-0.23	.160
Q5 Do you eat more than one kind of vegetable each day?**	2.79	3.23	+0.44	.000*	2.43	2.29	-0.14	.343
Q7 Do you eat 2 or more vegetables at your main meal?**	2.40	3.08	+0.68	.000*	2.20	2.00	-0.20	.051*

Note. Scores are based on a 1-4 point scale (4=Yes, every day 3=Yes, often 2=Yes, sometimes, 1=No) *Using paired samples t-tests, statistically significant differences were observed from pre to post survey (p- value<.05). **Statistical significance between intervention and control group (one-way ANOVA) was found.

Average Scores for Weekly Citrus fruit or Citrus Juice Consumption by Group- Pre & Post Survey

Question	Intervention (N=93)				Control (N=44)			
	Pre Mean	Post Mean	Diff	P-value	Pre Mean	Post Mean	Diff	P-value
Q2 Did you have citrus fruit or citrus juice during the past week?	.85	.92	+0.07	.109	.86	.86	0	1.00

Mean Servings (Based on Cups) of Fruit and Vegetable Eaten Each Day by Group- Pre & Post Survey

Group	N	FRUIT**				VEGETABLES**			
		Mean Cup Servings		Change in mean servings		Mean Cup Servings		Change in mean servings	
		Pre	Post	Diff.	P-value	Pre	Post	Diff.	P-value
Intervention	93	1.17	1.66	+0.49	.000*	1.07	1.70	+0.63	.000*
Control	44	1.23	1.18	-0.05	.652	1.20	0.91	-0.29	.011*

Note. *Statistically significant differences were observed from pre to post survey (p-value<.05) based on paired samples t-tests. **Statistically significant differences between intervention and control group (one-way ANOVA) was found.

Network-funded contractor:	Orange County Health Care Agency - 08-85179
Contract number:	08-85179
Information provided by :	Gina Osborne & Dawn Robinson
Telephone:	(714) 834-8579 or (714) 834-7984
Date:	7/26/2012
Email:	gosborne@ochca.com or drobinson@ochca.com

Section 1

1. Project Description and Goals

Project Name:	Healthy Meals, Healthy Families
Target Population:	18-59
Primary Curriculum Used:	Other - Please Specify
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The adult Food Behavior Checklist survey (FBC) was used to collect data. Of the 16 questions on the adult FBC, 14 were chosen as target behaviors and addressed in the lessons. As a pilot, two new questions focused on the 2010 Dietary Guidelines. These two questions were intended to address portion size and whole grains which were not in the FBC. After including the pilot questions, a total of 16 questions were chosen as target behaviors. A series of five nutrition education classes were provided in three 60-minute sessions with the exception of two sites which requested five classes in five sessions. Classes were conducted in English or Spanish depending on the primary language of the group. The pre-test was administered at the beginning of the first session, the post-test was administered at the end of the last session and a follow-up survey was administered one month after the last session to determine if participants were able to maintain behavioral changes. A total of 143 adults participated in at least one class; 129 pre-tests and 104 post-tests were completed resulting in a total of 84 matched tests for the Intervention Group. A total of 64 matched 1-month follow-up post-tests were collected. For the Comparison Group, a total of 49 pre-tests and 36 post-tests were completed in order to collect 36 matched tests.

The nutrition education intervention was conducted with adults at 11 sites, including seven shelters, three public housing sites and one school. This target group needed significant assistance in preparing healthy meals on a limited budget. Over 94% of the class participants were currently receiving CalFresh or other food assistance. The majority of the adults residing in shelters were women, with children, who were homeless and/or recovering from substance abuse. The classes were usually small groups of five to ten individuals and were conducted in a variety of settings including the living rooms of shelter apartments, the facility kitchen or community rooms at public housing sites. Fruits and vegetables were incorporated into each class and into the food demonstrations. Key messages from the 2010 Dietary Guidelines were discussed and skills such as meal planning, shopping, cooking and reading food labels were emphasized. This ensured that the participants could take what they learned in class and apply it to their daily lives to make healthier food and beverage choices. Educators had to address nutrition misinformation as well; many participants had questions and often these classes were the only opportunity to talk about their nutrition concerns. Please see Part II – Section 4b Components of Nutrition Education and Appendix C “Class Description Chart” for more information on the classes.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

None – although there was no formal physical activity intervention, the importance of daily activity was emphasized in the “Build a Healthy Plate” class.

In 1-2 paragraphs, please provide a description of standardized training:

Only Network LIA-funded staff with substantial nutrition education training and experience conducted the classes. Training other staff was not necessary. Staff members shared teaching techniques and best practices on an informal basis.

In 1-2 paragraphs, please provide a description of standard administration of data

For the Intervention Group, the FBC was used at all sites and was provided in English or Spanish based on participant preference. LIA staff assisted attendees in the completion of the FBC and the participant data card at the first session (pre) and at the last session (post). Site staff assisted participants in the completion of the FBC survey one month after the last session (follow-up).

For the Comparison Group, the FBC was used at all sites and was provided in English or Spanish based on participant

preference. LIA and/or site staff administered the FBC and the participant data card (pre) and administered the survey again one month later (post).

Individual assistance was provided as needed to ensure participants understood the questions. All intervention and comparison group data was tallied and entered by one staff to ensure quality and consistency of data entry.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Staff members used the same lessons, presentation materials, nutrition education handouts and surveys for all classes at all sites. Three staff conducting the classes were Registered Dietitians and one staff was a Community Health Assistant, all with substantial nutrition education training and experience.

There was some variation in teaching based on the questions and concerns of participants as well as time and space constraints. Food demonstrations varied based on food in season, the preferences and needs of participants and cooking equipment available at each site.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 50 adults who participated in Healthy Meals, Healthy Families will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test, Post-test and a one-month follow-up test after the Post-test with Comparison Group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Individual

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample
How many matched surveys?	84
How many sites?	11
How many classrooms?	0

b. Control:	Convenience Sample
How many matched surveys?	36
How many sites?	4
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Food Behavior Checklist (cups)	
Goal 2/Objective 2	Food Behavior Checklist (cups)	

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	5

	Intervention			Control		
Pre-test:	10/7/2011	to	6/1/2012	10/6/2011	to	3/6/2012
Start of Intervention Date	10/7/2011			NA		
End of Intervention Date	6/29/2012			NA		
Post-test:	10/21/2011	to	6/29/2012	10/28/2011	to	6/8/2012
Follow-up:	11/21/2011	to	7/29/2012	NA	to	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	Paper and pencil survey	

d. How were the surveys administered?

...self-administered with individual guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

The adult Food Behavior Checklist (FBC) survey contained 16 questions; 14 of those were chosen as target behaviors. As a pilot, two new questions were added focusing on the 2010 Dietary Guidelines. One related to juice portion size and the other related to whole grain consumption. In summary, there were a total of 16 targeted behaviors: 14 questions from the FBC and two new questions.

Intervention Group

A total of 84 matched surveys were collected for the Intervention Group. Data from the matched pre/post-tests and the pre-test/1-mo follow-up surveys show an improvement in 15 of the 16 targeted behaviors.

Of those 15, eleven were statistically significant improvements:

Q #16: Overall rating of eating habits (Post; 1-mo F/U)

Q #1: Eating fruits and vegetables as snacks (1-mo F/U)

Q #6: The number of cups of fruit eaten daily (Post; 1-mo F/U)

Q #7: The number of cups of vegetables eaten daily (Post)

Q #8: The variety of fruit eaten each day (Post; 1-mo F/U)

Q #9: The variety of vegetables eaten each day (Post)

Q #13: Two or more vegetables at main meal (Post)

Q #14: Read food labels when shopping (Post; 1-mo F/U)

Q #2: Drink fruit drinks, sports drinks or punch (Post)

Q #4: Drink regular soda (Post; 1-mo F/U)

Q #15: Run out of food before month end (Post)

Four of the 16 behaviors improved but not significantly:

Q #3: Citrus fruit or citrus juice in past week (Post; 1-mo F/U)

Q #5 Drink milk or use milk on cereal in the past week (Post; 1-mo F/U)

Q #10: Drink milk (Post; 1-mo F/U)

Q #18: Ate whole grains yesterday (Post; 1-mo F/U)

One of the 16 behaviors remained about the same:

Q #17: Typical juice portion size (Post; 1-mo F/U)

The results indicate the series of nutrition classes made a positive impact on the participants' targeted eating behaviors. After attending the classes, Intervention Group participants were eating a greater variety and more fruits and vegetables each day, eating fruits and vegetables as snacks more frequently and eating two or more vegetables with their main meal more frequently. They were drinking sugar-sweetened beverages less often and eating or drinking citrus fruit/juice more often; juice portion size remained about the same. Lastly, this group was eating more whole grains, reading food labels more frequently when they shopped for food and rated their overall eating habits higher. When comparing the post-test to the one-month follow-up survey, results show the participants were able to sustain or make further improvements in 11 of the 15.

Comparison Group:

A total of 36 matched surveys were collected for the Comparison Group. The pre-test mean scores for the Comparison Group were higher when compared to the Intervention Group, indicating the target audience reached was in need of nutrition education.

The results for the Comparison Group indicate there were no significant changes for any of the 16 targeted behaviors selected for evaluation. Data for this group indicated a decrease in eating fruits and vegetables as snacks, variety of vegetables consumed, amount of fruits and vegetables consumed daily and eating two or more vegetables at the main meal. Milk consumption decreased while fruit drink, sports drink and punch consumption increased. However, these changes were not significant. Regular soda consumption remained the same. When comparing the results of the Comparison Group to those of the Intervention Group, this indicates that the nutrition classes made a positive impact on the eating behaviors of the Intervention Group participants.

b. Description of how evaluation results will be used:

The results will be used to determine if revisions should be made to the nutrition classes to better meet the needs of the participants. The data will also be shared with community partners.

7. Point of Contact

Name:	Gina Osborne & Dawn Robinson
Phone Number:	(714) 834-8579 or (714) 834-7984
Email Address:	gosborne@ochca.com or drobinson@ochca.com

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.	0
b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*	0

c

- [ ] Food Behavior Checklist
- [ ] Fruit and Vegetable Checklist
- [ ] Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Results FBC Cups Eng-Span DET Comparison Group

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.75	2.53	-0.22	0.103
Q2. Drink sports drinks or punch (1-4)	2.11	2.14	0.03	0.786
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.78	0.83	0.06	0.422
Q4. Drink regular soda (1-4)	2.00	2.00	0.00	1.000
Q5. Consumed milk in past week (0=N; 1=Y)	0.83	0.89	0.06	0.324
Q6. Fruit eaten per day (0-3)	1.38	1.26	-0.11	0.372
Q7. Vegetables eaten per day (0-3)	1.32	1.29	-0.03	0.782
Q8. Different kinds of fruit daily (1-4)	2.31	2.47	0.17	0.136
Q9. Different kinds of vegetable daily (1-4)	2.33	2.31	-0.03	0.768
Q10. Drink milk (1-4)	2.43	2.34	-0.09	0.521
Q11. Take skin off chicken (1-4)	2.19	2.28	0.08	0.556
Q12. Consumed fish in past week (0=N; 1=Y)	0.39	0.44	0.06	0.624
Q13. 2 or more vegetables at main meal (1-4)	2.31	2.26	-0.06	0.676
Q14. Read nutrition facts when shopping (1-4)	2.11	2.23	0.11	0.379
Q15. Run out of food before month end (1-4)	1.69	1.63	-0.06	0.676
Q16. Self-rating of eating habits (1-10)	6.23	6.31	0.09	0.816
Q17. Typical juice portion size (0-2)	0.98	0.95	-0.03	0.690
Q18. Ate whole grains yesterday (0=N; 1=Y)	0.62	0.76	0.14	0.103

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.67	1.75	0.07	0.397
Veggies (Q 7, 9,13) (Range 0-3)	1.33	1.29	-0.04	0.631
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.60	3.54	-0.06	0.648

Demographics			
Hispanic			
yes	17	**Age**	#DIV/0!
no	19	0-5	0
Race		5-17	0
American Indian or Alaskan Native	0	18-59	36
Asian	0	60+	0
Black or African American	4	**Gender**	
Native Hawaiian or Other Pacific Islander	0	Males	0
White	28	Females	36

Results FBC Cups Eng-Span DET Intervention Group Matched

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.49	2.60	0.11	0.151
Q2. Drink sports drinks or punch (1-4)	2.19	1.96	-0.23	0.007
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.76	0.79	0.02	0.567
Q4. Drink regular soda (1-4)	2.28	1.92	-0.36	0.000
Q5. Consumed milk in past week (0=N; 1=Y)	0.84	0.87	0.02	0.620
Q6. Fruit eaten per day (0-3)	1.19	1.42	0.23	0.004
Q7. Vegetables eaten per day (0-3)	1.12	1.31	0.19	0.022
Q8. Different kinds of fruit daily (1-4)	2.18	2.44	0.26	0.002
Q9. Different kinds of vegetable daily (1-4)	2.11	2.41	0.30	0.001
Q10. Drink milk (1-4)	2.36	2.54	0.18	0.096
Q11. Take skin off chicken (1-4)	2.42	2.46	0.05	0.692
Q12. Consumed fish in past week (0=N; 1=Y)	0.46	0.49	0.02	0.697
Q13. 2 or more vegetables at main meal (1-4)	2.12	2.39	0.27	0.011
Q14. Read nutrition facts when shopping (1-4)	1.77	2.22	0.45	0.000
Q15. Run out of food before month end (1-4)	1.78	1.60	-0.18	0.024
Q16. Self-rating of eating habits (1-10)	5.25	5.80	0.55	0.003
Q17. Typical juice portion size (0-2)	1.03	1.06	0.03	0.638
Q18. Ate whole grains yesterday (0=N; 1=Y)	0.64	0.70	0.05	0.349

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.54	1.72	0.18	0.005
Veggies (Q 7, 9,13) (Range 0-3)	1.11	1.37	0.25	0.001
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.14	3.60	0.46	0.001

Demographics			
Hispanic			
yes	50	**Age**	#DIV/0!
no	32	0-5	0
Race		5-17	2
American Indian or Alaskan Native	4	18-59	82
Asian	1	60+	0
Black or African American	6	**Gender**	
Native Hawaiian or Other Pacific Islander	1	Males	1
White	65	Females	83

Results FBC Cups Eng-Span DET Intervention Group Post v 1-month follow up

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.56	2.68	0.12	0.151
Q2. Drink sports drinks or punch (1-4)	2.01	2.10	0.08	0.400
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.79	0.86	0.07	0.167
Q4. Drink regular soda (1-4)	1.96	2.03	0.07	0.415
Q5. Consumed milk in past week (0=N; 1=Y)	0.88	0.89	0.01	0.708
Q6. Fruit eaten per day (0-3)	1.37	1.44	0.08	0.365
Q7. Vegetables eaten per day (0-3)	1.25	1.20	-0.05	0.545
Q8. Different kinds of fruit daily (1-4)	2.43	2.47	0.04	0.694
Q9. Different kinds of vegetable daily (1-4)	2.39	2.36	-0.03	0.760
Q10. Drink milk (1-4)	2.55	2.52	-0.03	0.775
Q11. Take skin off chicken (1-4)	2.34	2.45	0.11	0.349
Q12. Consumed fish in past week (0=N; 1=Y)	0.42	0.44	0.01	0.843
Q13. 2 or more vegetables at main meal (1-4)	2.34	2.24	-0.10	0.289
Q14. Read nutrition facts when shopping (1-4)	2.11	2.18	0.07	0.504
Q15. Run out of food before month end (1-4)	1.57	1.63	0.06	0.567
Q16. Self-rating of eating habits (1-10)	5.56	5.88	0.32	0.159
Q17. Typical juice portion size (0-2)	1.06	1.08	0.02	0.837
Q18. Ate whole grains yesterday (0=N; 1=Y)	0.67	0.74	0.07	0.209

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.73	1.84	0.11	0.144
Veggies (Q 7, 9,13) (Range 0-3)	1.33	1.26	-0.07	0.320
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.60	3.67	0.08	0.600

Demographics			
Hispanic			
yes	39	**Age**	#DIV/0!
no	32	0-5	0
Race		5-17	3
American Indian or Alaskan Native	6	18-59	77
Asian	2	60+	0
Black or African American	5	**Gender**	
Native Hawaiian or Other Pacific Islander	0	Males	1
White	53	Females	79

Results FBS Cups Eng-Span DET Group Pre V 1-month follow up

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.39	2.61	0.21	0.018
Q2. Drink sports drinks or punch (1-4)	2.17	2.11	-0.06	0.509
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.73	0.80	0.07	0.254
Q4. Drink regular soda (1-4)	2.28	2.04	-0.24	0.009

Q5. Consumed milk in past week (0=N; 1=Y)	0.77	0.86	0.08	0.109
Q6. Fruit eaten per day (0-3)	1.13	1.41	0.29	0.013
Q7. Vegetables eaten per day (0-3)	1.12	1.24	0.12	0.155
Q8. Different kinds of fruit daily (1-4)	2.14	2.39	0.24	0.018
Q9. Different kinds of vegetable daily (1-4)	2.10	2.29	0.19	0.124
Q10. Drink milk (1-4)	2.23	2.38	0.15	0.094
Q11. Take skin off chicken (1-4)	2.17	2.37	0.20	0.128
Q12. Consumed fish in past week (0=N; 1=Y)	0.48	0.42	-0.06	0.469
Q13. 2 or more vegetables at main meal (1-4)	2.10	2.25	0.15	0.146
Q14. Read nutrition facts when shopping (1-4)	1.76	2.10	0.34	0.002
Q15. Run out of food before month end (1-4)	1.77	1.69	-0.09	0.346
Q16. Self-rating of eating habits (1-10)	5.22	5.78	0.57	0.027
Q17. Typical juice portion size (0-2)	1.02	1.06	0.04	0.546
Q18. Ate whole grains yesterday (0=N; 1=Y)	0.59	0.67	0.09	0.133

Fruit & Vegetable Consumption (Range)	**Pre-Test Mean**	**Post-Test Mean**	**Difference**	**P-Value**
Fruit (Q 3, 6, 8) (Range 0-3)	1.49	1.73	0.24	0.019
Veggies (Q 7, 9,13) (Range 0-3)	1.10	1.24	0.14	0.070
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.05	3.47	0.43	0.012

Demographics			
Hispanic			
yes	37	**Age**	#DIV/0!
no	31	0-5	0
Race		5-17	3
American Indian or Alaskan Native	5	18-59	72
Asian	2	60+	0
Black or African American	6	**Gender**	
Native Hawaiian or Other Pacific Islander	0	Males	0
White	51	Females	84

Network-funded contractor:	Orange County Superintendent of Schools (Coalition) - 08-85143
Contract number:	08-85143
Information provided by :	Dareen Abdrabou
Telephone:	714-327-1083
Date:	7/19/2012
Email:	dabdrabou@ocde.us

Section 1

1. Project Description and Goals

Project Name:	Nutrition Education for Elementary Students
Target Population:	4th-6th grade students
Primary Curriculum Used:	MyPlate 10 Tips Lessons for Elementary Students
Secondary Curriculum Used:	Instant Recess & Jammin' Minutes

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Five -45 minute lessons were provided:

1. MyPlate and Setting SMART Goals- 35 minutes and Instant Recess PA- 10 minutes

2. Make Half your Plate Fruits & Veggies and Decision Making/Analyzing Influences- 35 minutes and Jammin' Minutes PA- 10 minutes

3. Make Half your Grains Whole and Food Label Reading/Accessing Valid Information- 35 minutes and Instant Recess PA- 10 minutes

4. Switch to Low Fat Milk/Lean Protein and Analyzing Influences- 35 minutes and Jammin' Minutes PA- 10 minutes

5. Rethink Your Drink & Label Reading- 35 minutes and Instant Recess PA- 10 minutes

In 1-2 paragraphs, please provide a description of the physical activity intervention:

At each of the 5 intervention lessons, students engaged in 10 minutes of physical activity. Resources used were Instant Recess and Jammin' Minutes.

In 1-2 paragraphs, please provide a description of standardized training:

No teacher trainings were required. Two Network-funded Nutrition Educators conducted all the interventions. Staff met several times before the start of the intervention to review materials, review lesson plans, etc. Staff co-presented almost all of the intervention lessons except for one lesson when two classrooms where scheduled at the same time.

In 1-2 paragraphs, please provide a description of standard administration of data

The same Network-funded staff member administered all surveys, pre and post, to both the intervention and control group in the same exact manner.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

The intervention was standard across all classrooms because of the consistency of staff providing the lesson as well as consistency in the lesson plan, materials, handouts, and activities utilized.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 166 grade students who participated in Nutrition Education for Elementary Students will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample
How many matched surveys?	166
How many sites?	1
How many classrooms?	6

b. Control:	Convenience Sample
How many matched surveys?	161
How many sites?	1
How many classrooms?	6

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	0

Were any other measures used?	N/A

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention			Control		
Pre-test:	2/7/2012	to	2/10/2012	4/3/2012	to	2/17/2012
Start of Intervention Date	2/7/2012			NA		
End of Intervention Date	5/31/2012			NA		
Post-test:	5/16/2012	to	5/31/2012	5/22/2012	to	6/6/2012
Follow-up:	n/a	to	n/a	n/a	to	n/a

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	Paper and pencil survey

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Data analysis of questions on the Youth Survey included paired samples t-tests within groups to determine if change from pre to post scores was statistically significant at $p < .05$. In addition, one-way ANOVA was conducted to test for statistical significance between Intervention and Control groups at $p<.05$.

Healthy Foods

Comparison of pre and post scores suggests a statistically significant decrease of milk and juice consumption for the Intervention group. For all other healthy food items (cheese, yogurt, cereal, vegetables, and fruit), slight increases of pre to post scores were observed among the Intervention group; however, differences are not statistically significant. One-way ANOVA was conducted to test for statistical significance between groups at $p<.05$ and statistical significance between Intervention and Control group was found for juice intake.

Although not statistically significant, based on pre to post mean scores, the Intervention group showed a slight increase in eating breakfast whereas Control group decreased their breakfast intake.

For overall consumption of ‘healthy foods’, the Intervention group decreased their total consumption whereas Control group increased their total consumption. However, it’s important to note that these differences are not statistically significant.

Less Healthy Foods

Comparison of pre and post scores suggests a statistically significant decrease of the following ‘less healthy’ food items for the Intervention group: French fries/chips, punch/sports drinks/fruit flavored drinks, and cookies/cakes/other sweets. Overall, participants in the Intervention group significantly decreased their intake of ‘less healthy’ foods.

There was a significant difference between Intervention and Control group in regards to consumption of French fries and chips.

Overall, pre to post mean scores showed participants in the Intervention group reporting a decrease in their total consumption of ‘less healthy’ foods whereas participants in the Control group increased their intake of such food items

Try New Foods

Although differences from pre to post survey mean scores were not statistically significant, results show that participants in the Intervention group slightly increased their willingness to try new fruits and vegetables whereas participants in the Control group decreased their willingness to try new fruits and vegetables.

Home Access of Fruits and Vegetables

Although not statistically significant, the change from pre to post mean scores show that participants in the Intervention group reported having a slight increase of fruits and vegetables being accessible at home whereas the Control group reported a reduction in accessibility of fruits and vegetables at home.

Perceived Parental Consumption

Although differences within groups were not statistically significant, change of pre to post mean

scores show that participants in the Intervention group reported a slight increase in perceived parental consumption of fruits and vegetables whereas the Control group reported a decrease in parental consumption.

Physical Activity

Re Results suggests a statistically significant increase of physical activity for the Intervention group for number of days in a week of moderate to vigorous physical activity for 60-minutes and number of days in a week of 30-minutes outdoor play.

HIGHLIGHTS

Participants in the Intervention group reported a significant decrease in their total intake of 'less healthy foods'— specifically a decrease in consumption of 1) punch/sports drinks/fruit-flavored drinks, 2) French fries/chips, and 3) cookies, cakes and other sweets. There was a significant difference between Intervention and Control group on consumption of the 'less healthy' food items- French fries and chips. A comparison of pre to post mean scores did reveal a significant increase on the number of days in a week the Intervention group participated in 60 minutes of moderate to vigorous play and 30 minutes of outdoor play. Although pre to post mean score differences were not statistically significant within groups, participants in the Intervention group did report slight increases in categories that Control group reported reductions or decreases in: 1) perceived parental consumption of fruits & vegetables, 2) home access of fruits and vegetables, and 3) willingness to try new fruits and vegetables.

Our most outstanding moments all revolve around how excited and engaged students were to receive the nutrition information and brag about their healthy behavior changes. In addition, several teachers expressed how much they loved the project and how the nutrition education shared with the students positively impacted they own health behaviors. Teachers expressed great overall interest in the Network program and its goals/mission.

The Network program has been active at the intervention site for years now and we feel that might have contributed to pre-test scores of healthy behaviors starting out at already high levels. The program has been promoting HOTM activities for years and has conducted many parent education efforts as well.

b. Description of how evaluation results will be used:

The evaluation results will be used to guide further program implementation, improve efforts to create a healthy classroom environment and strengthen parent education efforts.

7. Point of Contact

Name:	Dareen Abdrabou
Phone Number:	714-327-1083
Email Address:	dabdrabou@ocde.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

n/a

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

n/a

c. Did you use the Network Youth Survey or the Network High School Survey

Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

No.

FFY12 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Pasadena USD - 11-10222
Contract number:	11-10222
Information provided by :	Katia Ahmed
Telephone:	626-396-5763
Date:	7/11/2012
Email:	ahmed.katia@pusd.us

Section 1

1. Project Description and Goals

Project Name:	Implement a comprehensive nutrition program at each funded site to promote the 2010 Dietary Guidelines, increase fruit and vegetable consumption and physical activity among SNAP-Ed eligible school age children.
Target Population:	6th grade students-12 and 13 years old
Primary Curriculum Used:	Team Nutrition adapting MyPlate instead of MyPyramid
Secondary Curriculum Used:	N/A

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Our 6th grade students at three middle school sites participated in the *Network* Impact Outcome Evaluation for FFY 2012. Our students received a series of seven knowledge and skilled based nutrition education intervention starting October 2011 to April 2012. The intervention series comprised of lesson's topic such as food safety, MyPlate and the importance of physical activity, reading Nutrition Facts label, portion distortion, *ReThink Your Drink*, Salt and Fat. In addition to the seven lesson series the Network performed the following interventions and activities on a regular basis at the sites which included:

- Harvest of the Month produce was featured in the cafeteria four times each month for a total of 8 months. The classroom activities were implemented but not all teachers implanted the HOTM curriculum in its entirety.
- The *Network* worked closely with the PE teachers to deliver additional skilled based nutrition education and physical activity promotion.
- The *Network* created a comprehensive parent education workshop as evident by 28 parent champions conducting train the trainer workshops throughout school district and executing a successful Parent Summit in April 2012.
- Our middle school students were highly involved in the Student Nutrition Advisory Council (SNAC).
- Our SNAC and their peers were trained on *ReThink Your Drink* curriculum and hold monthly *ReThink Your Drink* booth to demonstrate the importance of limiting sugary beverages and drinking water.
- Our students participated in the Governor's Challenge and one our middle school was awarded the top prize in 2010-2011 school year.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

In addition to the *Network* component of physical activity in MyPlate and *ReThink Your Drink* lessons, all our students at the middle school receive Comprehensive California Standard Based Physical Education Program. Students participated in the Governor's Challenge on a yearly basis. Throughout the years the *Network* partnered with our PE teachers at the sites to deliver *Network* approved nutrition education lessons and physical activity promotion prior to the installation of the Comprehensive Physical Education Program.

In 1-2 paragraphs, please provide a description of standardized education training:

The *Network* adapted nutrition intervention education lessons from *Team Nutrition*, 2010 Dietary Guidelines and *ReThink Your Drink* campaign.
The seven lesson consist of:

- Lesson 1 (Food Safety and Sanitation) - Students learn the importance of a clean and sanitized work area; define cross contamination, proper handwashing, and fruit and vegetable washing.
- Lesson 2 (MyPlate) - Introduce the My Plate, make half your plate fruits and vegetables, switch to skim or 1% milk, make at least half your grains whole, and vary your protein choices.

- Lesson 3 (Portion Distortion) – Explain what a serving for each food group on MyPlate is and give examples of how to prevent portion distortion and/or avoid eating portions that are larger than their bodies need.
- Lesson 4 (Nutrition Fact Label) - Understand key components of a food label and be able to use the food label to help make healthy food choices.
- Lesson 5 (*ReThink Your Drink*) - discuss healthier beverage choices and water is a better hydration choice.
- Lesson 6 (Sodium) - Discuss the Daily Recommended Allowance of Sodium, identify sodium content, and identify foods high in sodium.
- Lesson 7 (Fat) - Identify the differences between saturated, trans, and unsaturated fat and choose lower fat options by using the Nutrition Facts Label.

In 1-2 paragraphs, please provide a description of standard administration of data

Before administering the impact pre-test and seven series lesson each teacher received 30-45 minute training. Teacher training consisted of reviewing the seven lesson content, availability of resources, modeling and technical assistance availability with the *Network* staff for delivering each lesson plan, and summary of Impact and Outcome Evaluation and protocol. After the training and administration of the pre-test surveys the educator, in some cases the *Network* staff and or the teacher delivered the lesson content to the students. During the IOE interventions all classes received the same standardized lessons delivered by the same educator (teacher and/or *Network* staff). The students were instructed to use the 4 middle digit numbers in their student id. All students were given paper survey and pencil. All students were given the *Network* survey protocols. They all were given assurance that the surveys and its results were anonymous.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All our students received a seven series lesson each lasting a total of forty five minutes. The lessons were delivered by same educator (teacher and /or *Network* staff). All lessons were delivered on a sequential bi-monthly basis. No intervention started before teacher training was conducted and pre-test surveys were administered.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 6th grade students who participated in a comprehensive nutrition program at each funded site to promote the 2010 Dietary Guidelines will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used? Pre-test and Post-test with interventions of different intensities without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	200
How many sites?	3
How many classrooms?	10

b. Control: None

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	*Network* Youth Survey
Goal 2/Objective 2	N/A

Were any other measures used? No

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	7

	Intervention			Control		
Pre-test:	10/14/2011	to	1/10/2012	NA	to	NA
Start of Intervention Date	10/15/2011			NA		
End of Intervention Date	4/26/2012			NA		
Post-test:	3/13/2012	to	4/27/2012	NA	to	NA
Follow-up:	NA	to	NA	NA	to	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Intervention groups were administered pre-test surveys before the beginning of the intervention and the post-test surveys were administered after the intervention was completed. There was no control/ comparison group participating.

The intervention group demonstrated increases between the pre-test and post-test in consumption of fruit and vegetable, no juice; consumption of fruit, vegetable and juice; and eating healthy food; however, these increases were not statistically significant.

The group did not demonstrate any significant scoring changes from pre-test to post-test in trying new fruits and vegetables. This may be attributed to no availability of new produce in the cafeteria or at home. The students did not report significant changes in their perception of their families' consumption of fruits and vegetables, especially parents.

In the healthy dietary behavior category, students showed a statistically significant decrease in eating breakfast and statistical significant increase in cheese consumption. This may be attributed to a focus campaign prior to the testing promoting eating breakfast and grab and go breakfast during the week of testing.

Students scored higher in the pre-test when it came to less healthier dietary behavior, with the drop from pre-test to post-test primarily driven by the statistically significant decrease in soda and soft drink consumption. Such an impact is definitely attributable to the inclusion of RYD interventions at the school sites.

The results showed great improvement in students limiting their consumption of sugary beverages and increases in physical activity. The reading of the Nutrition Facts label lesson has really empowered the students to make better food choices and make them aware of what they are eating or drinking. Teachers noticed that some students were starting to read Nutrition Facts Label to find the amount of sugar, fat or salt in their food. Students would come up to the educator in hallways, after class and/or during lunch to discuss how the *ReThink Your Drink* lesson helped them in improving their beverage selection. Many students voiced how they were not aware of the amount of sugar that was in the sport and energy drinks. They also attributed better hydration to drinking water.

Once a month, the *Network* sponsored a *ReThink Your Drink* booth at all the school sites. While conducting the lesson at the booth, we observed the students from our intervention group involved in explaining to their peers the content of *Rethink Your Drink* lesson. They showed them how to convert the sugar from grams to teaspoons. Encouraging conversation amongst them on how to read the Nutrition Facts label and one by one calculating the sugar content of the beverages. As an educator it's very uplifting to see how the 7 week comprehensive nutrition education lessons did not only benefit the students in the intervention group but also reached other students through peer to peer interaction. In many occasion, we heard from the parents how their children have made simple changes by not choosing a sweetened beverage while eating out or not purchasing sugary beverages for hydration. The parents stated," they are drinking Water!"

The group did demonstrate statistical significant relating to physical activity. This is attributed to a comprehensive physical education program implemented at the site and the Network partnership with the PE teachers during other interventions.

b. Description of how evaluation results will be used:

Based on the above results we are planning to implement the following: 1. Provide additional opportunity for the Harvest of the Month training to our middle school teacher, 2. Integrate additional component of fruits and vegetables consumption into the lessons, 3. Make skilled based hands on cooking demos available during the interventions, 4. Continue addressing *Rethink your Drink* campaign through the lessons and other venues, 5. Recruit additional 6th grade classroom teachers to increase sample size by N=100, 6. Provide additional opportunity for teacher training relating to administer IOE classroom interventions.

7. Point of Contact

Name:	Katia Ahmed
Phone Number:	626-396-5763
Email Address:	ahmed.katia@pusd.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. None

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* None

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.68	0.89	0.22	0.004
4. Milk	1.25	1.22	-0.03	0.763
5. Yogurt or cheese	0.34	0.30	-0.04	0.411
6. Cereal	0.65	0.70	0.05	0.470
8. Vegetables	1.63	1.66	0.03	0.800
9. Fruit	1.72	1.91	0.19	0.141
10. Juice	1.37	1.51	0.14	0.260
11. Water	3.35	3.41	0.05	0.621
15. Breakfast	0.75	0.66	-0.10	0.009
Total: fruit & vegetable (no juice)	3.35	3.56	0.22	0.258
Total: fruit, vegetable, juice	4.71	5.07	0.36	0.143
Total: healthy foods (Q3-6, 8-11)	10.97	11.58	0.61	0.093
Less Healthy Dietary Behaviors				
7. French fries or chips	0.78	0.77	-0.01	0.941
12. Punch, sports drinks, fruit-flavored drinks	0.78	0.83	0.04	0.580
13. Soda or soft drinks	0.67	0.51	-0.16	0.008
14. Cookies, cakes, other sweets	0.66	0.60	-0.07	0.392
Total: less healthy foods (Q7, 12-14)	2.88	2.70	-0.19	0.225
Trying New Foods	2.41	2.40	-0.02	0.841
16. Trying new fruits	1.35	1.37	0.01	0.751
17. Trying new vegetables	1.06	1.03	-0.03	0.542
Home Access	3.41	3.50	0.09	0.164
18. Fruits to eat at home	1.74	1.79	0.04	0.286
19. Vegetables to eat at home	1.67	1.71	0.04	0.364
Perceived Parental Consumption	4.49	4.45	-0.03	0.781
20. How often parents eat fruit	2.14	2.13	-0.02	0.842
21. How often parents eat vegetables	2.31	2.31	-0.01	0.918
Physical Activity	5.22	6.52	1.30	0.000
22. Days of 60 minutes moderate/vigorous	2.61	3.32	0.72	0.000
23. Days of 30 minutes outdoor play	2.61	3.20	0.59	0.001

Demographics

Average Age	11.3
Gender	
Males	107
Females	93

Network-funded contractor:	Riverside, County of, Community Health Agency - 11-10212
Contract number:	11-10212
Information provided by :	Nancy Allende, Jennifer Garcia and Lenea Pollett
Telephone:	(951) 358-5889
Date:	7/11/2012
Email:	nallende@rivcocha.org, JeGarcia@rivcocha.org

Section 1

1. Project Description and Goals

Project Name:	Riverside County Community Health Agency: Palm Springs USD
Target Population:	4th and 5th grade students
Primary Curriculum Used:	PowerPlay!
Secondary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The Power Plar School Idea and Resource Kit was utilized and implemented. In addition, the Harvest of the Month (HOTM) educator newsletters were distributed and implemented by the teachers. HOTM taste tests occurred via the 'Chef in the Classroom" program or taste tests at assemblies.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

The focus on physical activity significantly increased in the intervention schools this year. Structured recess and lunch was added where the students have an opportunity to participate in SPARK programs. Also, every student received an extra phsyical education class each week from a PE Specialist. This was additional time outside of normal PE time.

In 1-2 paragraphs, please provide a description of standardized training:

The teachers attended "Lunch and Learn" programs where they had attended a didactic nutrition education presentation and also sampled HOTM produce samples made from the HOTM recipes.

In 1-2 paragraphs, please provide a description of standard administration of data

Students were surveyed both pre and post in the classroom setting. The teacher in addition to one nutritionist administered the surveys. These surveys were then kept in a locked cabinet at the School Nutrition office at PSUSD until they were picked up by the county. A different person then completed the data entry on both the pre and post surveys from both groups (control and intervention) groups.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

0

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 249 grade students who participated in Riverside County Community Health Agency: Palm Springs USD will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used?	Control versus Intervention

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Schools

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample	
How many matched surveys?		101
How many sites?		2
How many classrooms?		7

b. Control:	Convenience Sample	
How many matched surveys?		50
How many sites?		1
How many classrooms?		4

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Increase fruit and vegetable consumption.	
Goal 2/Objective 2	0	

Were any other measures used?	Improve produce preferences.

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	10

	Intervention			Control		
Pre-test:	10/3/2011	to	10/31/2011	10/3/2011	to	10/31/2011
Start of Intervention Date	11/1/2011			NA		
End of Intervention Date	6/15/2012			NA		
Post-test:	6/18/2012	to	6/26/2012	5/30/2012	to	6/6/2012
Follow-up:		to			to	

c. Describe how the data were collected.

Intervention:	In classroom survey	
Comparison/control:	In classroom survey	

d. How were the surveys administered?

Paper & pencil in classroom, read questions out loud

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

The intervention students significantly increased healthy food consumption, fruit, juice, produce category. The intervention students significantly increased physical activity, both outdoor play and vigorous activity. In addition to the intervention group, significantly increased vegetable consumption, green beans, peaches, tomatoes and zucchini. Also, the increased the preference for watermelon.

Students were excited to learn more about produce and enjoy nutrition and the cooking lessons. The teachers now use nutrition as a reward system.

b. Description of how evaluation results will be used:

The results will be used to enhance the intervention next year.

7. Point of Contact

Name:	Nancy Allende, Jennifer Garcia and Lenea Pollett
Phone Number:	(951) 358-5889/(951)358-5893
Email Address:	nallende@rivcocha.org, JeGarcia@rivcocha.org

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

n/a

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

n/a

c. Did you use the Network Youth Survey or the Network High School Survey

Yes

d. Optional Surveys

x	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
x	Outcome Expectations for Fruits and Vegetables (Baranowski)	
x	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

None

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

The cooking clubs are used as a reward for good behavior by the teachers.

Network-funded contractor:	San Bernardino Superintendent of Schools - 10-10065
Contract number:	10-10065
Information provided by :	Dr. Robert LaChausse
Telephone:	909-537-7229
Date:	7/10/2012
Email:	rlachaus@csusb.edu

Section 1

1. Project Description and Goals

Project Name:	Power Play
Target Population:	4th and 5th grade students
Primary Curriculum Used:	Children’s Power Play! School Idea and Resource Kits
Secondary Curriculum Used:	Children’s Power Play! Power Up for Learning

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Children's Power Play was implemented at five elementary schools in San Bernardino City Unified School District with 4th and 5th grade students. SBCSS project staff modified the Power Play curriculum to include a mix of ten Power Play nutrition lesson activities plus two Power Up for Learning physical activities into the 6 one-hour sessions including nutritional knowledge, skills, and confidence to develop lifelong healthy habits related to nutrition and physical activity.

For Grade 4- WEEK 1: Activity 1: Power Survey & Power Up for Learning Energizer 1: Wake Up, Warm Up; Week 2: Activity 2: Power Search and Activity 3: How much do I need?; Week 3: Activity 4: Power Choices and Activity 9: What's on a Label? & PUFL Act 5: More or Less? (Also, introduction to journaling in Activity 5); Week 4: Finish Activity 5: Fruit, Vegetable, and Power Play! Journal and Activity 6: My Power Plan; Week 5: Activity 8: The Power of Advertising; Week 6: Activity 7: Rate the taste and Activity 10: Healthier Please.

For Grade 5- WEEK 1: Activity 1: Power Survey & PUFL Energizer 1: Wake Up, Warm Up; WEEK 2: Activity 2 Power Scramble and Activity 3 How much do I need?; Week 3: Activity 4: Making Better Choices and Activity 8: What's on a label? & PUFL Act 5: More or Less? (Also, introduction to journaling in Activity 5); Week 4: Finish Activity 5: Fruit, Vegetable and Power Play! Challenge and Activity 9: Plan a Power Meal; Week 5: Activity 7: Power of Advertising ; Week 6: Activity 6: You Be the Food Critic! And Activity 10: I Have the Power.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

There were several specific physical activity topics or activities included in the 6 sessions including Wake UP, Warm Up, Power Up, How much do I need?, and Get the Power. Additionally, during several of the sessions, students participated in instructor lead, stretching, dancing or other body movement activities that are not included in the Power Play curriculum lessons.

In 1-2 paragraphs, please provide a description of standardized training:

SBCSS project staff completed a 2 hour training session on this modified implementation of the Power Play Curriculum on February, 1, 2012.

In 1-2 paragraphs, please provide a description of standard administration of data

Approximately 420 4th and 5th grade students from 5 elementary schools in San Bernardino City Unified School District participated in a randomized control trial (RCT). Parental consent to participate in the study was obtained via a take home letter provided by the researcher and distributed by the classroom teacher. After consent was obtained, students were randomly assigned to either an intervention group or control group (i.e. no intervention). Students assigned to the intervention group participated in 6 1- hour sessions over a two month period while students in the comparison group completed the normal classroom lesson for that day. School sites agreed not to implement other nutrition education lessons during the study period (February through June). Students in both intervention and control groups completed a self-administered, paper and pencil pretest survey during the first week of February. Students completed the post test survey approximately 30 days after the last lesson had been implemented at their respective school site between May 1 and May 16. Standardized briefing procedures were included at each data collection episode. The researcher also collected pre and post measures of actual eating behaviors and food choices at both pretest and posttest. SBCSS nutrition staff completed lessons logs documenting the extent to which fidelity to each lesson component was completed, student engagement, and lesson quality. Additionally, each staff member was observed teaching at least one session by the researcher using the lesson observation form to examine facilitator quality, student engagement, dosage, and curriculum fidelity. The teaching observations were conducted randomly. The researcher (project evaluator) and his staff collected all student surveys. Students in both the intervention group and control group completed each survey (pre and Post) on the same day and time.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

In terms of intervention standardization, the researcher found that implementation of the modified curriculum varied both in dosage and fidelity. For example, the average number of Power Play activities implementing for Grade 4 students was 65%. The average number of fully completed activities for Grade 5 across all school sites was 81%. Quality of instruction,

measured on a scale 0=low to 10= high, was 7.20 for Grade 4 students and 8.80 for Grade 5 students.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of at least 150 4th and 5th grade students who participated in Power Play will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used?	Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Individual

4. Describe how assignment to these groups was carried out:

a. Intervention: Random Sample

How many matched surveys?	195
How many sites?	5
How many classrooms?	23

b. Control: Random Sample

How many matched surveys?	181
How many sites?	5
How many classrooms?	23

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	0

Were any other measures used?	Asking Behaviors (Baranowski et al., 2007), Nutrition Knowledge Scale (Kelder et al., 2005), Self-Efficacy: Asking Behaviors Scale (Baranowski et al., 2007), Self-Efficacy: Eat Healthy Foods Scale (Baranowski et al., 2007), FJV availability scale (Baranowski, 2005)

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	6

	Intervention	Control
Pre-test:	1/31/2012 to 2/7/2012	2/7/2012 to 1/31/2012
Start of Intervention Date	2/9/2012	NA
End of Intervention Date	4/11/2012	NA
Post-test:	5/11/2012 to 5/16/2012	5/11/2012 to 5/16/2012
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	Paper and pencil survey	

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

It was expected that relative to the control group, participants randomly assigned to the intervention group would demonstrate improved scores on the study variables (e.g., self-efficacy to ask fruits and vegetables, knowledge of healthy foods, fruit consumption, etc.) A repeated measures analysis of variance (ANOVA) was used to examine the simple effect of time and the time by group interaction. Prior to conducting any analyses, variables were tested to ensure that the assumptions of the statistical techniques to be utilized were met. This involved computing frequency distributions, histograms, and measure of skewness. These variables did not meet assumptions and were transformed using natural log transformations. After analysis, each transformed variable was returned to its normal state for interpretation. Three hundred and eighty-three matched surveys were included in the analysis (intervention= 195, control= 188).

Physical Activity

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the frequency of physical activity. The main effect of time, $F(1, 355) = 2.98$, $p = .05$ was significant and the time by group interaction, $F(1, 355) = 4.21$, $p = .04$ was significant. This indicates that the number of days exercised increased from pretest (m= 1.80) to posttest (m=2.18) for those students in the intervention group ($F(1, 355)= 7.25$, $p= .01$). The program increased the number of days of physical activity per week.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the number of days played outside in the past 7 days. The main effect of time, $F(1, 354) = 9.92$, $p = .01$ was statistically significant and the time by group interaction, $F(1, 354) = 2.46$, $p = .11$ was not significant. This indicates that there was no change in the number of days played outside from pretest (m=1.86) to posttest (m= 1.71) for the intervention group and but a decrease in the number of days played outside from pretest (m=1.97) to posttest (m= 1.49) for the control group. Therefore, the program seems to have an impact. Specifically, the program seemed dampen the effect of time that would otherwise lead to a reduction of the number of days played per week.

FJV Behaviors

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the frequency of consuming vegetables the previous day. The main effect of time, $F(1, 366) = 1.15$, $p = .28$ was not significant and the time by group interaction, $F(1, 366) = .07$, $p = .79$ was not significant. The current data indicate that the program did not impact students' vegetable consumption.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the frequency of consuming fruits the previous day. The main effect of time, $F(1, 375) = 9.94$, $p = .01$ was significant and the time by group interaction, $F(1, 375) = .16$, $p = .68$ was not significant. The current data indicate that there was an increase in fruit consumption for both the intervention and control groups. Therefore, the program did not impact students' fruit consumption.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the frequency of fruit juice consumption on the previous day. The main effect of time, $F(1, 366) = 6.43$, $p = .01$ was statistically significant and the time by group interaction, $F(1, 366) = .11$, $p = .73$ was not significant. The current data indicate that there was an increase in fruit juice consumption for both the intervention and control groups.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and

control) and time (pretest and posttest) on the frequency of milk consumption on the previous day. The main effect of time, $F(1, 365) = 3.47$, $p = .07$ was not significant and the time by group interaction, $F(1, 365) = .290$, $p = .59$ was not significant. The current data indicate that the program did not change the frequency of milk consumption among those students participating in intervention.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the frequency of soda consumption on the previous day. The main effect of time, $F(1, 365) = .525$, $p = .46$ was not significant and the time by group interaction, $F(1, 365) = 1.94$, $p = .16$ was not significant. The current data indicate that the program did not change the frequency of soda consumption among those students participating in the intervention.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the frequency of water consumption on the previous day. The main effect of time, $F(1, 364) = 13.92$, $p = .001$ was significant and the time by group interaction, $F(1, 364) = 3.71$, $p = .05$ was significant. The current data indicate that there was an increase in the number of times students consumed water from pretest (m= 3.07) to posttest (m=3.57) for those students in the control group but no change for students in the intervention group.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the frequency of consuming sweets including sweet rolls, doughnuts, cookies, brownies, pie, or cake. The main effect of time, $F(1, 360) = 2.30$, $p = .13$ was not statistically significant and the time by group interaction, $F(1, 360) = 1.48$, $p = .22$ was not significant. This indicates that the program did not affect the number of times students eat sweets.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on the frequency of consuming French fries or chips on the previous day. The main effect of time, $F(1, 367) = .388$, $p = .53$ was not statistically significant and the time by group interaction, $F(1, 367) = .003$, $p = .95$ was significant. The current data indicate that the program did not change the frequency of consuming French fries or chips among those students participating in the intervention.

Psycho-Social Factors

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on knowledge regarding healthy foods. The main effect of time, $F(1, 339) = .07$, $p = .78$ was not significant and the time by group interaction, $F(1, 339) = .45$, $p = .50$ was not significant. The current data indicate that the program did not change the nutritional knowledge of students participating in the intervention.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on self-efficacy to ask parents for fruits and vegetables. The main effect of time, $F(1, 310) = 1.12$, $p = .29$ was not significant and the time by group interaction, $F(1, 310) = 2.75$, $p = .09$ was not significant. The current data indicate that the program did not impact students' self-efficacy to ask parents for fruits and vegetables.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on self-efficacy to eat fruits and vegetables. The main effect of time, $F(1, 295) = 1.49$, $p = .22$ was not significant and the time by group interaction, $F(1, 295) = 1.84$, $p = .17$ was not significant. The current data indicate that the program did not change students' self-efficacy to eat fruits and vegetables.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and control) and time (pretest and posttest) on self-efficacy to prepare fruits and vegetables. The main effect of time, $F(1, 312) = .635$, $p = .42$ was not significant and the time by group interaction, $F(1, 312) = .117$, $p = .73$ was not significant. The current data indicate that the program did not change the self-efficacy to prepare fruits and vegetables.

A 2 × 2 repeated measures ANOVA was calculated to examine the effects of group (intervention and

control) and time (pretest and posttest) on the frequency of asking for fruits and vegetables at home. The main effect of time, $F(1, 323) = 14.50$, $p = .001$ was significant and the time by group interaction, $F(1, 323) = .04$, $p = .83$ was not significant. The current data indicate that the frequency of asking for fruits and vegetables at home for increased for students in both the intervention group (m= 5.42 to m=5.96) and control group (m=5.45 to m=5.94).

Bivariate correlations and simple linear regressions were used to examine the relationship between fruit and vegetable consumption and psycho-social factors. These analyses revealed that fruit and vegetable consumption are positively associated with self-efficacy to eat fruits and vegetables (r=.37, p =.01), self-efficacy to ask for fruits and vegetables (r= .38, p= .01), and the frequency of asking for fruits and vegetables at home (r= .33, p= .01) but not related to knowledge regarding healthy foods (r= -.09, p= .37).

b. Description of how evaluation results will be used:

A report of findings will be given to SBCSS program staff. The evaluator will conduct a presentation of findings with program staff and stakeholders. Presentations will be submitted to the Network conference and other relevant professional association conferences by the evaluator (i.e. AEA, SOPHE, etc.)

7. Point of Contact

Name:	Dr. Robert LaChausse
Phone Number:	909-537-7229
Email Address:	rlachaus@csusb.edu

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.	0
b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*	0
c. Did you use the Network Youth Survey or the Network High School Survey	Yes

d. Optional Surveys

Food Preferences Survey	
Knowledge surveys various available; identify scale(s) from Compendium:	Nutrition Knowledge Scale (Kelder et al., 2005),
Norms surveys for children various available; identify scale(s) from Compendium:	0
Outcome Expectations for Fruits and Vegetables (Reynolds)	
Outcome Expectations for Fruits and Vegetables (Baranowski)	
Physical Activity Preferences for Children and	

Adults	
Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	Self-Efficacy: Asking Behaviors Scale (Baranowski et al., 2007), Self-Efficacy: Eat Healthy Foods Scale (Baranowski et al., 2007)

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

Asking Behaviors (Baranowski et al., 2007) Nutrition Knowledge Scale (Kelder et al., 2005), Self-Efficacy: Asking Behaviors Scale (Baranowski et al., 2007), Self-Efficacy: Eat Healthy Foods Scale (Baranowski et al., 2007), FJV availability scale (Baranowski, 2005)

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

Food Party Protocol. Students are asked to choose a snack after she/he has competed the student survey. Students are presented with 4 snacks: Oreo cookies, baby carrots, sliced apples, and tortilla chips (based on the researcher's previous focus groups with this population). Students are given instructions and get their "snack". Once the student is at the end of the line, the Research Assistant (RA) will take a photograph of the student's plate. An index card containing a unique identification number, classroom code, and teacher code is placed next to the plate and a photograph is taken. At no time will any student's name or other identifying information be associated with their food plate photograph. Additionally, at no time will the face of the student be in any photograph. The amount in grams and calories are recorded independently by three raters. We calculate inter-rater agreement using existing methods for analyzing inter-rater. This data is collected both at pretest and posttest.

The Fidelity Monitoring Log is a self-report measure by SBCSS nutrition staff The Fidelity Monitoring Log asks facilitators to: 1) report the extent to which each part of the lesson or activity within each lesson was completed, 2) specifically describe any changes, additions or adaptations to each the lessons, 3) report the addition of any information, materials, pedagogical techniques, handouts, etc. to the lesson, 4) rate the extent to which students were engaged in the lesson (on a scale of 1 to 5), 5) report the amount (percent) of time spent using various pedagogical techniques (didactic, role play, simulation, etc.), 6) report which specific curriculum materials (i.e. overheads, worksheets, index cards, etc.) were used that lesson, and 7) report the date and time the lesson occurred. The facilitators were instructed to complete the log at the end of each class period.

The researcher used the Lesson Observation Form which assesses 1) quality of delivery -assessed as the percentage of the class period spent using teaching techniques (lecture, classroom discussion, skill demonstration, and role play, 2) the extent to which each part of the lesson or activity within each lesson was completed, 3) specifically describe any changes or adaptations to each the lessons (both material and pedagogical), 4) report the addition of any information, materials, pedagogical techniques, handouts, etc. to the lesson, and 5) the amount of time spent on classroom management (i.e. dealing with student behavior). Additionally, the same items from the Fidelity Monitoring Log will be included to examine specific lesson components from the Power Play curriculum.

Means and Standard Deviations by Group and Time

Item or Scale (scoring)	Intervention Group (n=195)		Comparison Group (n= 181)		p value for time by group interaction
	M	SD	M	SD	
Fruit Consumption (0-5)					
Pretest	1.85	1.56	1.77	1.40	.68
Posttest	2.08	1.71	2.07	1.63	
Vegetable Consumption (0-5)					
Pretest	1.67	1.72	1.74	1.56	.79
Posttest	1.75	1.76	1.87	1.57	
Milk Consumption (0-3)					
Pretest	1.40	1.00	1.29	0.96	.59
Posttest	1.53	1.01	1.37	0.91	
Soda Consumption (0-3)					
Pretest	0.75	0.85	0.87	0.99	.16
Posttest	0.78	0.88	0.75	0.91	
Fruit Juice Consumption (0-5)					
Pretest	1.27	1.32	1.16	1.25	.11
Posttest	1.45	1.43	1.40	1.42	
Water Consumption (0-5)					
Pretest	3.11	1.60	3.07	1.65	.001[2]
Posttest	3.27	1.70	3.57	1.58	
Sweets Consumption (0-3)					
Pretest	0.59	0.80	0.76	0.90	.22
Posttest	0.57	0.80	0.61	0.85	
French Fries or Chips Consumption (0-3)					
Pretest	0.72	0.80	0.75	0.84	.95
Posttest	0.68	0.79	0.71	0.89	
Nutrition Knowledge (0=low to 9=high)					
Pretest	8.41	1.45	8.57	1.15	.50
Posttest	8.38	1.71	8.64	1.13	
FJV Asking Behaviors (3-9)					
Pretest	5.42	2.35	5.47	2.39	.83
Posttest	5.96	2.17	5.95	2.43	
SE Prepare Healthy Foods (3-9)					
Pretest	7.18	1.72	7.39	1.63	.73
Posttest	7.29	1.66	7.43	1.51	
SE FV Eating Behaviors (10-30)					

Pretest	23.86	4.12	24.63	4.28	.17
Posttest	24.51	4.27	24.60	4.34	
SE Asking (0-9)					
Pretest	6.12	1.68	6.72	1.67	.09
Posttest	6.87	1.69	6.66	1.73	
Physical Activity (0-7 days)					
Pretest	1.80	1.70	2.10	1.95	.04[1]
Posttest	2.18	2.10	2.07	1.96	
Days Played (0-7 days)					
Pretest	1.86	1.96	1.94	1.98	.11
Posttest	1.71	1.72	1.49	1.51	

Notes:[1]In favor of Intervention group; [2] In favor of Comparison group

Network-funded contractor:	San Francisco USD - 11-10204
Contract number:	11-10204
Information provided by :	Mark Elkin
Telephone:	(415) 242-2615
Date:	6/22/2012
Email:	elkinm@sfusd.edu

Section 1

1. Project Description and Goals

Project Name:	SFUSD Nutrition Education Project
Target Population:	K-12
Primary Curriculum Used:	Approved Lessons
Secondary Curriculum Used:	0.E+00

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The six scripted lessons which comprise the curriculum for the Student Impact includes, fruit and vegetable tastings, in-class journal activities and take home "family homework". Lesson topics include label reading, decision-making, nutrients, fiber, decreasing the consumption of sugar sweetened beverages and the importance of eating a healthy breakfast. Each lesson includes a tasting of three fruits or vegetables associated with the lesson content.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

0

In 1-2 paragraphs, please provide a description of standardized training:

Impact Curriculum was distributed to Site Nutrition Coordinators during Job Alike Meetings, where each lesson was reviewed and practiced. Questions about implementation were addressed in these group meetings.

In 1-2 paragraphs, please provide a description of standard administration of data

ETR developed and distributed Survey Administration Guidelines to each Site Nutrition Coordinator. Questions about proper administration were addressed in Jobalike meetings and via email with evaluator.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Each lesson was highly structure and scripted. A random selection of lessons were observed to ensure standardization and fidelity to curriculum design.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of at least 100 4th - 5th grade students who participated in SFUSD Nutrition Education Project Six-Lesson Curriculum will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention:	Convenience Sample
How many matched surveys?	186
How many sites?	9
How many classrooms?	9

b. Control:	
How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	0

Were any other measures used?	(1) Fruit & Vegetables Preferences Survey (SFUSD) (2) Parent Survey "Family Homework Feedback Forms"

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention			Control		
Pre-test:	1/12/2012	to	2/7/2012	1/0/1900	to	1/0/1900
Start of Intervention Date	01/12/2012 - 02/07/2012			NA		
End of Intervention Date	3/22/2012			NA		
Post-test:	2/28/2012	to	3/22/2012	1/0/1900	to	1/0/1900
Follow-up:	1/0/1900	to	1/0/1900	1/0/1900	to	1/0/1900

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...self-administered with individual guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Individual Items: Significant Differences

Of the 55 pairs analyzed, 17 showed statistically-significant differences between pretest and posttest. Unfortunately, three of those 17 showed undesirable differences [i.e., At home, do you have vegetables to eat?; Below, check the days you exercised or took part in physical activity that made your heart beat fast and made you breathe hard for at least 60 minutes? (Saturday); and Below, check the days you play outdoors for at least 30 minutes? (Saturday).] Each of these indicators showed small but significant decreases in matched pair t-tests.

On the positive side, 13 fruit and vegetable preference items showed significant improvements between pretest and posttest, indicating the effectiveness of the intervention on increasing students' appreciation and enjoyment of fruits and vegetables.

Summated Scales: Significant Differences.

Eight summated scales were calculated to measure a range of concepts (using definitions and SPSS syntax shown below). Of the eight scale analyses, 4 showed a significant difference between pretest and posttest. Unfortunately, the availability of fruits and vegetables at home decreased significantly between pre and post. However, three scales showed significant improvement – the fruit and vegetable preferences scale; a decrease in the consumption of unhealthy foods (e.g., fries, pastries, and punch); and an increase in student's ratings of their parents' consumption of fruits and vegetables.

Parent / Caregiver Family Homework Feedback Survey Results (Posttest Only)

We also administered a survey to parents / caregivers of students participating in the IOE. Only 53 surveys were returned from 237 families, so the results are not representative of all families. Data show that 30% of parents / caregivers completed all 6 family homework exercises, and 17% did not complete any of the exercises. Most parents /caregivers who did not complete any of the exercises reported they "didn't have enough time" or that their children "do their homework at an afterschool program." Only one parent / caregiver reported making the fruit salad with Jicama recipe. Families who did do the exercises together reported positive ratings of the experiences and their impact. Below are verbatim responses:

What did you and your child learn by doing the family homework activities?

1. About health, eating correct foods, snack.

2. Eating right is always the right thing.

3. Fast food looks better but it's not as good as fruit and veggies.

4. Healthy eating, reading labels and choosing the right food to eat.

5. How to be healthy

6. How to make better decisions when choosing foods to eat for breakfast and snacks.

7. How to make healthy decisions about the food we eat.

8. I didn't know these were to be interactive. It tends to be a lot of homework & this was overlooked by me. But I love the concept.

9. I learn that good things have that too.

10. I learned that a soda has a lot of sugar.

11. I learned that there are good fat and bad fat.

12. I learned that we need to eat healthy snacks and food.

13. It helped us start a dialog about eating healthy.

14. Learn to be healthy

15. Learned about nutrition facts and how to understand what is a better choice.

16. Moderation - that some healthy choices included treats as well.

17. My child learn to drink more water.

18. My child learned how things taste, how long we should exercise, and other things.

19. My son learned a little bit about new foods and the differences between some kinds of foods.

20. She learned more about nutritional value of foods and drinks.

21. That a person can still eat sweet things in moderation-especially the donut in the fiber breakfast! That was fun.

22. That there are healthier alternatives.

23. That we can have fun together & eat.

24. That we have to drink or eat healthy.

25. To be honest nothing! Because we live by all these healthy choice rules.

26. We learn about heath and vitamins.

27. We learn about keeping healthy.

28. We learn that there are a lot of fruit we never tried.

29. We learned about health and making better choices.

30. We learned all about healthy decision.

31. We learned how to be healthy.

32. We learned how to make the best decision for a healthy snack.

33. We learned new recipes.

34. We learned that to make healthy choices and not to eat junk food.

35. We learned the importance of healthy foods, and it is very important to read in order to determine what's in the food which is helpful in growth and development.

36. We learned to choose healthy snack and food.

37. We learned what's good for you and what's not good.

38. When you eat healthy you can perform better and have more enjoy and do better with class.

What feedback do you have about the family homework activities? What did you like? How could they be improved?

1. Eat food to improve

2. Eat healthy

3. Having info funnel to parents via a newsletter like PTA (which was done) or hosting a nutrition night in each semester.

4. I didn't have time to do it.

5. I enjoyed it. I would like more ideas.

6. I like reading the nutrition labels because it makes me aware of the content or nutrients that we are taking everything.

7. I like that you taught my child that a soda has a lot of sugar.

8. I like the info.

9. I like to eat different and I can improve by eating more.

10. I like what the family homework.

11. I liked reading the labels and making better choices.

12. I liked the one that making healthy decisions, and reading labels because it kinda make you learned eating healthy.

13. I liked the one with the recipe and I don’t need anything improved. I liked the watermelon.

14. I liked them they taught Sarah a lot of stuff.

15. I liked you can do it with your family.

16. I really like the activities and I hope to have more of these family homework. Also to let my child learn more about health knowledge.

17. I want to learn more about fruits and veggies.

18. It help my child to make the right decisions on choosing healthy food.

19. It was fun! More gross facts about fat & sugar would be good-kind of interesting science.

20. It was fun.

21. It's fine for what it is - recipes are good!

22. Keep up the great work.

23. More communication to my child to take this home and ask me to do it with her - that it's fun & educational & important.

24. More recipes. Different topics.

25. No.

26. None

27. Nothing

28. Our feedback is great about the family because it made us more healthy.

29. Please provide homework on sheets that are well defined and short. Homework time used for health and English.

30. The homework activities were helpful in starting a dialog with my child about healthy food and why it's important.

31. They can improve by not eating junk food.

32. They were fun.

33. They were good examples of selecting healthy choices.

34. To eat healthy good daily. I love that he is learning a better way to eat and that will give him more choices for the future. Now I believe that kids can participate on giving a healthy Twist at their favorite foods. I like burgers! I do that with the

35. To provide more cells in our body. Let just eat healthier and take vitamins.

36. We learned how to read food labels. We learned what kinds of food are good for us.

37. We like how this is getting more families involved. Change is always good, more families participating.

38. We like the jicama, watermelon, apricots, apple, kiwi, bok choy and celery.

39. We think it is helpful for us with the homework and we can improve if we like that we stay healthy.

b. Description of how evaluation results will be used:

IOE Results will be presented to NEP managers and Site Nutrition Coordinators in the Summer and Fall as IOE planning for the upcoming year begins. The intervention development team, in consultation with the network, will make changes to specific components (e.g., the lessons themselves; the overall number of lessons; the family homework assignments). Although the strength of the intervention is clearly on improving fruit and vegetable preferences and enjoyment, other impacts were not observed, especially those on the mandated network survey related to indicators that are not necessarily the focus of the current intervention (e.g., items on exercise and physical activity). The intervention development team will seek to address this misalignment by making appropriate adjustments to intervention content and structure.

Results on the significant improvement in fruit and vegetable preferences will also be shared with school sites to encourage overall project support and increased utilization of cooking carts (i.e., to replicate the demonstrated impact of using lessons coupled with tastings).

7. Point of Contact

Name:	Mark Elkin (SFUSD) & John Shields (ETR)
Phone Number:	(415) 242-2615 & (415) 252-0402
Email Address:	elkinm@sfusd.edu

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. None to date.

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

X	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

Family Homework Feedback Form (Parent / Caregivers) Posttest Only

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

Student Journaling

Network-funded contractor:	Santa Ana USD - 08-85156
Contract number:	08-85156
Information provided by :	Jennifer Chavez
Telephone:	714-558-5688
Date:	6/14/2012
Email:	jennifer.chavez@sausd.us

1. Project Description and Goals

Project Name:	Adult Impact Evaluation
Target Population:	18-55
Primary Curriculum Used:	5-week series using LAUSD Adult Class Modules
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Nutrition education was provided to parents using the 5-week LAUSD Adult Class Modules. Topics covered were: My Plate, nutrients, food labels, meal planning and eating out/snacks. All classes had a taste test as well. Parents were engaged and asked a lot of questions. Many parents would come back from one week to the next and tell us what changes they have made in their homes based on the nutrition education we provided.

SAUSD parents were eager to learn about nutrition and leaving wanting more information. When the 5th week was over they wanted us to come back for more lessons!

In 1-2 paragraphs, please provide a description of the physical activity intervention:

The My Plate lesson contained physical activity, we discussed recommendations for adults and children. We discussed the difference between moderate and vigorous activity and we demonstrated the "chair workout." Lastly, we passed out handouts for parents to track the amount of minutes they spent on physical activity for one week.

In 1-2 paragraphs, please provide a description of standardized training:

Two Network staff members provided the trainings. One Curriculum Specialist and one Program Coordinator. Minimal training was needed as both provide nutrition education throughout the year. Preparation was conducted each week, reviewing the materials and PowerPoint, gathering resources needed and buying ingredients for the taste tests.

In 1-2 paragraphs, please provide a description of standard administration of data

All parents were provided with the same pre and post survey. The questions were read out loud and placed on an elmo (over head projector). Network staff walked around the room in case parents had questions or were confused about a question on the survey. This system was in place at all sites.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Classrooms were not used.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 75 adults who participated in Adult Impact Evaluation will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Schools

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	31
How many sites?	3
How many classrooms?	0

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Fruit and Vegetable Checklist (servings)
Goal 2/Objective 2	0

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention	Control
Pre-test:	1/25/2012 to 2/27/2012	
Start of Intervention Date	1/25/2012	NA
End of Intervention Date	4/16/2012	NA
Post-test:	2/22/2012 to 4/27/2012	
Follow-up:		

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

There were 31 matched surveys.

Quantity and frequency of the consumption of fruits and vegetables increased significantly with the exception of citrus fruit or juice past week (question 2), with $p > .05$. However, there was very little room for improvement since the average respondent already confirmed consumption of citrus fruit or juice on the pre-test. In all other cases, *p* is less than the .05 significance threshold. There was an increase in eating fruits and vegetables as snacks (question 1), difference of .60, $p < .01$. Fruits eaten per day (question 3) increased by .40 with $p < .05$. Consumption of different kinds of fruits and vegetables daily (question 4 and 5) increased by .81, $p < .01$ and by .52, $p < .01$, respectively. Vegetables eaten per day (question 6) increased by .70, $p < .01$ and eating two or more vegetables at a main meal (question 7) increased by .90, $p < .01$.

These increases were also reflected at the aggregate levels of consumption of fruits (question 2, 3, and 4), consumption of vegetables (question 5, 6, and 7), and consumption of both (all questions). There was an increase of .43, $p < .01$, for consumption of fruits, an increase of .72, $p < .01$, for consumption of vegetables, and an increase of 1.43, $p < .01$, for consumption of both.

Qualitative Findings

Were there any truly outstanding moments over the last year that you would like to share? Have you seen changes at a broader level, like the classroom, school, or community, as a result of your work?
We experienced outstanding moments each week with our parents. Week 1 we discussed My Plate, the following week we had parents coming in and telling us that they actually went out and bought smaller plates! Parents stated that they made sure "half" their plates were fruits/vegetables. Week 2 we discussed nutrients. The following week we had parents come in and tell us that they now read food labels to check the amounts of carbohydrates, protein and fat in their foods. Moments like this continued for the five weeks. Parents stopped buying soda and made their children drink more water. And the outstanding moment in that is their kids enjoyed the water and now that's all they ask for. This is great now that summer is here.

Our parents want the nutrition knowledge and once they had it...they made incredible changes on a weekly basis. A lot of the parents just didn't know how to read a food label or how marketing was directly affecting them. Once they had the knowledge, they used it to make behavior changes in their homes.

b. Description of how evaluation results will be used:

Evaluation results will be used to highlight the importance of the consumption of fruits and vegetables with teachers, parents and administration. We will take a closer look (when we implement the 2012-2013 Impact Evaluation) if juice is being overly consumed. This evaluation supports the work of the Harvest of the Month program and demonstrates that individuals are willing to consume more fruits and vegetables, as well as try new produce items. Since all intervention contained a taste test, participants were able to try new produce items. We will continue to offer taste tests during interventions as a way to broaden the horizon of available produce to the public.

7. Point of Contact

Name:	Jennifer Chavez
Phone Number:	714-558-5688
Email Address:	jennifer.chavez@sausd.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c
- [ ] Food Behavior Checklist
- [ ] Fruit and Vegetable Checklist
- [ ] Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.9	3.5	0.6	0.000
Q2. Citrus fruit or juice past week (0=N; 1=Y)	0.97	0.97	0	1.000
Q3. Fruit eaten per day (0-3)	1.47	1.86	0.4	0.029
Q4. Different kinds of fruit daily (1-4)	2.58	3.39	0.81	0.000
Q5. Different kinds of vegetable daily (1-4)	2.68	3.19	0.52	0.003
Q6. Vegetables eaten per day (0-3)	1.17	1.87	0.7	0.000
Q7. 2 or more vegetables at main meal (1-4)	2.35	3.26	0.9	0.000

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruits (Q2, Q3, Q4) (Range 0-3)	1.93	2.36	0.43	0.001
Veggies (Q5, Q6, Q7) (Range 0-3)	1.41	2.13	0.72	0.000
Fruits & Veggies (all) (Range 0-7)	3.83	5.25	1.43	0.000

Network-funded contractor:	Shasta COE - 10-10059
Contract number:	10-10059
Information provided by :	Tanya Marshall
Telephone:	530-225-0189
Date:	7/30/2012
Email:	tmarshall@shastacoe.org

Section 1

1. Project Description and Goals

Project Name:	Boulder Creek Elementary
Target Population:	4th/5th graders
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	PowerPlay!

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

During the months Sept-May Harvest of the Month was administered in the classroom which includes: tasting trio prep/tasting, family newsletters, HOTM and Power Play workbooks, HOTM seasonal posters, cafeteria connection, botanical images and growing information, read out loud related books, and nutrition integration into classroom curriculum. Also included was: Treats for Troops, Rethink Your Drink, Nutrition Decathlon, back to school nights, open houses, and the afterschool program.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Nutrition Decathlon, Power Play CYO kit, and Instant Recess.

In 1-2 paragraphs, please provide a description of standardized training:

All teachers were trained on HOTM and had the necessary tools to implement the program.

In 1-2 paragraphs, please provide a description of standard administration of data

We went into each classroom and administered the pre and post surveys. We read the instructions out loud as well as all of the questions.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All classrooms received the recipe and ingredients for the HOTM tasting trios each month, along with HOTM (So-Cal) and Power Play student workbooks. Student's received the HOTM parent newsletters to take home, HOTM tasting trio recipes, and power play cookbooks. HOTM and Power Play activities took place in the afterschool program and were presented to the families at Back to School Nights and Open Houses. The SPARK activities were also presented to teachers in support to increase their PA in the classroom.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 180 4/5th grade students who participated in Boulder Creek Elementary will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	181
How many sites?	1
How many classrooms?	8

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	0

Were any other measures used? 0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	all

	Intervention	Control
Pre-test:	9/1/2011	NA
Start of Intervention Date	Sept 2011	NA
End of Intervention Date	May 2012	NA
Post-test:	5/1/2012	NA
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

d. How were the surveys administered?

Read out loud to the classrooms participating

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Healthy Dietary Behaviors: Increased consumption of cheese, milk, cereal, juice and most importantly fruit and vegetable intake, which is our main goal. These improved results are based on our HOTM program. We started with over 90% of the students already consuming breakfast and the end results stayed in the 90s. The water consumption was already high to begin with as well. We had p-values increase in F/V intake and on healthy foods overall.

Less Healthy Dietary Behaviors: There were not any p-Values in this category. Less healthy food choices started at 2.53 and went to 2.51 which is not a significant decrease in any choice on this section.

Trying New Foods: In this category we had more p-values with an increase in both trying new fruits and vegetables.

Home Access: No p-values accrued here, however there was a slight increase in starting at 3.45 and going up to 3.50.

Perceived Parental Consumption: There was not a big difference from pre to post test in this category.

Physical Activity: We had p-values in this area, a significant change starting at 9.43 and going up to 11.27

The students are always eager and willing to try new foods and recipes brought into the classroom. Teachers have said how much of a difference our program is making – students are making healthier food choices based upon our lessons, bringing healthier foods for snack time, and wanting healthier food options for classroom parties. Many teachers are now allowing only healthy options for their classroom parties instead of the typical cakes, cupcakes, and sodas. We are seeing a lot more fruit and vegetable options on the table.

b. Description of how evaluation results will be used:

These results will be used and applied to next school year where we plan to increase rigor by: doing the HOTM menu slicks, continuing nutrition ed in the classroom, afterschool program, more parent outreach, conducting teacher and staff trainings, promoting more gardening activities, collaborate with local farmers, grocery store produce tour, and coordinating with the physical education teachers to incorporate nutrition into organized physical activity.

7. Point of Contact

Name:	Tanya Marshall
Phone Number:	530-225-0189
Email Address:	tmarshall@shastacoe.org

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

- [ ] Food Preferences Survey
- [ ] Knowledge surveys various available; identify scale(s) from Compendium: 0
- [ ] Norms surveys for children various available; identify scale(s) from Compendium: 0
- [ ] Outcome Expectations for Fruits and Vegetables (Reynolds)
- [ ] Outcome Expectations for Fruits and Vegetables (Baranowski)
- [ ] Physical Activity Preferences for Children and Adults
- [ ] Self-Efficacy surveys for children various available; identify scale(s) from Compendium: 0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	1.13	1.25	0.12	0.176
4. Milk	1.44	1.48	0.04	0.648
5. Yogurt or cheese	0.56	0.51	-0.05	0.503
6. Cereal	0.63	0.74	0.11	0.086
8. Vegetables	1.84	2.25	0.41	0.001
9. Fruit	1.91	2.44	0.53	0.000
10. Juice	1.06	1.12	0.06	0.609
11. Water	4.21	4.17	-0.04	0.671
15. Breakfast	0.93	0.91	-0.02	0.373
Total: fruit & vegetable (no juice)	3.75	4.69	0.94	0.000
Total: fruit, vegetable, juice	4.81	5.81	1.00	0.000
Total: healthy foods (Q3-6, 8-11)	12.77	13.95	1.18	0.001
Less Healthy Dietary Behaviors				
7. French fries or chips	0.57	0.62	0.05	0.456
12. Punch, sports drinks, fruit-flavored drinks	0.62	0.61	-0.01	0.930
13. Soda or soft drinks	0.41	0.49	0.08	0.187
14. Cookies, cakes, other sweets	0.93	0.78	-0.14	0.100
Total: less healthy foods (Q7, 12-14)	2.53	2.51	-0.02	0.892
Trying New Foods	2.56	2.73	0.18	0.009
16. Trying new fruits	1.48	1.53	0.06	0.190
17. Trying new vegetables	1.08	1.20	0.12	0.007
Home Access	3.45	3.50	0.05	0.347
18. Fruits to eat at home	1.76	1.79	0.03	0.371
19. Vegetables to eat at home	1.68	1.71	0.04	0.356
Perceived Parental Consumption	4.54	4.50	-0.04	0.723
20. How often parents eat fruit	2.20	2.21	0.02	0.824
21. How often parents eat vegetables	2.23	2.21	-0.02	0.820
Physical Activity	9.43	11.27	1.84	0.000
22. Days of 60 minutes moderate/vigorous	4.81	5.77	0.97	0.000
23. Days of 30 minutes outdoor play	4.62	5.49	0.87	0.000

Demographics

Average Age	9.6
Gender	
Males	97
Females	84

Network-funded contractor:	Shasta County Public Health
Contract number:	
Information provided by :	Ereka Rambur
Telephone:	530-225-5126
Date:	7/12/2012
Email:	erambur@co.shasta.ca.us

Section 1

1. Project Description and Goals

Project Name:	Shasta County Public Health Nutrition and Physical Activity Intervention
Target Population:	6th grade
Primary Curriculum Used:	Exercise Your Options
Secondary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Site #1 – During the 2011-12 school year: Four lessons from Exercise Your Options will be taught, Harvest of the Month education and taste tests will be done on a monthly basis, Re-Think Your Drink education and challenge will be performed.

Site #2 – During the 2011-12 school year: Harvest of the Month education and taste tests will be done monthly

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Site #1 – During the 2011-12 school year: One lesson will be taught from Exercise Your Options which includes a nutrition message, a SPARK activity that integrates a nutrition message, and a guest speaker will talk about Safe Routes to School and hydration.

Site #2 – During the 2011-12 school year: a SPARK lesson will be taught each month after the HOTM taste test is done. The SPARK activity will integrate a nutrition message.

In 1-2 paragraphs, please provide a description of standardized training:

Teachers involved in IOE will receive instruction on how to use the Exercise Your Options Curriculum, SPARK activities, Re-Think Your Drink materials and learn how to be involved in Safe Routes to School.

In 1-2 paragraphs, please provide a description of standard administration of data

Prior to intervention, 6th grade students will complete the Network for a Healthy California Youth Survey presurvey.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Sixth grade students receive instruction on a nutrition and physical activity & harvest of the month intervention monthly

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 100 grade students who participated in Shasta County Public Health Nutrition and Physical Activity Intervention will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

IOE Objective 2 (Physical Activity) Optional:

IOE Objective 3 (Sugar Sweetened Beverages) Optional:

IOE Objective 3 (Other) Optional:

2. Evaluation Design

What design was used? Pre-test and Post-test without a comparisn (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Schools

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	88
How many sites?	2
How many classrooms?	5

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	0

Were any other measures used?	Physical activity survey and food frequency survey provided by the Network

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	7

	Intervention			Control		
Pre-test:	Oct. 3	to	Oct. 5	1/0/1900	to	1/0/1900
Start of Intervention Date	Oct. 7			NA		
End of Intervention Date	4/20/2012			NA		
Post-test:	5/4/2012	to	5/25/2012	1/0/1900	to	1/0/1900
Follow-up:	1/0/1900	to	1/0/1900	1/0/1900	to	1/0/1900

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

The intervention did not affect the students' total score for consumption of the healthy foods and beverages that were measured in the evaluation. The average healthy food and beverage total score decreased slightly (by 0.45 points) after the intervention, but this was a non-significant change. There was no effect on the proportion of students who reported eating breakfast. There was no effect on the individual scores for cheese, milk, yogurt or cheese, cereal, vegetables, fruit, juice, or water. The average total score for fruit and vegetable (no juice) consumption decreased by 0.06 points, and the average total score for fruit, vegetable, and juice consumption decreased by 0.23 points after the intervention, but both were non-significant changes.

The intervention did not affect the students' total score for consumption of the unhealthy foods and beverages that were measured in the evaluation. The average unhealthy food total score decreased (by 0.05 points) after the intervention, but this was a non-significant change. There was no effect on the scores for French fries or chips, punch, sports drinks, and fruit flavored drinks, soda or soft drinks, or cookies, cakes or other sweets.

The intervention did not affect the students' total score for trying new foods . The average trying new food total score increased (by 0.22 points) after the intervention, but this was a non-significant change. There was no effect on the scores for trying new fruits or trying new vegetables.

The intervention did not affect the students' total score for access to fruits and vegetables at home. The average home access total score increased (by 0.11 points) after the intervention, but this was a non-significant change. There was no effect on the scores for access to fruits or access to vegetables.

The intervention did not affect the students' total score for perceived parental consumption. The average perceived parental consumption total score decreased (by 0.03 points) after the intervention, but this was a non-significant change. There was no effect on the scores for perceived parental consumption of fruits or vegetables.

The intervention significantly affected the students' total score for physical activity. The average physical activity total score increased (by 1.17 points) after the intervention, a significant change. There was no effect on the average number of days that the students exercised moderately or vigorously for at least 60 minutes. However, the intervention was successful in increasing the average number of days that the students played outside for at least 30 minutes. After the intervention, the average number of days that students played outside increased by 0.68 days, a significant change.

The intervention did not significantly affect the students' total score for physical activity from the 2011 YRBSS survey. There was also no effect on the number of days that youth spent 60 minutes or more being physically active, the number of days they performed strengthening exercises, the number of hours they watched TV or played video games, the number of days they go to PE class at school, or the number of sports teams they participate in.

After the intervention, student preference for sweet potatoes decreased significantly . Student preference for all other fruits and vegetables remained unchanged. However, a borderline significant improvement in preference occurred for dried plums, while borderline significant decreases in preference occurred for corn and grapefruit.

It was very rewarding to watch six graders knowledge on nutrition grow from the beginning of the year until the end of the year

b. Description of how evaluation results will be used:

0

7. Point of Contact

Name:	Ereka Rambur
Phone Number:	530-225-5126
Email Address:	erambur@co.shasta.ca.us

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey No

d. Optional Surveys

x	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
x	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Network-funded contractor:	Tulare COE - 10-10054
Contract number:	10-10054
Information provided by :	Janet Hettinger
Telephone:	559 651-0130 x 3722
Date:	7/23/2012
Email:	jhettinger@tcoe.org

Section 1

1. Project Description and Goals

Project Name:	Harvest of the Month
Target Population:	4th and 5th grades
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	PowerPlay! Team Nutrition, Dairy Council, SPARK

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

There were three intervention sites at 3 different school districts; Palm, Castle Rock and Westfield.

Each month teachers received ingredients and supplies for a skill based food demo/taste test using the Tasting Trio recipe. Students received an "I Tasted ....." sticker and a recipe in English and Spanish. Teachers used the Harvest of the Month Teaching Points and Harvest of the Month Produce fact sheet. Classrooms also received a box of fresh produce. In addition teachers used the Harvest of the Month student workbooks, Food Fact calendar, and Harvest of the Month power points. Teachers were given nutrient fact sheets on magnesium, phytochemicals and vitamin E, adding to others they have received in the past. Also used were menu slicks and the Harvest of the Month Parent Newsletter. Each month schools received a Harvest of the Month cafeteria poster featuring the Harvest of the Month produce. This was placed in the lunch line area.

In addition to the above monthly activities, Palm Elementary teachers utilized Team Nutrition lessons and had their students write essays on good nutrition. Two teachers used the Dairy Council curriculum, taught nutrition as a stand-alone subject, integrated nutrition into core subjects and had a Chef in the Classroom presentation. A Tulare County Office of Ed-Network staff provided nutrition education once a month during late start Wednesdays in the cafeteria to K-5th grade students. There were a few students from intervention classrooms.

In addition to the above mentioned monthly activities, Castle Rock Elementary teachers had their students write essays on good nutrition, one had a Chef in the Classroom presentation and integrated nutrition into Language Arts and Science.

Westfield Elementary utilized the monthly activities above and had two Chef in the Classroom presentations, a guest speaker on 'plant parts you can eat' with a skill based taste test, MyPlate lessons, ReThink Your Drink, Power Play, Team Nutrition, read books that encouraged good nutrition, students wrote essays on good nutrition, and the teacher integrated nutrition into Language Arts and P.E. A Tulare County Office of Ed-Network staff attended two Family Night's providing nutrition education with a skill based taste test.

Palm and Castle Rock have active Nutrition Advisory Councils (NAC). NAC activities at Palm school included marching in the Veteran's Day Parade with a banner and students made up a healthy cheer to recite as they marched, monthly presentations on Harvest of the Month using the Harvest of the Month Power Points, made presentations in classrooms promoting National School Lunch Week and National School Breakfast Week, promoted a "Turn Off the TV" challenge for all students and staff, making classroom presentations with their "TV heads".

NAC students at Castle Rock also assisted teachers with the Tasting Trio demonstrations and nutrition education using the Harvest of the Month Power Points, made posters during the school year which were displayed in the lunch line area about the importance of eating breakfast, how to have a healthy heart, diabetes prevention, and ReThink Your Drink.

A Tulare County Office of Ed-Network staff delivered nutrition education at Nutrition on the Go. Families come once a month to get free produce from a local food bank. Nutrition education is delivered while they are waiting in line.

In the community where Palm School is located, our staff delivered parent nutrition education and physical activity promotion. It is not known if any parents from the intervention group attended.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Impact teachers at Palm and Castle Rock were SPARK trained this year in the spring. It is not known what lessons they used or how many. All teachers received a Ten Minute Instant Recess DVD.

In 1-2 paragraphs, please provide a description of standardized training:

We attended the staff meetings at each school site during August and September to in-service teaching staff on the Tasting Trios and the Health Education Content Standards. Teachers were given a copy of the standards and competencies with ideas for integration.

We have Partner Meetings every month with lead teachers from school sites and Food Service Directors. At those meetings lesson ideas are modeled. If they are not able to attend, copies of materials are sent to them. We have our lead teachers on a distribution list. This list is used to send out the Harvest of the Month Power Points and any other information pertinent to nutrition education and physical activity promotion.

In 1-2 paragraphs, please provide a description of standard administration of data

We used the Network approved data collection protocol and it was given to all Impact and Control Group teachers. Teachers administered the pre and post surveys either on the same day or within a few days of each other.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All teachers received the same materials. How it was taught varied from class to class. Some teachers added Thinking Maps to the Power Points. Not all classrooms had a Chef in the Classroom presentation or guest speaker, used Dairy Council or PowerPlay! Two schools had a NAC group and one did not. NAC activities varied from school to school.

The same chef did not present in all classrooms. Each chef was given the same material to use for nutrition education, but each chef adds personal information about their education, cooking experience and cooking tips for the featured produce.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 4th and 5th grade students who participated in Harvest of the Month will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used? Pre-test and Post-test with a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups? Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	190
How many sites?	3
How many classrooms?	8

b. Control: Convenience Sample

How many matched surveys?	123
How many sites?	1
How many classrooms?	6

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey	
Goal 2/Objective 2	0	

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	0

	Intervention			Control		
Pre-test:	8/30/2011	to	9/7/2011	9/21/2011	to	8/30/2011
Start of Intervention Date	9/12/2011			NA		
End of Intervention Date	5/18/2012			NA		
Post-test:	5/21/2012	to	5/25/2012	5/3/2012	to	5/10/2012
Follow-up:	NA			NA		

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	Paper and pencil survey	

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Intervention Group

Castle Rock showed statistical improvement in 19/29 measures, Palm 11/29 and Westfield 9/29 measures.

Cheese: max score 3

All sites had significant scores with Castle Rock students eating the most cheese per day at 1.43 then Westfield and Palm last.

Milk: max score 3

Two sites had significant scores, with Westfield students drinking milk 2.04 times a day, then Castle Rock and Palm. Would like to see this at 3.

Yogurt: max score 3

Two sites had significant scores, with Westfield students eating yogurt 0.97 times a day, then Castle Rock and Palm.

Cereal: max score 3

One site had a significant score, Castle Rock students eating cereal 1.04 times a day.

Vegetables: max score 5

All three sites had significant scores with Westfield students eating vegetables 2.66 times a day, Palm was next then Castle Rock. Would like to see this with at least 4.

Fruit: max score 5

Two sites had significant scores. Castle Rock students eating fruit 2.91 times a day, Palm next then Westfield. Don't know why Westfield did not show significant result. Still would like see the scores be closer to 5.

Juice: max score 5

None if the sites had a significant score. Castle Rock students had the highest consumption at 1.88 times a day, Westfield then Palm.

Water: max score 5

Only Castle Rock showed significant results with students drinking water 4.09 times a day, Westfield then Palm.

Breakfast: max score 1

None of the sites had a significant score. Palm and Castle Rock have breakfast in the classroom. The pre and posttest scores were almost 1. There was not much room for improvement.

Total fruit, vegetable: max score 10

All three sites had significant scores with Castle Rock showing a greater difference in pre and post at 5.45 (2.05 diff), Westfield also with 5.45 (1.45 diff) and Palm last.

Total fruit, vegetable juice: max score 10

All three sites had significant scores with Castle Rock post-test mean of 7.33, then Westfield and Palm last.

Total healthy foods: 20

All three sites had significant scores with Castle Rock total post-test mean of 16.75, Westfield and Palm lowest post-test mean.

French fries or chips: max score 3

Only Castle Rock showed significant results with students reducing consumption from 0.86 to 0.54 times a day. The other sites showed a small reduction.

Punch, sports drinks: max score 3

Only Castle Rock showed significant results with students reducing consumption from 1.18 to 0.75 times a day. The other sites also showed a small reduction.

Soda: max score 3

None of the sites had a significant score. Two sites showed a small drop in soda consumption and one site saw a small increase in consumption. We need to do more ReThink Your Drink education.

Cookies, cakes: max score 3

Only Castle Rock showed significant results with students reducing their consumption from 0.92 to 0.53. The other sites showed small reduction.

Total less healthy foods: max score 9

Only Castle Rock showed significant results of reducing their consumption of less healthy foods from 3.73 to 2.32 times a day. Westfield showed small reduction and Palm showed slight increase.

Trying new foods: max score 2

Only Westfield has significant score overall. The other sites showed slight increase.

Trying new fruits: max score 2

None of the sites had a significant score.

Trying new vegetables: max score 2

Only Westfield has significant score. You would think Westfield would have a significant score for trying new fruits too.

Home access: max score 4

Only Castle Rock showed a significant score 3.49 with the other two sites having small increases in availability of fruits and vegetables at home. A '4' indicates they always have fruit and vegetables in the home to eat. For all sites, the pre-test scores were already pretty high at 3.28, 3.33 and 3.31 indicating families do have fruits and vegetables in the home to eat.

Fruits to eat at home: max score 2

None of the sites showed significant results although, again, they all showed slight increases in fruits to eat at home.

Vegetables to eat at home: max score 2

Only Castle Rock showed a significant score of 1.58 to 1.73 with 2 indicating they always have vegetables to eat at home. The other two sites had small increase.

Perceived parental consumption: max score 6

Only Palm showed significant score with 4.72. Again, the other sites show slight increase in awareness of what their parents are eating.

How often parents eat fruit: max score 3

None of the sites had significant result. Post-test means were 2.35, 2.30 and 2.35.

How often parents eat vegetables: max score 3

Palm showed significant result of 2.28. Again, why would this not be true for awareness of their

parents eating fruit?

Days of 60 minutes mod/vigorous: max score 7

Castle Rock and Palm had significant results here which makes sense as these are the sites teachers were trained in SPARK. Palm had a post-test mean of 3.75, Castle Rock 4.61. We would like to see this closer to 7. I know both these communities have gang problems. Westfield's post-test mean was 5.55. So these kids getting more days of 60 minutes of vigorous activity than the other sites, but the results weren't significant.

Days of 30 minutes outdoor play: max score 7

Castle Rock and Palm had significant results. Castle Rock with 4.47 days of outdoor play and Palm with 3.85 days. Westfield post-test mean was 5.03. So these kids are playing outdoor more days than the other sites, but the results weren't significant.

Even though all measures did not show significant results, most of the measures for all sites showed improvement of healthy choices and behaviors.

The Control Group had significant results in 9/29 measures

There were not significant results for Healthy Dietary Behaviors, Less Healthy Dietary Behaviors (except measure of cookies, cakes and other sweets with a decrease from 1.00 to 0.85), and Trying New Foods.

There was a significant result for Home Access, fruits to eat at home and vegetables to eat at home. I believe this occurred due to the post given in the spring when availability of fruits and vegetables in greater. Most parents work in the grape and stone fruit fields and bring some home.

The significant results for physical activity may be due to the school having a competitive soccer league in the spring. Many of the control group students participated in this.

b. Description of how evaluation results will be used:

The ReThink Your Drink material was introduced last year. We are partnering with the Health Department to bring this information to the community. We will continue to encourage our participating teachers/districts to use this material. We will introduce a challenge week to not drink sugary beverages for a week. Get NAC students or student councils involved with a classroom presentation. NAC students are creative and will come up with something really great.

We wonder if any LIA's offer taste testing at Back-to School and Open House events. I would think they would all have to be Serve Safe certified. How are the food samples kept cold, etc? We think a simple food prep demonstration would be great. We are just not sure how this is done. We will try to partner with community agencies to expand parent education. We have limited staff to expand.

Continue with the Harvest of the Month materials. Teachers are familiar with it. We are going to reduce the Teaching Points to one page, making it more user friendly. We will model Harvest of the Month lessons and ideas for integrating nutrition into core subjects for those teachers who are struggling with nutrition education.

Promote Fuel Up to Play 60 plays. There are wonderful ideas for increasing physical activity during the school day.

7. Point of Contact

Name:	Janet Hettinger
Phone Number:	559 651-0130 x 3722
Email Address:	jhettinger@tcoe.org

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. None

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* None

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

Food Preferences Survey	
Knowledge surveys various available; identify scale(s) from Compendium:	0
Norms surveys for children various available; identify scale(s) from Compendium:	0
Outcome Expectations for Fruits and Vegetables (Reynolds)	
Outcome Expectations for Fruits and Vegetables (Baranowski)	
Physical Activity Preferences for Children and Adults	
Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so,

please briefly describe them below.

Plate waste. Tulare County Office of Ed - Network staff went into the cafeteria at two intervention sites for 3 months during 4th and 5th grade lunch periods on days the Harvest of the Month was on the menu. Staff visited the cafeterias during the first of the month, before any intervention, and again at the end of the month. Students were asked if they liked the produce being served and if not, why. The produce surveyed was jicama, grapefruit and broccoli. Each intervention site prepared the produce differently.

Palm served jicama with salsa, then with chili powder, Castle Rock served jicama with fresh squeezed lemon juice and chili powder.

Palm served broccoli cooked both times, Castle Rock served broccoli raw with ranch dressing then made a nice broccoli salad and broccoli cooked with cheese sauce (students had a choice). We did not count how many like broccoli with the cheese sauce or salad because most choose the broccoli with the cheese sauce. The broccoli salad was really good and was made from scratch. I think broccoli salad is just something kids don't eat at home.

Castle Rock served fresh, sectioned pink grapefruit both times. The kids did not like it. Palm did not put grapefruit on the menu that month.

Intervention Site Castle Rock

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	1.04	1.43	0.39	0.004
4. Milk	1.50	2.04	0.54	0.000
5. Yogurt or cheese	0.39	0.82	0.42	0.001
6. Cereal	0.78	1.04	0.26	0.025
8. Vegetables	1.59	2.54	0.95	0.000
9. Fruit	1.80	2.91	1.11	0.000
10. Juice	1.76	1.88	0.12	0.575
11. Water	3.57	4.09	0.53	0.012
15. Breakfast	0.93	0.96	0.03	0.483
Total: fruit & vegetable (no juice)	3.39	5.45	2.05	0.000
Total: fruit, vegetable, juice	5.16	7.33	2.17	0.000
Total: healthy foods (Q3-6, 8-11)	12.43	16.75	4.32	0.000
Less Healthy Dietary Behaviors				
7. French fries or chips	0.86	0.54	-0.32	0.011
12. Punch, sports drinks, fruit-flavored drinks	1.18	0.75	-0.43	0.006
13. Soda or soft drinks	0.71	0.54	-0.17	0.160
14. Cookies, cakes, other sweets	0.92	0.53	-0.39	0.008
Total: less healthy foods (Q7, 12-14)	3.73	2.32	-1.41	0.000
Trying New Foods	2.71	2.76	0.05	0.838
16. Trying new fruits	1.43	1.50	0.07	0.453
17. Trying new vegetables	1.28	1.26	-0.01	0.754
Home Access	3.28	3.49	0.21	0.042
18. Fruits to eat at home	1.66	1.76	0.10	0.128
19. Vegetables to eat at home	1.58	1.73	0.15	0.040
Perceived Parental Consumption	4.48	4.77	0.29	0.175
20. How often parents eat fruit	2.35	2.35	0.00	1.000
21. How often parents eat vegetables	2.21	2.42	0.21	0.103
Physical Activity	7.13	9.08	1.95	0.001
22. Days of 60 minutes moderate/vigorous	3.43	4.61	1.17	0.000
23. Days of 30 minutes outdoor play	3.70	4.47	0.78	0.019

Demographics

Average Age 9.6

Gender	
Males	54
Females	47

Intervention Site Palm

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.65	0.93	0.29	0.124
4. Milk	1.52	1.32	-0.20	0.208
5. Yogurt or cheese	0.40	0.40	0.00	1.000
6. Cereal	0.89	0.86	-0.03	0.123
8. Vegetables	1.41	2.32	0.91	0.000
9. Fruit	1.82	2.64	0.81	0.005
10. Juice	1.43	1.57	0.14	0.375
11. Water	3.51	3.67	0.16	0.140
15. Breakfast	0.93	0.92	-0.01	0.533
Total: fruit & vegetable (no juice)	3.23	4.96	1.73	0.000
Total: fruit, vegetable, juice	4.66	6.53	1.87	0.001
Total: healthy foods (Q3-6, 8-11)	11.62	13.70	2.09	0.006
Less Healthy Dietary Behaviors				
7. French fries or chips	0.71	0.83	0.12	0.599
12. Punch, sports drinks, fruit-flavored drinks	1.03	1.01	-0.02	0.464
13. Soda or soft drinks	0.63	0.78	0.15	0.048
14. Cookies, cakes, other sweets	0.74	0.62	-0.12	0.437
Total: less healthy foods (Q7, 12-14)	3.12	3.24	0.12	0.957
Trying New Foods	2.16	2.35	0.19	0.366
16. Trying new fruits	1.22	1.51	0.29	0.181
17. Trying new vegetables	0.95	0.85	-0.10	0.118
Home Access	3.31	3.37	0.06	0.560
18. Fruits to eat at home	1.66	1.78	0.11	0.204
19. Vegetables to eat at home	1.61	1.60	-0.01	0.728
Perceived Parental Consumption	4.17	4.72	0.55	0.022
20. How often parents eat fruit	2.15	2.35	0.20	0.057
21. How often parents eat vegetables	1.98	2.28	0.30	0.043
Physical Activity	4.12	7.59	3.47	0.000
22. Days of 60 minutes moderate/vigorous	2.23	3.75	1.52	0.000
23. Days of 30 minutes outdoor play	1.89	3.85	1.96	0.000

Demographics

Average Age	9.8
Gender	
Males	67

Females	62

Intervention Site Westfield

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.83	1.31	0.48	0.006
4. Milk	1.62	2.07	0.45	0.010
5. Yogurt or cheese	0.41	0.97	0.55	0.001
6. Cereal	0.79	1.03	0.24	0.182
8. Vegetables	1.83	2.66	0.83	0.004
9. Fruit	2.17	2.79	0.62	0.095
10. Juice	1.24	1.24	0.00	1.000
11. Water	4.24	4.28	0.03	0.885
15. Breakfast	0.90	0.90	0.00	1.000
Total: fruit & vegetable (no juice)	4.00	5.45	1.45	0.011
Total: fruit, vegetable, juice	5.24	6.69	1.45	0.030
Total: healthy foods (Q3-6, 8-11)	13.14	16.34	3.21	0.001
Less Healthy Dietary Behaviors				
7. French fries or chips	0.45	0.38	-0.07	0.573
12. Punch, sports drinks, fruit-flavored drinks	0.62	0.52	-0.10	0.599
13. Soda or soft drinks	0.55	0.34	-0.21	0.312
14. Cookies, cakes, other sweets	0.41	0.34	-0.07	0.602
Total: less healthy foods (Q7, 12-14)	2.03	1.59	-0.45	0.337
Trying New Foods	2.62	3.00	0.38	0.019
16. Trying new fruits	1.59	1.66	0.07	0.424
17. Trying new vegetables	1.03	1.34	0.31	0.010
Home Access	3.33	3.63	0.30	0.175
18. Fruits to eat at home	1.71	1.86	0.14	0.212
19. Vegetables to eat at home	1.59	1.78	0.19	0.170
Perceived Parental Consumption	4.58	4.63	0.05	0.871
20. How often parents eat fruit	2.30	2.30	0.00	1.000
21. How often parents eat vegetables	2.29	2.29	0.00	1.000
Physical Activity	10.14	10.59	0.45	0.448
22. Days of 60 minutes moderate/vigorous	5.34	5.55	0.21	0.550
23. Days of 30 minutes outdoor play	4.79	5.03	0.24	0.446

Demographics

Average Age	10.1
Gender	
Males	30

Females	25

Control Group

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.55	0.66	0.10	0.223
4. Milk	1.43	1.41	-0.02	0.804
5. Yogurt or cheese	0.39	0.44	0.05	0.425
6. Cereal	0.83	0.80	-0.03	0.613
8. Vegetables	1.24	1.39	0.15	0.163
9. Fruit	1.46	1.60	0.14	0.192
10. Juice	1.35	1.28	-0.07	0.391
11. Water	3.19	3.25	0.06	0.595
15. Breakfast	0.86	0.91	0.05	0.109
Total: fruit & vegetable (no juice)	2.70	2.99	0.29	0.088
Total: fruit, vegetable, juice	4.06	4.27	0.22	0.270
Total: healthy foods (Q3-6, 8-11)	10.21	10.67	0.46	0.156
Less Healthy Dietary Behaviors				
7. French fries or chips	0.85	0.85	0.00	1.000
12. Punch, sports drinks, fruit-flavored drinks	1.13	0.98	-0.15	0.063
13. Soda or soft drinks	0.65	0.64	-0.02	0.810
14. Cookies, cakes, other sweets	1.00	0.85	-0.15	0.018
Total: less healthy foods (Q7, 12-14)	3.63	3.31	-0.32	0.095
Trying New Foods	2.28	2.22	-0.07	0.401
16. Trying new fruits	1.22	1.24	0.02	0.580
17. Trying new vegetables	1.07	0.98	-0.09	0.094
Home Access	3.14	3.39	0.24	0.002
18. Fruits to eat at home	1.68	1.76	0.09	0.041
19. Vegetables to eat at home	1.48	1.63	0.15	0.001
Perceived Parental Consumption	3.99	4.25	0.26	0.027
20. How often parents eat fruit	2.01	2.09	0.08	0.260
21. How often parents eat vegetables	1.97	2.18	0.21	0.004
Physical Activity	5.68	7.28	1.60	0.000
22. Days of 60 minutes moderate/vigorous	2.74	3.53	0.79	0.000
23. Days of 30 minutes outdoor play	2.94	3.75	0.81	0.000

Demographics

Average Age	9.4
Gender	
Males	61

Females	66

Network-funded contractor:	The Regents of UC on behalf of UC Cooperative Extension in Alameda County (#11-10244)
Contract number:	10244)
Information provided by :	Lucrecia Farfan Ramirez & Jasmine Chan
Telephone:	510-639-1270 & 510-639-1273
Date:	8/2/2012
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Section 1

1. Project Description and Goals

Project Name:	Nutrition Education Training Academy (NETA)
Target Population:	18-59 parents of early childhood children
Primary Curriculum Used:	TIPs for Parents of Preschool Children
Secondary Curriculum Used:	

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

The NETA parent component of the program uses "Tips for Parents of Preschool Children," for the corresponding month. "Tips for Parents" is a NETA publication published monthly and features the harvest of the month. NETA "Tips" harvest followed OUSD promotion of locally grown produce. "Tips for Parent's is delivered monthly along with Tips for Busy Early Childhood Professionals," a classroom-based publication for teachers. NETA "Tips" is similar to the Networks' Harvest of the Month. During Lesson 2 or 3 parents were given disposable cameras to capture the healthy meals they prepared at home and share with the class.

Tips for Parents has two sections:

Section 1--Front page: General Information that includes: Nutrition and Nutrition Facts, Produce Tips (selection, buying, storing), Taste Test and Recipe featuring the Fruit/Vegetable of the Month,

Section 2—Back page: Parent-Child Activity that reinforces the classroom base-activities. It includes What Should Parents Know, and Family Physical Activity and Information about the latest classroom activity. Tips for Parents and Busy Professional are reviewed and approved by the Network for Healthy California

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Physical Activity is included with each lesson to mirror the information included in section 2 of the monthly "Tips". Staff demonstrates how to do physical activity with their preschool children. Examples are: family activity circuit (stretch, squat, jump), "Bridges & Tunnels," "Jump the River," and other movements to develop motor skills. Other age-appropriate network publications like "Shape of Yoga." are also used.

In 1-2 paragraphs, please provide a description of standardized training:

Each class covers one lesson and includes approximately 20 minutes of nutrition education/physical activity plus 20 minutes of cooking/food preparation. Each lesson covers "Tips for Parents," as well as activities to reinforce behavior change related to vegetable and fruit consumption. Each lesson has a goal-setting activity at the end of class. Participants are asked to discuss with their partner and complete their plans for goal setting. For the purpose of this evaluation we selected early childhood centers located close to the produce markets available at elementary schools. Supervisor meets with NETA staff weekly to discuss past lessons and prepare for future ones monitors evaluation. The goal is to increase access to fresh and affordable produce, along with the "Tips" classes to support behavior change in vegetable and fruit consumption.

In 1-2 paragraphs, please provide a description of standard administration of data collection

Network staff read each question and answers options out loud and then each child selects the best answer for them. Surveys are reviewed (onsite) by Network staff for any blanks or unclear responses to have clarified on a one-to-one basis as necessary. This process is used for each site.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

NETA staff administered all pre-tests prior to starting nutrition education. 5 lessons/classes were delivered. Post-tests were administered at the end of the 5 classes. For the lessons we used the "Tips for Parents of Preschool Children". Tips

for Parents is a NETA publication published monthly and features the harvest of the month. NETA "Tips" harvest followed OUSD promotion of locally grown produce. The series consisted of 5 lessons. Each individual class covers one lesson from the Tips for Parents and includes approximately 20 minutes of nutrition education/physical activity plus 20 minutes of cooking/food preparation. Lesson includes: Nutrition and Nutrition Facts, Produce Tips (selection, buying, storing), Taste Test and Recipe featuring the Fruit/Vegetable of the Month. Parent-Child Activity that reinforces the classroom base-activities. It includes What Should Parents Know, and Family Physical Activity and Information about the latest classroom activity. Participants receive recipes they can prepare at home at the end of the class.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 50 adults who participated in Nutrition Education Training Academy (NETA) will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Early Childhood Development Centers

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	85
How many sites?	13
How many classrooms?	17

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Food Behavior Checklist (cups)

Goal 2/Objective 2	0

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	5

	Intervention	Control
Pre-test:	1/17/2012 to 6/5/2012	NA
Start of Intervention Date	1/17/2012	NA
End of Intervention Date	6/5/2012	NA
Post-test:	2/21/2012 to 6/5/2012	NA
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

A total of 180 parents participated in the training. We used the Fruit and Vegetable Checklist as an evaluation measurement. 180 participated in the pre-tests and 150 post-tests. Eighty-four participants match pre- and post-tests and completed all 5 lessons. Most participants completed the lessons in sequence, however, a subset of participants attended 1 or 2 make-up lessons. Make-up lessons were done either individually or in groups.

Intervention Process

• Parent groups . Met at 13 sites and hosted 17 five-series classes (4 sites had both AM and PM classes). Groups were scheduled to meet once a week, but we had to make several changes in the delivery dates. Due to issues with the child development centers, educators, or parent absentees.

• Frequency of meetings. Some class groups met once a week, while others met bi-monthly at a regular, scheduled time. The challenge of reaching and retaining parents, as well as working within a school calendar, required flexibility in scheduling classes.

• Nutrition Intervention: "Tips for Parents of Preschool Children" for the delivery of the lessons.

• Make up lessons were offered for those interested in completing all the 5 series. Make up lesson were available either individually and/or as a group.

Participants

• Total # of participants recruited 234

• 85 pre- and post-matched

• All of the 85 parents in the evaluation were adults, 18 to 59 years of age.

• Gender: 80 females, 5 male.

• 77 of the 85 parents were Hispanic/Latino and 8 were non-Hispanics

Results

Individual Questions:

Analysis of all 85 participants (Total Group) showed a statistically significant (p=0.018) increase in mean consumption of fruits and vegetables as snacks (pre-test 2.99; post-test 3.28) on a scale of 0-4. Plus, there was a statistical significance in different kinds of fruits (P=0.011) and vegetables (P=0.004) consumed daily. On a scale of 1-4, the mean of different kinds of fruits consumed daily increased from pre-test=2.76 to post-test=3.05; while the mean of different kinds of vegetable consumed daily increased from pre-test=2.69 to post-test=3.01. Furthermore, the mean vegetables eaten per day (scale 0-3) showed a statistically significant (P=0.006) from pre-test=1.24 to post-test=1.44. Plus, the consumption of 2 or more vegetables at the main meal (scale 1-4) exhibited a statistically significant increase of pre-test=2.58 to post-test=2.86.

Results from two questions on the checklist were not significant. These questions were "Did you have citrus fruit or citrus juice during the past week," and "Fruit: How much do you eat each day?"

Fruit & Vegetable Consumption Overall:

All measures of fruit and vegetable consumption were combined to create overall measures of fruit and vegetable intake. There was a significant increase (P=0.034) in consumption of fruits overall from the mean of 1.98 to 2.11 (on a scale of 0-3). There was also a significant increase (P=0.000) in consumption of vegetables overall from the mean of 1.50 to 1.77. Combining both fruits and vegetable consumption, there was a significant increase (P=0.001) in the mean from 4.15 to 4.64. The 2010 USDA Dietary Guidelines recommends 2 cups/day fruit and 2 ½ cups/day of vegetables. Through the influence and education received during our 5-series nutrition class, the overall mean consumption of fruits of the 85 participants changed from below the USDA recommendation (pre-test=1.98 cups) to meeting the daily recommendations (post-test=2.11 cups). Self-reported mean vegetable consumption was below the USDA recommendations (pre-test=1.5 cups; post-test=1.77 cups. Cumulatively, mean consumption of vegetables reported by our participants increased during our intervention. Additionally, the variety of fruit and vegetable consumption consumed daily increased.

b. Description of how evaluation results will be used:

Most of the 234 parents recruited were Hispanic/Latinos. Only 85 or 36% completed all the 5 required lessons and pre- and post test. It is important to highlight that 77% of the parents completed the pre-test and 64% the post -test. The participation rate in the pre-test is relative high, which shows an initial degree of interest from the parents. It seems that parent's participation rate decreases when the number of session increases. In previous year we learned that the frequency as well as the delivery format influenced participation rate. Offering parents a range of training hours options increase the participation rate. Parents continue to face financial struggle and use their free time to work and have difficulty juggling time.

Delivery modality of 40 minutes of education + discussion and 20 minutes of food preparation + cooking seems to be the most appropriate for parents with limited language skills. Tips for Parents seems to be appropriate, but should be translated into Spanish. Using "Tips" of the month strengthens the educational intervention for children beyond the classroom to the home. It also involves the parent in the education of the child, which is an important component of early childhood education.

From our evaluation, we learned that the majority of our parents did not significantly change their eating pattern for fruit. Since we followed the Oakland Unified School District HOM cycle—the chosen lesson months of Jan=May featured 3 months of vegetables and 2 months of fruit. Surprised by the results, we plan to evenly focus the HOM lessons by showcasing 3 fruits and 3 vegetables throughout the lessons.

Lessons learned:

1. Taste Testing: A useful activity that motivates parents to taste produce they might be unfamiliar with. However, the participatory learning process is limited. Participatory learning model of delivery is particular important for low-literacy, limited English speakers. Next year we hope to have more options for participatory learning.

2. Photo Dairy: Parents were given a camera to take pictures of the meals they prepared at home, but many were private or forgetful to share. We will eliminate this activity next years

3. Parent Participation: Parents are interested in learning about how to improve their children meals and eating habits, but their time is limited. They will not attend more than 3 lessons. Incentives like field day at the OUSD Produce Markets and cooking demonstration with seasonal produce might increase participation.

4. HOTM Cycle: We followed the OUSD HOTM cycle which featured 3 vegetables (greens, cabbage, carrots) and 2 fruits (orange and berries). This may have skewed our results in question #3 because we focused on more vegetables than fruits. Next year, we plan to balance the HOM lessons by showcasing 3 fruits and 3 vegetables during the lessons.

5. Class Scheduling: Offering classes year-round at different locations besides the ECE sites and evening classes for the family might be an option since some schools elementary schools are offering dinner for children.

6. Staff: Support staff delivering the lessons must be bilingual and bi-cultural. A higher percentage of the population we served has limited English skills. We have been in the process of hiring Community Health Workers with language and bi-cultural skills and will continue to do this.

7. Data Cards: Many of the participants did not understand all the questions on the CALFresh Data Cards. Confusion arose over how to respond to question 6, which categorized their ethnicity. Next year we will spend more time explaining how to accurately fill out the card.

7. Point of Contact

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Phone Number:	510-639-1270 & 510-639-1273
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8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.

"Creating Healthful Communities Early Childhood Program: A Food System Approach to Create Healthy Communities," March 5-6, 2012, Network for a Healthy California Statewide Conference, Sacramento, CA

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

0

c

	Food Behavior Checklist
	Fruit and Vegetable Checklist
	Fruit and Vegetable Inventory

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.99	3.28	0.29	0.018
Q2. Citrus fruit or juice past week (0=N; 1=Y)	0.93	0.93	0.00	1.000
Q3. Fruit eaten per day (0-3)	1.39	1.50	0.11	0.184
Q4. Different kinds of fruit daily (1-4)	2.76	3.05	0.28	0.011
Q5. Different kinds of vegetable daily (1-4)	2.69	3.01	0.32	0.004
Q6. Vegetables eaten per day (0-3)	1.24	1.44	0.20	0.006
Q7. 2 or more vegetables at main meal (1-4)	2.58	2.86	0.28	0.007

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruits (Q2, Q3, Q4) (Range 0-3)	1.98	2.11	0.13	0.034
Veggies (Q5, Q6, Q7) (Range 0-3)	1.50	1.77	0.27	0.000
Fruits & Veggies (all) (Range 0-7)	4.15	4.64	0.50	0.001

Demographics

Hispanic			
yes	77	**Average Age**	#DIV/0!
no	8	**Gender**	
Race		Males	5
American Indian or Alaskan Native	0	Females	80
Asian	0		
Black or African American	0		
Native Hawaiian or Other Pacific Islander	0		
White	0		

Network-funded contractor:	Ukiah USD - 10-10115
Contract number:	10-10115
Information provided by :	Terry d'Selkie
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Date:	6/18/2012
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Section 1

1. Project Description and Goals

Project Name:	Growing Healthy Kids From the Ground Up
Target Population:	10-12 years/ 4th and 5th grades
Primary Curriculum Used:	Harvest of the Month
Secondary Curriculum Used:	PowerPlay!

In 1-2 paragraphs, please provide a description of the nutrition education intervention:

Our Garden-Enhanced Nutrition Education Program has 4 major elements. The first is nutrition education in the classroom and gives students basic nutrition knowledge like where our food comes from, caloric balance and the benefits and sources of vitamins and minerals, proteins, fats, complex carbohydrates and fiber. It also includes the importance of breakfast, the harmful effects of sugar in sugar sweetened beverages, interpreting food labels and preparation of healthy foods for snacks and meals. There are approximately 9 lessons in the classroom. The second major element is Harvest of the Month activities, which include taste testing and food preparation, learning about the specific produce and nutrition facts. There are 9 months of Harvest of the Month. Gardening comprises the third element. Students become, via planting and harvesting, familiar with common fruits and vegetables in our Harvesting Health Network approved curriculum. There are 7 lessons in the garden. The fourth element of our program is the influencing of the school cafeteria choices. We do games and role playing. This is also an incentive program for consuming fruits and vegetables in the cafeteria.

In 1-2 paragraphs, please provide a description of the physical activity intervention:

Physical activity is integrated into our garden-enhanced nutrition portion of the program. We also do physical activity in our Harvesting Health Curriculum and with our HOTM workbooks. Physical activities are done approximately 10 times during the intervention.

In 1-2 paragraphs, please provide a description of standardized training:

HOTM trainings are done for every teacher/garden-nutrition specialist each year. We also do monthly trainings with Harvesting Health, nutrition education basics and how to administer the pre and post surveys.

We ALL give the pre survey the first two weeks of Sept. and the post survey the last two weeks of May. We have a survey training to go over all instructions and answer questions. Surveys are in color, given in 1 class period and then collected from students.

The following list is what ALL students receive from their lessons: Harvest of the Month lessons, basic nutrition facts about fruits and vegetables, rethink your drink, importance of healthy breakfast, food and ingredient labels, My Plate curriculum, Harvesting Health Garden-Enhanced Nutrition Education. Elective topics include farm field trips, Food Inc. comparison lesson and some individual choices of nutrition education by teachers.

In 1-2 paragraphs, please provide a description of standard administration of data

All surveys were administered in the same way, read aloud in the classroom by the teacher as the students responded on paper.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

All teachers are provided the same materials and the same training, but each individual teaching style is a little different.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 600 4th and 5th grade students who participated in Growing Healthy Kids From the Ground Up will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	Classrooms

4. Describe how assignment to these groups was carried out:

a. Intervention:	Other (Specify in next field)	Specify Other: 6 schools chosen from 3 school districts
How many matched surveys?	712	
How many sites?	6	
How many classrooms?	32	
b. Control:		
How many matched surveys?	0	
How many sites?	0	
How many classrooms?	0	

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	Network Youth Survey

Were any other measures used?	no

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	16

	Intervention	Control
Pre-test:	8/25/2011 to 9/23/2012	NA
Start of Intervention Date	9/26/2011	NA
End of Intervention Date	5/4/2012	NA
Post-test:	5/8/2012 to 6/1/2012	NA
Follow-up:	NA	NA

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

d. How were the surveys administered?

...read aloud to classroom

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Our focus was primarily on increasing fruits and vegetable consumption. We increased the average consumption of vegetables by roughly 1/2 time per day (.55) about a 35% increase. Fruit consumption was increased by (.42) about a 22% increase. Both of these increases are statistically significant (.000)

Milk consumption increased 10% and was statistically significant (.001)

Breakfast consumption increased about 7% and was statistically significant (.004)

Total healthy foods as defined by the survey increased about 13% and was statistically significant (.000)

Less healthy foods, particularly punch, sports drink, fruit-flavored drinks (.046) and cookies, cakes and other sweets (.025) decreased by about 10% and were statistically significant.

Students tried new foods and there was an increase of fruits and vegetables combined of about 5% and was statistically significant (.008)

Reported physical activity increased 28% and was statistically significant (.000)

When we did a frequency distribution we found that the number of students who had no vegetables dropped by 26% (196-145). We found the number of students who had no fruit dropped 40% on the post survey 125-75).

b. Description of how evaluation results will be used:

We saw promising results and plan to replicate this same evaluation next year.

7. Point of Contact

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Phone Number:	(707) 462-2561
Email Address:	tdselkie@uusd.net

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation. 0

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!* 0

c. Did you use the Network Youth Survey or the Network High School Survey Yes

d. Optional Surveys

	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys

for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

0

Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Dietary Behaviors				
3. Cheese	0.93	1.04	0.11	0.018
4. Milk	1.37	1.51	0.14	0.001
5. Yogurt or cheese	0.44	0.51	0.07	0.039
6. Cereal	0.74	0.83	0.09	0.017
8. Vegetables	1.58	2.13	0.55	0.000
9. Fruit	1.91	2.33	0.42	0.000
10. Juice	1.42	1.52	0.10	0.124
11. Water	3.64	3.69	0.05	0.534
15. Breakfast	0.85	0.91	0.06	0.004
Total: fruit & vegetable (no juice)	3.49	4.46	0.97	0.000
Total: fruit, vegetable, juice	4.91	5.98	1.07	0.000
Total: healthy foods (Q3-6, 8-11)	12.03	13.57	1.54	0.000
Less Healthy Dietary Behaviors				
7. French fries or chips	0.71	0.76	0.05	0.148
12. Punch, sports drinks, fruit-flavored drinks	0.92	0.82	-0.09	0.046
13. Soda or soft drinks	0.55	0.56	0.01	0.858
14. Cookies, cakes, other sweets	0.84	0.74	-0.10	0.025
Total: less healthy foods (Q7, 12-14)	3.02	2.89	-0.13	0.213
Trying New Foods	2.45	2.57	0.12	0.008
16. Trying new fruits	1.35	1.42	0.07	0.013
17. Trying new vegetables	1.09	1.15	0.05	0.058
Home Access	3.17	3.46	0.29	0.000
18. Fruits to eat at home	1.62	1.75	0.13	0.000
19. Vegetables to eat at home	1.51	1.68	0.17	0.000
Perceived Parental Consumption	4.49	4.75	0.26	0.001
20. How often parents eat fruit	2.18	2.28	0.10	0.026
21. How often parents eat vegetables	2.22	2.40	0.18	0.000
Physical Activity	#REF!	#REF!	#REF!	#REF!
22. Days of 60 minutes moderate/vigorous	3.65	4.68	1.04	0.000
23. Days of 30 minutes outdoor play	#REF!	#REF!	#REF!	#REF!

Demographics

Average Age	9.4

Gender	
Males	#VALUE!
Females	#VALUE!

FFY12 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Ventura USD vol - 08-85167
Contract number:	08-85167
Information provided by :	Alise Echele
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1. Project Description and Goals

Project Name:	Ventura USD
Target Population:	Targeted 7th grade students for IOE. Entire program targeted school-age children grades K-12.
Primary Curriculum Used:	Contractor developed, PM-approved lessons
Secondary Curriculum Used:	Harvest of the Month

In 1-2 paragraphs, please provide a description of standard administration of data

7th grade students (5 classrooms), who participated in the series of nutrition education classes, filled out the Network-approved Food Preference Survey at the beginning of the school year prior to any nutrition intervention. All students completed this survey on the same date. The same group of students filled out the same Food Preference Survey at the end of the school year after all classes were completed.

In 1-2 paragraphs, please provide a description of standardization across all classrooms

Each classroom participated in the same intervention each month. Identical lessons and fruit/vegetable taste tests were executed monthly.

Project Goals and Objectives (for IOE listed on your SOW)

Goal 1:

SNAP-Eligible families (<185% federal poverty level) will consume the recommended daily amounts of colorful fruits and vegetables and participate in daily physical activity.

IOE Objective 1 (Fruit and Vegetable Consumption):

By Sept 30, 2012, a sample of 135 7th grade students who participated in nutrition education and cooking lessons will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

2. Evaluation Design

What design was used?	Pre-test and Post-test without a comparison (control) group

3. Unit of Assignment

What was the unit of assignment to intervention and control groups?	N/A

4. Describe how assignment to these groups was carried out:

a. Intervention: Convenience Sample

How many matched surveys?	135
How many sites?	1
How many classrooms?	5

b. Control:

How many matched surveys?	0
How many sites?	0
How many classrooms?	0

5. Impact Measures

a. Describe the measure(s) associated with each intervention goal. Select relevant measure(s) from the lists below, and if additional measures were used, please describe in the space provided.

Goal 1/Objective 1	Network Youth Survey
Goal 2/Objective 2	Preferences

Were any other measures used?	0

b. Describe the points at which data were collected.

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	0
How many lessons from the intervention occurred *after* pre-tests?	7

	Intervention			Control
Pre-test:	10/5/2012	to	10/5/12012	to
Start of Intervention Date	10/5/2012			NA
End of Intervention Date	4/25/2012			NA
Post-test:	4/25/2012	to	4/25/2012	to
Follow-up:	to			to

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	n/a

d. How were the surveys administered?

...self-administered with classroom level guidance

6. Findings

a. Results: Describe the measurement results for the intervention group, and if relevant, for the control/comparison group. Compare intervention and control/comparison groups at each measurement point, by individual measure. Describe tests of statistical significance used. Summarize and interpret findings.

Background

To assess the impact of the VUSD Nutrition Network program,7th grade students at Anacapa Middle School were administered the Youth Network Survey and the Food Preferences survey in October and May of the

2011/12 school year. This was the first year of Network participation for Anacapa Middle School, although many of its students attended elementary schools participating in Network activities, including Harvest of the Month.

Consumption

Students were asked one question each about the consumption of milk, yogurt/cottage cheese, cereal, French fries/chips, vegetables, fruit, punch/sports drinks, fruit juice, water, non-diet soda, and sweet rolls/doughnuts. For each item, students were asked if they had eaten that item the previous day (e.g., "Yesterday, did you eat any vegetables?"). Response options included No, 1 time, 2 times, and 3 times or more. Items were coded so that 0 indicated none eaten and 3 indicated 3 or more servings.

Among the Anacapa Middle School students surveys, significant increases from pre- to post-test were seen in the consumption of fruit ($t = 2.82$, $df = 127$, $p = .006$) and fruit juice ($t = 2.12$, $df = 122$, $p = .04$), as well as cheese ($t = 2.99$, $df = 128$, $p = .003$). A significant decrease was seen in the consumption of French fries ($t = 2.09$, $df = 1287$, $p = .04$). With respect to beverage choices, no statistically significant changes were seen in the consumption of water, sports drinks, or soda.

Taste Preferences

At both pre- and post-test, students were asked about taste preferences for ten fruits and eleven vegetables. Of the twenty-one total fruits/vegetables, nine (four fruits, five vegetables) were included in Harvest of the Month (HOM) activities at Anacapa Middle School. For each fruit/vegetable, students were asked to indicate if they like this fruit/vegetables a lot (score=4), like it a little (score=3), don't like it (score=2), or don't know what it is (score=1). These questions were asked at both pre- and post-test in order to determine any changes in students' taste preferences occurring over the course of the school year, especially as related to HOM activities. Analyses included a comparison of pre- and post-test means for each fruit/vegetables using a paired-sample t-test.

Analysis of results indicates increases in taste preferences for the following fruits and vegetables:

Apples ($t = 2.52$, $df = 127$, $p = .013$)
Kiwi ($t = 2.45$, $df = 126$, $p = .006$)*
Oranges ($t = 2.30$, $df = 127$, $p = .023$)*

A decrease in taste preferences was seen for strawberries ($t = -2.14$, $df = 127$, $p = .034$).

Of the three fruits showing increased taste preferences over the course of the 2011/12 school year, two were Harvest of the Month fruits. Notably, the only item for which there was a decrease in taste preference was strawberries, also a Harvest of the Month selection. It is important to note, though, that the change for strawberries from pre- to post-test was quite small. At pre-test, the average ranking of strawberries was 3.91, or just slightly below the maximum ranking of 4 ("I like this a lot"). At post-test, the average ranking was 3.85, a very small difference from pre-test. Given the categorical nature of the question, it is likely that a ceiling effect was obtained in the pre-test; that is, the scores were so high at pre-test for strawberry preferences that there was little room from improvement at post-test. Further observation of taste preferences for strawberries indicates that 92% of students stated they "like strawberries a lot" at pre-test, compared to 88% at post-test. As is common in any type of research, whenever you have such a high number scoring at the top of a scale, that high number is likely to move towards a more central standing by post-test, i.e., regression to the mean.

Exercise and Outdoor Play

VUSD did not set specific Network goals related to increasing exercise and outdoor play among participating students. However, there have been several initiatives within the district aimed at improving physical activity among students, so questions related to exercise and outdoor play were included on the Youth Survey. Analysis of this data showed a significant increase in the number of days students reported exercising for a minimum of 60 minutes ($t = 3.24$, $df = 127$, $p = .013$). At pre-test, students reported exercising 60 minutes or more on an average of 3.8 days; this increased to 4.4 days at post-test. No corresponding change was seen in the number of days students reported participating in a minimum of 30 minutes of outdoor play.

The exercise findings are encouraging for the various programs that have been implemented in VUSD related

to exercise, although additional information is necessary in order to draw any firm conclusions regarding the efficacy of specific programs.

Qualitative Findings

Since Anacapa Middle School was new to Network programming this contract year, we were unsure how the school community would respond at first. Two 7th grade science teachers volunteered to participate in the 7-class nutrition series. These science teachers were exceptional. They excelled at teaching the curriculum and generated enthusiasm for the importance of nutrition education throughout the school environment. By the end of the year, all science teachers had requested nutrition technical assistance to incorporate this content into their class time. Students responded well to the intervention and were excited to participate in the interactive lessons and taste tests. Cafeteria staff observed this student enthusiasm and increased preference for fruits and vegetables at lunchtime. Cafe staff observed increased student selection of Harvest of the Month fruits and vegetables during mealtimes as a result of classroom interventions. In addition, students requested the cooking in the classroom recipes during meal times. The cafe manager was glad to observe this change and requested more logistical coordination between HOTM taste tests/cooking in the classroom and the menu calendar so that students first experience the recipes and fruit/vegetables in the classroom prior to lunchtime preparation. As a result, we look forward to strengthening the classroom and cafeteria connection in order to support our main objective: increase fruit and vegetable consumption during the school day.

Summary

The evaluation of the Network for a Healthy California program implemented in VUSD shows encouraging results at Anacapa Middle School. Over the course of the 2011/12 school year, students reported eating more fruits and cheese, as well as drinking more fruit juice and eating fewer French fries. Students showed increased taste preferences for two of the Harvest of the Month selections, kiwis and oranges, and students showed higher levels of exercise at pre-test than at post-test. These findings indicate the program is on the right track, although clearly more time is needed to achieve results that have a more wide-ranging positive impact on students' health and well-being.

b. Description of how evaluation results will be used:

Evaluation results show the program implemented at Anacapa Middle School is headed in the right direction. Because this was the first year of the program at Anacapa Middle School, these positive findings suggest that the program should continue in a similar direction in the next school year. One potential avenue to further increase student healthy eating and physical fitness is the implementation of programs aimed at parents. Over the course of the next month, the evaluator will conduct more in-depth analyses of the Network Youth Survey as well as other surveys administered within VUSD, including a parent survey conducted for the purposes of another grant. The results of the two surveys and other data collected in VUSD will be triangulated to provide additional information on areas of weaknesses in VUSD's health and nutrition programs. The Network Survey is helpful in providing basic information about the needs of schools, but a far more comprehensive view is necessary to determine program strengths and weaknesses and areas of need in targeted improvement. It is expected that these analyses will be completed by mid-August.

7. Point of Contact

Name:	Alise Echele
Phone Number:	805-641-5000 x 1310
Email Address:	alise.echele@venturausd.org

8. Relevant Journal References

a. List any abstracts or posters that were written or presented on this evaluation.	N/A

b. List any journal articles that describe the intervention you conducted. Include evidence based curricula and tested materials such as *PowerPlay!*

N/A

c. Did you use the Network Youth Survey or the Network High School Survey

Yes

d. Optional Surveys

X	Food Preferences Survey	
	Knowledge surveys various available; identify scale(s) from Compendium:	0
	Norms surveys for children various available; identify scale(s) from Compendium:	0
	Outcome Expectations for Fruits and Vegetables (Reynolds)	
	Outcome Expectations for Fruits and Vegetables (Baranowski)	
	Physical Activity Preferences for Children and Adults	
	Self-Efficacy surveys for children various available; identify scale(s) from Compendium:	0

e. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

f. Will you use any other tools or methods, such as observations or food production records, to evaluate your intervention? If so, please briefly describe them below.

During the course of the 2011/12 school year, VUSD also implemented a Carolyn M. White Physical Education grant, with the goal of increasing physical activity and fitness among its students. This program involved a number of physical fitness/activity measures, including BMI measurements on students, pedometer tracking of students' activity, and several surveys. A parent survey was also administered at the end of the school year, which included questions on health and safety programs in VUSD. These data sources will all play a useful role in evaluating the progress of VUSD health and nutrition programs.

		Count
age	10 yrs	0
	11 yrs	10
	9-11	10
	12 yrs	113
	13 yrs	6
	12-13	119
	14 yrs	0
	15 yrs	0
	14-15	0

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Yesterday, eat cheese? post	1.29	129	.945	.083
	cheese	1.02	129	.857	.075
Pair 2	Yesterday, drink milk? (post)	1.57	129	.982	.087
	milk	1.60	129	.955	.084
Pair 3	Yesterday, eat yogurt? post	.44	128	.684	.060
	yogurt	.32	128	.588	.052
Pair 4	Yesterday, eat cereal? post	.61	129	.641	.056
	cereal	.64	129	.672	.059
Pair 5	Yesterday, eat fries? post	.52	128	.687	.061
	fries	.67	128	.764	.068
Pair 6	Yesterday, eat vegetables? post	1.94	128	1.413	.125
	vegetables	1.90	128	1.505	.133
Pair 7	Yesterday, eat fruit? post	2.16	128	1.513	.134
	fruit	1.77	128	1.404	.124
Pair 8	Yesterday, drink fruit juice? post	1.05	129	1.096	.096
	fruit_juice	.84	129	.798	.070
Pair 9	Yesterday, drink water? post	3.48	129	1.485	.131
	water	3.43	129	1.413	.124
Pair 10	Yesterday, have sports drink? post	.62	128	.785	.069
	sports_drink	.64	128	.801	.071
Pair 11	Yesterday, have soda? post	.51	127	.755	.067
	soda	.57	127	.740	.066
Pair 12	Yesterday, eat doughnuts, cookies, brownies, cake, pie? post	.48	126	.690	.061
	doughnuts	.51	126	.654	.058

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Yesterday, eat cheese? post - cheese	.271	1.029	.091	.092	.451	2.995	128	.003
Pair 2	Yesterday, drink milk? (post) - milk	-.031	1.075	.095	-.218	.156	-.328	128	.744
Pair 3	Yesterday, eat yogurt? post - yogurt	.117	.800	.071	-.023	.257	1.658	127	.100
Pair 4	Yesterday, eat cereal? post - cereal	-.023	.765	.067	-.157	.110	-.345	128	.730
Pair 5	Yesterday, eat fries? post - fries	-.148	.804	.071	-.289	-.008	-2.088	127	.039
Pair 6	Yesterday, eat vegetables? post - vegetables	.039	1.239	.109	-.178	.256	.357	127	.722
Pair 7	Yesterday, eat fruit? post - fruit	.383	1.538	.136	.114	.652	2.817	127	.006
Pair 8	Yesterday, drink fruit juice? post - fruit_juice	.209	1.123	.099	.014	.405	2.117	128	.036
Pair 9	Yesterday, drink water? post - water	.054	1.427	.126	-.194	.303	.432	128	.667
Pair 10	Yesterday, have sports drink? post - sports_drink	-.023	.926	.082	-.185	.139	-.286	127	.775
Pair 11	Yesterday, have soda? post - soda	-.063	.898	.080	-.221	.095	-.791	126	.430
Pair 12	Yesterday, eat doughnuts, cookies, brownies, cake, pie? post - doughnuts	-.024	.815	.073	-.167	.120	-.328	125	.743

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	apples_post	3.80	128	.459	.041
	apples	3.68	128	.531	.047
Pair 2	bananas_post	3.62	128	.641	.057
	bananas	3.61	128	.592	.052
Pair 3	grapes_post	3.79	127	.482	.043
	grapes	3.76	127	.526	.047
Pair 4	kiwi_post	3.48	127	.754	.067
	kiwi	3.36	127	.773	.069
Pair 5	nectarine_post	3.35	128	.919	.081
	nectarine	3.20	128	1.004	.089
Pair 6	oranges_post	3.70	128	.538	.048
	oranges	3.60	128	.632	.056
Pair 7	peaches_post	3.56	128	.707	.063
	peaches	3.55	128	.685	.061
Pair 8	pears_post	3.43	126	.698	.062
	pears	3.36	126	.732	.065
Pair 9	strawberries_post	3.85	128	.436	.039
	strawberries	3.91	128	.365	.032
Pair 10	tangerines_post	3.71	126	.594	.053
	tangerines	3.59	126	.707	.063
Pair 11	avocado_post	3.13	128	.845	.075
	avocado	3.05	128	.850	.075
Pair 12	broccoli_post	3.31	128	.781	.069
	broccoli	3.26	128	.816	.072
Pair 13	cabbage_post	2.98	127	.807	.072
	cabbage	2.88	127	.832	.074
Pair 14	carrots_post	3.63	128	.615	.054
	carrots	3.59	128	.633	.056
Pair 15	corn_post	3.62	127	.666	.059
	corn	3.65	127	.609	.054
Pair 16	green_beans_post	3.08	126	.816	.073
	green_beans	3.08	126	.786	.070
Pair 17	lettuce_post	3.67	127	.592	.053
	lettuce	3.59	127	.694	.062
Pair 18	peas_post	2.82	127	.811	.072
	peas	2.91	127	.777	.069
Pair 19	pumpkin_post	2.91	127	.821	.073
	pumpkin	2.89	127	.809	.072
Pair 20	spinach_post	3.01	127	.895	.079
	spinach	2.92	127	.869	.077
Pair 21	tomatoes_post	3.01	127	.868	.077
	tomatoes	2.98	127	.917	.081

Paired Samples Test

		Paired Differences					t	df
					95% Confidence Interval of the Difference			
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper		
Pair 1	apples_post - apples	.117	.527	.047	.025	.209	2.517	127
Pair 2	bananas_post - bananas	.008	.554	.049	-.089	.105	.160	127
Pair 3	grapes_post - grapes	.024	.388	.034	-.044	.092	.687	126
Pair 4	kiwi_post - kiwi	.118	.544	.048	.023	.214	2.449	126
Pair 5	nectarine_post - nectarine	.156	.943	.083	-.009	.321	1.875	127
Pair 6	oranges_post - oranges	.102	.499	.044	.014	.189	2.301	127
Pair 7	peaches_post - peaches	.008	.494	.044	-.079	.094	.179	127
Pair 8	pears_post - pears	.071	.568	.051	-.029	.172	1.411	125
Pair 9	strawberries_post - strawberries	-.055	.289	.026	-.105	-.004	-2.140	127
Pair 10	tangerines_post - tangerines	.119	.652	.058	.004	.234	2.048	125
Pair 11	avocado_post - avocado	.086	.628	.055	-.024	.196	1.549	127
Pair 12	broccoli_post - broccoli	.055	.566	.050	-.044	.154	1.094	127
Pair 13	cabbage_post - cabbage	.102	.744	.066	-.028	.233	1.551	126
Pair 14	carrots_post - carrots	.031	.601	.053	-.074	.136	.588	127
Pair 15	corn_post - corn	-.031	.576	.051	-.133	.070	-.616	126
Pair 16	green_beans_post - green_beans	.000	.681	.061	-.120	.120	.000	125
Pair 17	lettuce_post - lettuce	.079	.586	.052	-.024	.182	1.515	126
Pair 18	peas_post - peas	-.094	.660	.059	-.210	.021	-1.614	126
Pair 19	pumpkin_post - pumpkin	.016	.756	.067	-.117	.148	.235	126
Pair 20	spinach_post - spinach	.087	.564	.050	-.012	.186	1.731	126
Pair 21	tomatoes_post - tomatoes	.024	.660	.059	-.092	.140	.403	126

Custom Tables

	DK what this is		Dont like		Like a little		Like a lot	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row %
strawberries_post	0	0%	4	3%	11	9%	113	88%
strawberries	0	0%	4	3%	7	5%	124	92%

Custom Tables

	DK what this is		Dont like		Like a little		Like a lot	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row %
strawberries_post	0	0%	4	3%	11	9%	113	88%
strawberries	0	0%	4	3%	7	5%	124	92%

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	post_exercise	4.4031	129	2.05213	.18068
	pre_exercise	3.8140	129	2.20003	.19370
Pair 2	post_outdoorplay	3.7674	129	2.44474	.21525
	pre_outdoorplay	3.6124	129	2.26836	.19972

Paired Samples Test

		Paired Differences					t	df
					95% Confidence Interval of the Difference			
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper		
Pair 1	post_exercise - pre_exercise	.58915	2.06387	.18171	.22960	.94870	3.242	128
Pair 2	post_outdoorplay - pre_outdoorplay	.15504	2.52317	.22215	-.28453	.59461	.698	128

Form Approved OMB No. 0584-0542

Expiration Date: 08/31/2013

Supplemental Nutrition Assistance Program Education (SNAP-Ed)
EARS Reporting Form

OMB BURDEN STATEMENT: According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0584-0542. The time to complete this information collection is estimated to average 54 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. OMB #0584-0542 expires 08/31/2013.

State: California **Federal Fiscal Year: 2012**

Number of Implementing Agencies*: 1

Name of Each Implementing Agency*

California Department of Public Health Network for a Healthy California

***** An implementing agency is defined as an organization that has a contract/formal agreement with the State Supplemental Nutrition Assistance Program (SNAP) to develop and deliver nutrition education activities in the state. Attach additional pages if necessary.

DIRECT EDUCATION:

Items #1-6 ask for information about participants and activities associated with direct SNAP Education (SNAP-Ed). Direct Education is defined as interventions where a participant is actively engaged in the learning process with an educator and/or interactive media. Direct education provides an opportunity to obtain information about individual participants. For an activity to qualify as direct education, information on the number of individuals, SNAP participation status, age, gender, and race/ethnicity must be collected.

Example 1: An implementing agency conducts a series of nutrition sessions designed to increase fruit and vegetable intake. The educators collect enrollment data including name, age, race, ethnic group, SNAP participation and gender.

Example 2: The implementing agency provides nutrition education via kiosks at several locations. Participant using the kiosks provides identifying information including their SNAP status, ethnicity, age and gender by entering this data or by using codes that can be linked to this information by the implementing agency.

Situations that would not count as “direct education” include cases where an individual obtains nutrition education or materials or listens to a session but no demographic information is captured about the individual. This would count as indirect education.

Direct Education: SNAP-Ed Participants and Contacts

1a. Direct Education: SNAP-Ed PARTICIPANTS by Age and SNAP Status

Reporting an unduplicated count of direct education participants means providing the number of different individuals who receive any SNAP-Ed direct education. Each individual counts as one participant, regardless of the number of times he or she has participated in direct education activities. You are encouraged to provide actual unduplicated counts but if you are unable, you should estimate the number of individuals served.

- For Question 1a, indicate below if you are providing actual unduplicated counts or an estimate of SNAP-Ed direct education participants.

___ Actual Counts of Participants (unduplicated)

_X__ Estimated Counts of Participants

		A	B	C	D	E
		Less than 5 Years	**5-17 Years** **Grades K-12**	**18-59 Years**	**60 Years or More**	**All Ages Combined**
1	**Number of SNAP Recipients in SNAP-Ed**	20,328	592,223	25,012	906	638,469
2	**Number of All Other Participants in SNAP-Ed**	10,433	259,163	16,650	2,532	288,778
3	**Total Number of SNAP-Ed Participants**	30,761	851,386	41,662	3,438	927,247

If you reported an estimate in Question 1a, please describe in 100 words or less the methods used to estimate the number of participants.

The estimate was provided by school demographic data from the California Department of Education and data collection cards which allowed direct education participants to self-report their SNAP status, age, gender, race and ethnicity.

1b. Direct Education: SNAP-Ed CONTACTS by Age and SNAP Status

A “SNAP-Ed contact” is defined as an interaction in which a SNAP-Ed participant participates in a direct education activity. Each SNAP-Ed participant may have one or more SNAP-Ed contacts.

- For Question 1b, indicate below if you are providing actual counts or an estimate of SNAP-Ed direct education contacts.

___ Actual Counts of Contacts

__X_ Estimated Counts of Contacts

		A	B	C	D	E
		Less than 5 Years	**5-17 Years Grades K-12**	**18-59 Years**	**60 Years or More**	**All Ages Combined**
1	**Contacts with SNAP Recipients in SNAP-Ed**	193,954	2,473,865	32,234	1,589	2,701,642
2	**Contacts with All Other Persons in SNAP-Ed**	110,187	1,629,197	25,009	4,641	1,769,034
3	**Total Contacts of SNAP-Ed Participants**	304,141	4,103,062	57,243	6,230	4,470,676

If you reported an estimate in Question 1b, please describe in 100 words or less the methods used to estimate the number of contacts.

The estimate for SNAP contacts was calculated by data collection tool which utilizes data cards, Free and Reduced Price Meal data and census tract data where the direct education was implemented.

Instructions for Question 1a and 1b

- Row 1: Enter **the total number of participants (1a) and contacts (1b) who are SNAP recipients** by each age range and for all ages combined (Row 1; Columns A-E).

- Row 2: Enter the **total participants (1a) and contacts (1b) for all other (non- SNAP) persons** by each age range and for all ages combined (Row 2; Columns A-E). This includes persons who are eligible non-participants with respect to the SNAP combined with persons who are not eligible for the SNAP.

- Row 3: Enter the **total participants (1a) and contacts (1b) for SNAP-Ed by age category** (Row 3; Columns A-E). Each number in Row 3 should equal the sum of Rows 1 and 2 in that column.

Special Circumstances

○ If necessary, determine SNAP status among children (columns A and B) who receive SNAP-Ed services in school and child care settings by multiplying the number of children participating in SNAP-Ed at each school or child care facility by the percent of students enrolled in the **FREE** school lunch program.

Example: An elementary school program has 100 children participating in SNAP-Ed and the school's free lunch participation rate is 60%. In the "5-17 Years (grade K-12)" column, report 60 students under "Number of SNAP Participants in SNAP-Ed" and 40 students under "Number of All Other Participants in SNAP-Ed" for a total of 100 students.

○ Teen-age SNAP-Ed participants should be counted by their age for Question 1 even if they are parents.

Example: If the teen parent is 16 years old, they should be counted under Column B, 5-17 Years (Grades K-12). If the teen is 19 years old, they should be counted under Column C 18-59 Years.

2a. Direct Education: SNAP-Ed PARTICIPANTS by Gender

- For Question 2a, indicate below if you are providing an unduplicated count or an estimate of SNAP-Ed direct education participants.

___ Actual Counts of Participants (unduplicated)

__X_ Estimated Counts of Participants

		A	B
		Female	**Male**
1	**Number of SNAP-Ed Participants**	463,100	464,147

If you reported an estimate in Question 2a, please describe in 25 words or less the methods used to estimate the number of participants.

The estimate was obtained from the California Department of Education's database and data collection cards which allow participants to self-report their gender.

2b. Direct Education: SNAP-Ed CONTACTS by Gender

- For Question 2b, indicate below if you are providing actual counts or an estimate of SNAP-Ed direct education contacts.

___ Actual Counts of Contacts

_X__ Estimated Counts of Contacts

		A	B
		Female	**Male**
1	**Number of SNAP-Ed Contacts**	2,184,587	2,286,089

If you reported an estimate in Question 2b, please describe in 25 words or less the methods used to estimate the number of contacts.

The estimate was obtained from the California Department of Education's database and data collection cards which allow participants to self-report their gender.

Instructions for Question 2a and b

Enter the DIRECT EDUCATION participants (2a) and contacts (2b) by gender in Row 1; Columns A and B of Table 2a and 2b. The total of A and B in Table 2a should equal the total number of SNAP-Ed participants in Question 1a, Row 3, Column E. The total of A and B in Table 2b should equal the total number of SNAP-Ed contacts in Question 1b, Row 3, Column E.

3. Direct Education: Race and Ethnicity

- For Question 3, indicate below if you are providing actual unduplicated counts or an estimate of SNAP-Ed direct education participants.

__ _ Actual Counts of Participants (unduplicated)

_ X __ Estimated Counts of Participants

		A	B	C
		Number of Hispanic or Latino SNAP-Ed Participants by Race	**Number of Non-Hispanic/Latino SNAP-Ed Participants by Race**	**Total by Race**
Individuals Reporting ONLY ONE RACE	**1. American Indian or Alaska Native**	1,091	6,923	8,014
	2. Asian	1,130	81,440	82,570
	3. Black or African American	1272	79,875	81,147
	4. Native Hawaiian or Other Pacific Islander	354	5,849	6,203
	5. White	631,894	105,531	737,425
Individuals Reporting MULTIPLE RACES	**6. American Indian or Alaska Native and White**			
	7. Asian and White			
	8. Black or African American and White			
	9. American Indian or Alaska Native and Black or African American			
	10. All Others Reporting More than One Race	2,556	9,331	11,887
	11. TOTAL by ethnicity	638,297	288,950	927,247

Instructions for Question 3

- For purposes of this form, “Hispanic or Latino” is an ethnic group, not a race.

- Column A: Report the number of Hispanic or Latino SNAP-Ed participants for each racial category listed in Rows1-11. Specifically, in Rows 1-5, report the number of SNAP-Ed participants who are of Hispanic or Latino ethnicity and report only one race. In Rows 6-10, report the number of SNAP-Ed participants who are of Hispanic or Latino ethnicity and report two or more races. Use Row 10 for all SNAP-Ed participants who are of Hispanic or Latino ethnicity and describe themselves with a racial combination not included in Rows 6-9. For Row 11, enter the sum of Rows 1-10 under Column A.

- Column B: Report the number of SNAP-Ed participants who are *not* of Hispanic or Latino ethnicity for each racial category listed in Rows 1-10. Specifically, in Rows 1-5, report the number of SNAP-Ed participants who are not of Hispanic or Latino ethnicity and report only one race. In Rows 6-10, report

the number of SNAP-Ed participants who are not of Hispanic or Latino ethnicity and report two or more races. Use Row 10 for all SNAP-Ed participants who are not Hispanic or Latino ethnicity and describe themselves with a racial combination not included in Rows 6-9. In Row 11, enter the sum of Rows 1-10 under Column B.

- Column C: Add the number of SNAP-Ed participants reported in Column A and Column B for each row. For Column C, Row 11, add the numbers reported in Column C.

Example 1: A SNAP-Ed participant who reports they are Hispanic and Black is counted in Column A, Row 3.

Example 2: A SNAP-Ed participant who reports being White, Asian, and Black but not Hispanic is counted in Column B, Row 10.

4. Direct Education: Number of SNAP-Ed Delivery Sites by Type of Setting

Type of Setting	Number of Different Sites/ Locations	Type of Setting	Number of Different Sites/Locations
Adult Education & Job Training Sites	56	**Libraries**	15
Adult Rehabilitation Centers	4	**Churches**	31
Worksites	2	**Public/Community Health Centers**	109
Community Centers	175	**Public Schools**	1,794
Elderly Service Centers	35	**Head Start Programs**	127
Emergency Food Assistance Sites	247	**Other Youth Education Sites** (includes Parks and Recreation)	192
Extension Offices	0	**Shelters**	48
Farmers Markets	41	**WIC Programs**	65
SNAP Offices	36	**Other (Indian Tribal Organization):**	8
Food Stores	27	**Other (Community Gardens):**	3
Public Housing	74	**Other (Community Based Organizations):**	12
Individual Homes	1	**Other (Colleges/Universities):**	1

Instructions for Question 4

For each type of DIRECT EDUCATION setting used, enter the number of different sites/locations used within the State. Record each site only ONCE on this form.

Example 1: SNAP-Ed is provided to residents of a shelter that is located in a local church. Record this site under "Church".

Example 2: SNAP-Ed is provided to participants in Head Start which is operating in the local elementary school which also has SNAP-Ed activities with the elementary school students. Record this site only once under "Public School".

- If you provide interactive multimedia education, please report locations where kiosks/computers are available.

Example 3: SNAP-Ed is provided through interactive multimedia via kiosks in 15 food stores and 10 worksites that have no other SNAP-Ed activities. These kiosks should be added to the numbers of sites reported under the food stores and worksite categories in Question 4.

5. Direct Education Programming Format

		A	B	C
	Format	**Number delivered**	**Time range per session (in minutes)**	**% delivered by interactive multimedia**
1	**Single session**	17,647	15-360	0.80%
2	**Series – 2 to 4 sessions**	1,212	15-360	1.97%
3	**Series – 5 to 9 sessions**	4,746	15-180	1.52%
4	**Series – 10 or more sessions**	1,598	15-180	0.30%

Instructions for Question 5

- For Rows 1-4, Column A, enter the number of single sessions, the number of 2-4 session series, the number of 5-9 session series, and the number of series with 10 or more sessions delivered.
- For Rows 1-4, Column B, enter the time range per session in minutes.
- For Rows 1-4, Column C, enter the percent of Column A delivered by interactive multimedia lessons/modules.

Example 1: *A state reports that 40 single sessions were delivered ranging in time from 45-60 minutes and that 10% were delivered by interactive multimedia. Row 1 of the form would show:*

		A	B	C
	Format	**Number delivered**	**Time range per session (in minutes)**	**% delivered by interactive multimedia**
1	Single Session			

6. Primary Content of Direct Education

CODE: E	**CODE**: I	**CODE:** H	**CODE:** G

INSTRUCTIONS for Question 6

- Identify up to four educational topic areas of emphasis from the list below. These four topic areas should reflect those areas given most emphasis (e.g. taught most frequently) in your State. Record only one code per box. **DO NOT REPORT SNAP OUTREACH IN THIS TABLE.**

A. FAT FREE & LOW FAT MILK OR EQUIV (& ALTERNATE CALCIUM SOURCES)
B. FATS AND OILS
C. FIBER-RICH FOODS
D. FOOD SHOPPING/PREPARATION
E. FRUITS & VEGETABLES
F. LEAN MEAT AND BEANS
G. LIMIT ADDED SUGARS OR CALORIC SWEETNERS
H. MYPYRAMID – HEALTHY EATING PLAN
I. PHYSICAL ACTIVITY
J. PROMOTE HEALTHY WEIGHT
K. SODIUM & POTASSIUM
L. WHOLE GRAINS
M. FOOD SAFETY
N. OTHER (specify): (possible for electronic form)
O. OTHER (specify): _____
P. OTHER (specify): _____
Q. OTHER (specify): _____

SOCIAL MARKETING INITIATIVES:

Item #7 asks for information about SNAP-Ed social marketing initiatives**. Social Marketing** is defined as a consumer-focused, research-based process to plan, implement and evaluate interventions that are designed to influence the voluntary behavior of a large number of people in the target audience (adapted from Alan Andreasen 1995 and Social Marketing Division of Society for Nutrition Education).

For an activity to qualify as a social marketing campaign, the initiative being reported must have included all of the following steps:

- Identified a specific segment of the SNAP/low income population to target
- Identified the specific nutrition needs of the target audience, associated target behavior(s), and the target audience's reasons for and against changing behavior.
- Interacted with the target audience to see if the message, materials, and delivery channel are understood and meaningful (would lead to behavior change).

States that conduct social marketing campaigns that include both direct and indirect education activities may elect to report these under these categories. However, if direct and indirect education activities are reported in the “direct education” section or the “indirect education” section, they should not be reported in the social marketing section because that would result in a duplicate count.

7. Description of ALL Social Marketing Campaigns

Attach an additional form to record data, if there are more than five campaigns.

A. Name of Campaign	B. Current Year of Campaign	C. Major Campaign Activities for Current Year *Use Codes*	D. Priority Population(s) *Use Codes*	E. Estimated Number of SNAP Recipients Reached	F. Estimated Number of Other Low Income Persons Reached	G. Total Estimated Reach (Low-Income, SNAP Recipients AND All Others)
1 Latino Campaign	18	P, D, I, E	F, A, B, C, D, E, H, M	202,156	101,703	500,125
2 African American Campaign	13	P, D, I, E	G, C, H, M	46,626	23,201	111,264
3 Power Play! Campaign	19	P, D, I, E	F, G, A, B, C, D, E, H, I, L	245,266	85,996	541,848
4 Worksite Program	8	P, D, I, E	F, G, A, B, C, D, E, H, I, M	1,461	9,606	18,596

5 Retail Program	15	P, D, I, E	F, G, A, B, C, D, E, H, I, M	85,841	27,208	223,361
6 Mass Communications	14	I	F,C,E,H	3,401,517	6,160,450	12,215,086

Instructions for Question 7

For each social marketing campaign being planned, under development or operating:

- Column A: Enter the name of all FNS approved social marketing campaigns.
- Column B: Enter the current campaign year for this annual reporting cycle. Be sure to include planning and development phases.
  Example: If this is the third year of a five year campaign, record 3 in Column B.

- Column C: Enter **one or more** of the following codes that describe major phases of campaign activities:

  - P=Planning (includes market and formative research)
  - D=Developing (includes campaign/materials design and consumer testing)
  - I =Implementing
  - E=Tracking and Evaluation

- Column D: Enter **all** of the appropriate codes describing the priority population (target audience) that this campaign reached during this fiscal year*:*

  - Ethnicity: F= Hispanic or Latino
    G= Not-Hispanic or Latino

  - Race: A= American Indian or Native Alaska
    B= Asian
    C= Black or African American
    D= Native Hawaiian or Other Pacific Islander
    E= White

  - Gender: H= Female
    I = Male

  - Age: J = All ages
    K= Less than 5 years of age
    L= 5 to 17 years of age
    M= 18 to 59 years of age

N= 60 years of age or older

For Columns E, F and G, enter the number of people reached, as estimated from demographic or marketing data or other sources.

- Column E: Enter the estimated number of SNAP recipients reached this reporting year through this campaign
- Column F: Enter the estimated number of low-income persons (EXCLUDING SNAP recipients) reached through this campaign this reporting year.
- Column G: Enter the total estimated number of people (low-income, SNAP recipients AND all others) reached this reporting year.

Example 1: The radio station that broadcasts social marketing nutrition messages has provided demographic statistics to the implementing partner showing the income range of their listening audience. The data show that roughly 20% of the audience or 400 people would not qualify for SNAP. The estimated count of 400 people should be counted under column G in Item 7 of the form.

Example 2: Nutrition education is conducted at a local grocery store in a low-income neighborhood and 200 people attend. Census track data is examined and shows that 55% of the population served by the store has income below 130% of the poverty level and 30% has income between 130% and 185% of the poverty level with the remaining 15% having income over 185% of the poverty level. In Column E, 110 (55% of 200 participants) should be included, 60 should be included in Column F (30% of 200) and 200 should be reported in Column G.

7. Continued-Description of ALL Social Marketing Campaigns

	H. Primary Intervention Levels *Use Codes*	I. Key Messages *Use Codes*	J. Primary Intervention Channels *Use Codes*	K. Total Expenditure for Social Marketing Campaign for Reporting Year	L Total Federal SNAP-Ed Expenditure for Reporting Year
1	E	E, I	E, J	$1,998,000	$1,998,000
2	E	E, I	E, J	$1,491,000	$1,491,000
3	E	E, I	O*, D, E, H, J	$1,941,000	$1,941,000
4	E	E, I	O*, E, H, J	$ 823,000	$ 823,000
5	E	E, D, M	E, J, N	$1,082,000	$1,082,000
6	E	E,H,I	A,B,C,D,E,F,G,H,I,J,K,L,M,N,O	11,597,068	11,597,068

*PowerPlay Campaign O-nutrition education in schools and community youth organizations.
*Worksite Program O-nutrition education in worksites.

Instructions for Question 7

- Column H: Enter **one or more codes** describing each campaign's level(s) of intervention:

  - A=Individual
  - B=Interpersonal (groups)
  - C=Institution/Organization
  - D=Community
  - E=All Levels
  - F=Other – please specify

- Column I: Enter **up to three codes** for each campaign's priority education topics/messages. Use the codes listed in the Instructions for Item # 6.
- Column J: Enter **all of the codes** corresponding to the intervention channels used in each campaign:

  - A=Nutrition Education Radio Public Service Announcement (PSA)
  - B=Nutrition Education TV Public Service Announcement (PSA)
  - C=Nutrition Education articles
  - D=Billboards, bus wraps, or other signage
  - E=Participation in community events/fairs
  - F=Sponsor community events/fairs
  - G=Fact sheets/pamphlets/newsletters
  - H=Posters
  - I=Calendars
  - J=Promotional materials w/nutrition messages (pens, pencils, wallet reference cards, magnets, cups, etc)
  - K=Website
  - L=Electronic (email) materials/info distribution
  - M=Videos/CD-Rom
  - N=Retail/point-of-purchase activities
  - O=Other – please specify

- Column K: Enter the **total expenditure (include all State and Federal SNAP-Ed and any other sources of funds)** for the campaign this reporting year.

- Column L: Enter the **Federal SNAP-Ed expenditures** for the campaign this reporting year.

INDIRECT EDUCATION:

Item #8 asks for information about SNAP indirect education. **Indirect Education** is defined as the distribution of information and resources, including any mass communications, public events and materials distribution that DO NOT meet the definitions of Direct Education or Social Marketing Campaigns. Mass communication, public events and material distribution efforts that don't meet the definition of social marketing should be reported here.

8a. Types of Materials Distributed

	Check if applicable
Fact sheets/pamphlets/newsletters	X
Posters	X
Calendars	X
Promotional Materials w/nutrition messages (pens/pencils/wallet reference cards/magnets/cups/etc)	X
Website	X
Electronic (Email) materials/info distribution	X
Videos/CD Rom	X
Other	

Instructions for Question 8a

Check all methods/materials used for indirect education.

8b. Estimated Size of Audiences Reached through Communication and Events

	Estimated No. of target population reached	Source of Data
Nutrition Education Radio PSAs	52,189	1
Nutrition Education TV PSAs	1,397,411	1
Nutrition Education Articles	1,009,238	1
Billboard, Bus or Van Wraps, or Other Signage	9,590,736	1
Community Events/Fairs -- in Which Participated	159,363	2
Community Events/Fairs – Only Sponsored	18,433	2
Other	2,434,328	4 (census tracts)

Instructions for Question 8b

For each type of communication channel and event enter the estimated number of individuals in the target population(s) reached and the code of the source of the data used to tabulate the estimate**.**
1 = commercial market data on audience size
2 = survey of target audience
3 = visual estimate
4 = other

9. Expenditures by Sources of Funding *(See Instructions)*

	Expenditures for Reporting Year
I. Public Cash Contributions -- State and Local Tax Revenue **only**	$0
2. Public and Private Cash Contributions -- **other than** State and Local Tax Revenue	$0
3. Sum of Lines 1 & 2	**$0**
4. Public In-Kind Contributions (non-cash)	$0
5. Private Cash Contributions to State SNAP Agency **only**	$0
6. Indian Tribal Organization Contributions	$0
7. Sum of Lines 4, 5 & 6	**$0**
8. Federal Reimbursement	**$61,530,523**
9. TOTAL SNAP-Ed EXPENDITURES: Sum of Lines 3, 7 & 8	**$61,530,523**

Instructions for Question 9

All dollar amounts recorded in item #9 should reflect actual expenditures NOT those initially budgeted.

- Line1: Enter the dollar value of expenditures paid only with State and local tax revenue designated specifically for SNAP-Ed activities.
- Line 2: Enter the dollar value of expenditures paid with public and private cash contributions. These are contributions that are received by state implementing agencies or their subcontractors other than State and local tax revenues designated specifically for SNAP-Ed activities. These are not from State and local tax revenues.
- Line 3: Enter the sum of lines 1 and 2 in line 3.
- Line 4: Enter the dollar value of expenditures paid with public in-kind (non-cash) contributions. These contributions are defined as goods or services provided by a state or local agency for which no cash funds are transferred and no out-of-pocket cost is incurred by the contributing agency. Typically, in-kind contributions are the value of goods or services provided by volunteers.
- Line 5: Enter the dollar value of expenditures paid with private cash contributions made to the State SNAP Office/Agency These contributions are funds provided by non-governmental groups. They may include cash provided to the State or outlays made directly by a non-governmental organization to cover approved SNAP-Ed costs.
- Line 6: If applicable, enter the dollar value of expenditures paid with Indian Tribal Organization (ITO) contributions. Although technically ITO contributions are Federal funds, for the purposes of SNAP-Ed reimbursement, they are considered state match.
- Line 7: Enter the sum of lines 4, 5 and 6 in line 7. This may be less than 50% of the Total SNAP-Ed Expenditures in line 9 when there is an ITO contribution because FNS reimburses allowable activities conducted on Indian reservations at the 75% rate.
- Line 8: Enter the total amount of the federal reimbursement for SNAP-Ed; this is the total amount chargeable to FNS. It may be greater than 50% of total outlays when there is an ITO contribution because FNS reimburses for allowable activities conducted on Indian reservations at the 75% rate.
- Line 9: Enter the sum of lines 3, 7 and 8 to record Total (allowable) SNAP-Ed Expenditures. This total should equal Line 3 in Question 10, Expenditures by Category of Spending.

Expenditures by Category of Spending (*See Instructions below)*

Cost breakouts for item #10 may be the actual allocation or estimated.

1. Total Expenditures for SNAP-Ed Program Delivery	$ 38,539,120
2. Total Expenditures for Administrative Costs	$ 22,991,403
3. TOTAL SNAP-Ed Expenditures (State and Federal)	$ 61,530,523

Data provided in this table are (check one): _ __ actual or _x___estimated based on FTE allocation.

Instructions for Question 10

Costs reported in this table may be calculated based on: 1) the actual expenditures associated with each component described above; or 2) be estimated based on multiplying the percentage of total FTE time spent on nutrition education versus administration to any cost component that is not tracked separately as a delivery or administrative expense.

Example: 45% of FTEs are for administrative functions. Apply this to the total expenditures and you can estimate your Total Expenditures for Administrative Costs, line 2.

Line 1: Count all of the following as Nutrition Education Program Delivery Expenditures:

- Dollar value of salaries and benefits associated with staff time spent providing approved and allowable SNAP-Ed activities.
- Cost of all food demonstration supplies.
- Cost of purchasing and/or developing educational materials (literature/materials/audiovisuals).
- Cost of developing and implementing media campaigns.
- Dollar value of the pro-rated costs of space used to deliver SNAP-Ed.
- Cost of any SNAP-Ed evaluation efforts.
- Cost of traveling to deliver SNAP-Ed services.
- Cost of training for nutrition education providers.
- Indirect costs (must be proportionate to time spent to delivery of SNAP-Ed)
- Other overhead charges (space, HR services, etc).

Line 2: Count all of the following as FSN Administrative Expenditures:

- Dollar value of salaries and benefits associated with staff time spent on SNAP-Ed administration not on nutrition education. (*example: State* SNAP/*IA/Project staff, support staff*).
- Cost of training to performing administrative functions like record keeping, accounting, etc.
- Cost of reporting.
- Cost of equipment and office supplies.
- Operating Costs.
- Indirect Costs for those administrative staff not covered above.
- Other overhead charges associated with administrative expenses (space, HR services, etc).

Line 3: Sum of lines 1 and 2. This total should equal the total reported in Line 9 of Question 9, Expenditure by Sources of Funding.

A Place to Grow:

NUTRITIOUS FOOD, BETTER HEALTH, STRONGER COMMUNITIES

How food, wellness and action rebuild lives and restore community

By Maureen A. Jung, Ph.D.

Profiles of nine programs of the Local Food and Nutrition Education Channel: 2008-2012

CHAMPIONS for CHANGE
Network for a Healthy California

“Social fabric is created one room at a time.”

–Peter Block

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Introduction

Obesity and diet-related chronic diseases have become severe economic and health threats to both adults and children, increasing the cost of health care and impacting quality of life for families and communities. Changing eating habits, adopting healthy behaviors, and understanding the influence of the environment on obesity rates is critical to reversing these negative trends. However, access to healthy foods is still a barrier to adopting healthier life styles for low-income Californians. *The Network for a Health California (Network)* offers solutions to this problem with effective approaches to nutrition education and obesity prevention.

In A Place to Grow, we explore some of these answers, looking at nine nutrition education projects funded by the *Network* through the Local Food and Nutrition Education (LFNE) Channel. These projects are examples of innovative, community-based approaches to reach specific low-income individuals and families.[1]

A Place to Grow looks at the role of community engagement as a vehicle to empower people and produce sustainable improvements in community and individual health.[2] Our purpose with this book is to share lessons, models, tools, and best practices with others who share an interest in creating healthier places.

This book is intended for community-based nonprofit organizations; local, regional, state and federal government agencies; schools and day care facilities; youth, recreational, and environmental groups; gardening advocates; health providers; food justice advocates, and more. It is for those seeking positive examples of community members and organizations working and learning together. It is for those interested in how community engagement promotes health by fostering deeper connections between people, organizations, and communities.

A Place to Grow is a call to action. Investing in community-based and nutrition education and obesity prevention programs requires a long-term commitment. While progress is being made, much more remains to be done. Now is the time to get involved.

Rosanne Stephenson

Rosanne Stephenson
Chief, Program Development Section

[1] Local Food and Nutrition Education Channel Request for Applications, FFY 2011, December 2010.

[2] National Institutes of Health, "Executive Summary," *Principles of Community Engagement*, second edition, 2011, http://www.atsdr.cdc.gov/communityengagement/pce_execsummary.html.

Chapter 1

COMMUNITY ENGAGEMENT IN ACTION: PROMOTING HEALTHIER CHOICES TO LOW-INCOME CALIFORNIANS

Whether we are rich or poor, the healthcare crisis affects all of us. Rising rates of obesity and chronic disease threaten individuals, families, and communities across the nation. However, some groups have been harder hit than others. In California, obesity and diabetes are higher among Latinos, African Americans and American Indians than among whites or Asians, and disproportionately affect the poorest Californians.[3]

To build a sustainable future, we must find ways to reverse these trends. But we don't have much time. If we fail to act effectively in the face of this crisis, we risk a continuation of the obesity epidemic driving up healthcare costs and diminishing the quality of life for families and communities.

Despite the size and complexity of this challenge, nutrition education and obesity prevention efforts by the California Department of Public Health (CDPH) through the *Network* offer concrete reasons for hope. In marked contrast to national trends, recent research shows significant improvements in two key areas of health behavior:[4]

- **Increased consumption of fruits and vegetables**. The proportion of very low-income (< $15,000 per year) adults who consumed the recommended 5-a-day servings of fruits and vegetables nearly doubled, rising from 24 percent in 1997 to 46 percent in 2007.[5]
- **Physical activity also improved**. The proportion of very low-income (< $15,000 per year) adults meeting the recommended level of moderate to vigorous physical activity—at least 30 minutes a day for at least five days per week—grew from 36 percent in 2001 to 46 percent in 2007.[6]

These achievements demonstrate that, even in a state so large and diverse as California, the right strategies can make a big difference in people's lives. Moreover, these public health programs reach the low-income populations most vulnerable to food insecurity, obesity, and diabetes. That is good news, but it's not good enough.

These improvements must be sustainable over the long run, and they must reach more people. What elements go into building successful public health programs that change behavior and reduce the risk of chronic disease? That's the billion-dollar question.

[3] Allison L. Diamant, Susan H. Babey, Joelle Wolstein and Malia Jones, "Obesity and Diabetes: Two Growing Epidemics in California," *Health Policy Research Brief,* UCLA Center for Health Policy Research, August 2010.

[4] Jennifer Gregson, "Commentary from the *Network* for a Healthy California," *Journal of Nutrition Education and Behavior*, 43:4S2, July/August 2011, S49.

[5] S.B. Sugerman, S.B. Foerster, J. Gregson, A. Linares, M. Hudes, "California Adults Increase Fruit and Vegetable Consumption from 1997-2007," *Journal of Nutrition Education and Behavior*, 43:4S 2 , S96-S103, July/August 2011.

[6] California Department of Public Health, *Network* for a Healthy California, "2007 California Dietary Practices Survey Data Tables," February 2011. Available at: www.cdph.ca.gov/programs/cpns/Pages/2007CDPSDataTable.aspx.

What follows is a narrative on effective approaches to improving public heath, focused on the Californians most vulnerable to food insecurity, obesity, diabetes, and other chronic diseases. The purpose of this book is three-fold:

- To discuss the approaches and strategies employed by the *Network*'s Local Food and Nutrition Education (LFNE) Channel to help community organizations develop successful nutrition education projects.
- To present profiles of nine projects that offer a window into the ways local organizations connect with community members, build capacity, and work toward sustainability.
- To issue a call to action. We urgently need to do more, and we have good models to follow. Use these strategies to build on the outcomes already achieved. Get involved in restoring health in your community.

Rather than a research study or technical report, what follows is a narrative on effective approaches to improving public health, focused on the Californians most vulnerable to obesity and chronic disease. In the process of providing nutrition education and preventing obesity, these programs add capacity and enhance the sustainability of changes in individuals, organizations and communities.

PARTNERSHIPS AND COLLABORATIONS MOBILIZE RESOURCES

The *Network* was formed to develop innovative partnerships that empower low-income Californians to eat more fruits and vegetables, increase their physical activity, and improve their food security—essential first steps in preventing obesity.[7] The *Network* leads a statewide movement of nearly 150 local, state, and national partner organizations and agencies working together to improve the health status of millions of low-income California parents and children.

Network-funded programs and activities are delivered through multiple channels. These include grants and contracts, advertising and social marketing campaigns, development and testing of educational resources, training and technical assistance to community partners, administrative oversight, and applied research and evaluation.[8]

In 2006, the *Network* launched the LFNE Channel, which includes community-based projects connected with local food systems, including food banks, farmers' markets, food justice and anti-hunger groups, as well as other nonprofits organizations that provide services to low-income families and the homeless. Target audiences include Californians eligible for or receiving benefits from the Supplemental Nutrition Assistance Program (SNAP). LFNE projects are designed to reach them where they live, work, play, learn, and worship.

To ease implementation of these projects, optimize outcomes, build capacity and promote sustainable improvements, The LFNE Channel:

- Provides support, training and technical assistance, including assistance in evaluation research.
- Shares promising practices, effective nutrition education tools, materials, and evaluation results.
- Facilitates technology transfer among contractors through Regional Collaboratives and other stakeholder meetings.[9]

The training, support, and oversight provided to the community-based organizations leads to better communication with partners, more efficient project implementation and better project results. These benefits build capacity that enables staff, participants, and organizations to take on larger challenges.

[7] To learn more about the *Network*, visit http://www.cdph.ca.gov/programs/cpns/pages/AboutUs.aspx

[8] Op. cit., Gregson, "Commentary," for an overview of the *Network*'s background, progress, and future directions.

[9] Source: California Department of Public Health, Local Food and Nutrition Education Channel webpage: http://www.cdph.ca.gov/programs/cpns/Pages/LocalFoodandNutritionEducation.aspx

COMMUNITY ENGAGEMENT EMPOWERS BETTER HEALTH CHOICES

The *Network* has long recognized that community-driven approaches are most effective in creating real and lasting change. As organizations expert Peter Block explains:

> *"If we continue to invest in individuals as the primary target of change, we will spend our primary energy on this and never fully invest in communities. In this way, individual transformation comes at the cost of community."*[10]

Instead, as the 2010 California Obesity Prevention Plan (COPP) pointed out in its case for action:

> *"The obesity epidemic is a multi-faceted issue that reflects changes in our social, economic, and built environments over many years. It is an issue that will require innovative actions, a shared vision, and a collaborative approach to resolve."*[11]

A recent, in-depth publication from the National Institutes of Health (NIH) reaffirms the efficacy of community-engagement strategies for improving the health of a community and its members.[12] As defined by the Centers for Disease Control and Prevention (CDC), community engagement refers to:

> *"…the process of working collaboratively with and through groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting [their] wellbeing… It is a powerful vehicle for bringing about environmental and behavioral changes that will improve the health of the community and its members. It often involves partnerships and coalitions that help mobilize resources and influence systems, change relationships among partners, and serve as catalysts for changing policies, programs, and practices"*[13]

This approach is based on the recognition that our social, economic, and physical environments shape individual health and health behaviors. Broad-based health improvements will not occur without community improvements to support them. Core principles of community engagement include fairness, justice, empowerment, participation, and self-determination.[14]

These principles guide the LFNE Channel in its work with community-based organizations and other partners and collaborators. Projects are encouraged to draw from evidence-based approaches that have demonstrated success in both research and in practice. Key LFNE strategies include:

- Improving access: Collaborating with activities to increase access to healthier foods and fresh produce through community-supported agriculture, such as school or community gardens.
- Social support: Encompassing a wide range of relationship and capacity-building activities, social support includes developing partnerships and collaborations. Examples include:
  - Peer-to-peer education interventions, which empower youth and adults to share their knowledge about nutrition and healthier behavior with their others in their community.

[10] Block, Peter, Community: The Structure of Belonging (Berrett-Koehler: San Francisco, 2008), p. 5.

[11] California Obesity Prevention Program, California Obesity Prevention Plan, California Department of Public Health, 2010.

[12] National Institutes of Health, *Principles of Community Engagement*, 2nd edition, Unites States Department of Health and Human Services, 2011. Available at: http://www.atsdr.cdc.gov/communityengagement/pdf/PCE_Report_508_FINAL.pdf

[13] Ibid., p. 7.

[14] Ibid, p. 4.

- Empowering youth and adults to engage in community change. This is a particularly powerful strategy because it refocuses authority in the hands of people who can best shape their communities.[15]

- Developing culturally-appropriate partnerships within minority and limited-English proficient communities. Focusing on a community's gifts and resources, rather than on the problems and fears, leads to greater opportunities for leverage and to more profound, longer-lasting changes.[16]

- Evaluation: Incorporating ongoing project evaluation that involves community organizations and their members, to ensure more effective project implementation and better project outcomes.

The LNFE Channel and its community-based partners work together to accomplish more with less by sharing resources, knowledge, strategies, and outcomes for the betterment of communities across California. Due to the grant size and spending restrictions, these contractors often rely on multiple funding sources to support separate project elements. Volunteers, in-kind donations, and other cost-reduction strategies help hold down costs.

In working closely with these community-based organizations funded by *Network* contracts, the LFNE Channel acts as a catalyst, providing seed money that enables these organizations to add nutrition education and activity projects that enrich lives in the communities they serve. The LFNE Channel enables these contractors to build capacity in their organizations, effectively allowing communities to restore themselves.

* * *

The following chapters look briefly at nine *Network*-funded LFNE Channel projects. The connections between community organization and its members made it possible to develop nutrition-education and activity projects to focus on the specific challenges they confronted. Each contractor also developed a constellation of partnerships and collaborations to make their programs possible.

These project profiles are offered as models of how local organizations work to improve the health of their communities. Ideally, they will serve as practical examples for others interested in promoting better health choices, preventing obesity and chronic diseases, and improving wellness in communities everywhere.

[15] Op. cit., Block, *Communities*, p. 69.

[16] Ibid., p. 139.

Chapter 2

COMMUNITY ENGAGEMENT EMPOWERS INDIVIDUALS, ORGANIZATIONS AND COMMUNITIES

By facilitating community-engaged health promotion, LFNE projects have transformed *Network* goals into reality for some low-income Californians. Now is the time to do more.

Despite increases in fruit and vegetable consumption and physical activity, obesity and diabetes still threaten families and communities statewide. Obesity rose nearly 18 percent between 2001 and 2007, to more than 6 million people.[17] During that same period, diabetes increased over 25 percent in just six years, to affect over two million Californians.

These statistics seem grim, yet they do not tell the whole story. Obesity and diabetes disproportionately affect the poor, Latinos, African Americans, and American Indians.[18] Among Latino adults in California, for example, obesity increased 45 percent - from 20 to 29 percent - between 2001 and 2009.[19] In what may seem like a paradox, in 2009, overweight and obese adults reported higher levels of food insecurity than adults who were not overweight.[20] In this same year, Latinos reported significantly higher levels of food insecurity than other ethnic groups.[21]

"GOOD COOKING/BUENA COCINA" TURNS LA FOOD DESERT INTO NEIGHBORHOOD OASIS

"Good Cooking/Buena Cocina"
Sustainable Economic Enterprises of Los Angeles, Los Angeles

Despite the State's role as a leading agricultural producer,[22] California has a food insecurity rate of 17.1 percent, above the national average of 16.1 percent—meaning a lack of access, at times, to enough food for an active, healthy life.[23] About 25 percent of food-insecure Californians, over 1.6 million people, are in Los Angeles County.

Good nutrition and physical activity are two keys to better health, but many LA residents lack access to affordable, fresh produce and to safe places for play and recreation. In many neighborhoods, liquor stores and fast-food restaurants outnumber grocery stores. Some areas have no grocery stores at all.

Amid the city's food deserts and blighted urban landscapes, Sustainable Economic Enterprises of LA (SEE-LA) is transforming the lives of families and communities. SEE-LA reaches CalFresh-eligible residents through programs in schools, community

[17] Op. cit., Diamant, "Obesity and Diabetes," p. 1.

[18] Ibid.

[19] *Network* for a Healthy California, "Key Facts Highlighting Barriers Latino Adults Face to Latino Fact Sheet," 2009, p. 1.

[20] Ibid.

[21] Ibid.

[22] USDA. Economic ResearchService. Frequently Asked Questions. http://www.ers.usda.gov/faqs.aspx#10

[23] Feeding America. Map the Meal Gap, Food Insecurity in Your County. http://feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap.aspx

centers, WIC clinics, and farmers' markets. Through partnerships with the LA Unified School District, New Economics for Women, and the Hollywood Community Housing Corporation, SEE-LA brings a variety of resources to the communities it serves.

SEE-LA operates eight certified farmers' markets, with sites in Hollywood, South Central, Watts, Echo Park, Crenshaw, Canoga Park, Atwater Village, and East Hollywood. These markets supply fresh, local, seasonal produce directly to poor communities. That makes them ideal locations to promote interest in healthy cooking classes. With funding from the *Network*, SEE-LA launched Good Cooking/Buena Cocina," a series of six workshops that focus on healthy recipes for busy cooks on limited budgets. Classes are often taught in both English and Spanish.

Good Cooking/Buena Cocina workshops are led by SEE-LA staff. Participants learn practical nutrition information and get practical tips for stretching their food budget. They also get peer support for making positive lifestyle changes. Following completion of the workshop series, many participants continue to shop at SEE-LA farmers' markets, buying fresh fruits and vegetables using CalFresh benefits and other federal/state nutrition assistance.

Some participants, after completing the series, want to get involved in bringing the program to more members of their community. They may become peer educators, "Champions for Change," who receive additional instruction in nutrition and cooking, along with a small stipend for sharing their knowledge with others in their community.

Culturally appropriate physical activities are also part of SEE-LA programs. Zumba, fitness dancing that incorporates salsa, hip hop and mambo dance moves, attracts dozens of participants every week. They have fun, socialize, and get healthier with Zumba, a part of the project supported by outside funding. Zumba, farmers' markets, and nutrition classes are helping bring life back to communities. Many participants continue to shop at SEE-LA farmers' markets, buying fresh fruits and vegetables using CalFresh benefits and other federal/state nutrition assistance.

Fatima Q. is a perfect example of how SEE-LA's classes change lives. Attending SEE-LA's nutrition-education classes and learning about the connections between food and health showed Fatima that change was possible. She began seeing improvements in her own life. Her enthusiasm led her to work for a year as a SEE-LA Champion for Change peer nutrition educator. After the year ended, Fatima and her husband continued to lead free Zumba classes for fun, exercise, socialization and better lives for their community members.

At the end of each six-week Good Cooking/Buena Cocina series, class members gather for a potluck meal. Each brings a traditional dish to share with the group. Some bring new recipes they've created, healthier versions of the cultural foods they love. Sharing food together shows respect for culture and for people, and honors the changes participants are making.

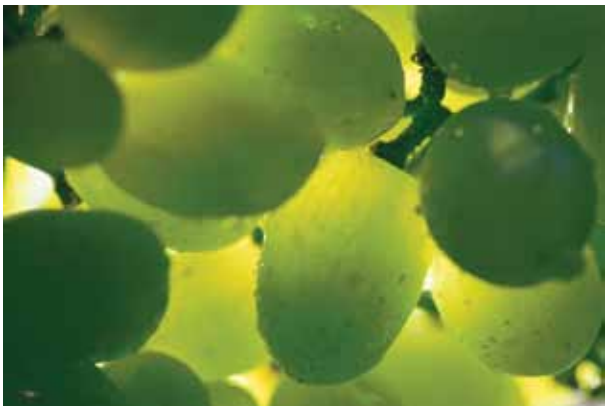
SEE-LA's programs have attracted funding and support from both public and private sources; from local politicians and agencies to Kaiser Permanente, Catholic Healthcare West and the California Association of Food Banks. Training and relationships built as a result of funding from the *Network for a Healthy California* have led to statewide visibility and praise for Good Cooking/Buena.

"SALSA, SABOR Y SALUD" BUILDS HEALTHY BODIES AND REINFORCES FAMILY VALUES

"Salsa, Sabor y Salud"
New Economics for Women, Los Angeles

Finding fresh healthy foods in downtown LA can be difficult. In the Westlake-Pico Union district, one of LA's more densely populated inner-city neighborhoods, residents face safety issues due to the dozens of gangs operating in the area. Between 73 and 85 percent of the residents in this district are Latino and approximately two-thirds were born outside the United States, most commonly in Mexico, El Salvador or Guatemala.[24]

[24] Los Angeles Times, *Mapping LA Project*, using 2000 United States Census data and information from the Los Angeles Department of City Planning and the Southern California Association of Governments. http://projects.latimes.com/mapping-la/neighborhoods/neighborhood/downtown/



In California, both obesity and diabetes are more prevalent among Latinos than whites and disproportionately affect the poorest Californians.[25] Obesity is a significant risk factor for diabetes; both health conditions are, in turn, significant risk factors for other serious health conditions such as heart disease.[26] In 2007 the adult rate of diabetes for Latinos was more than double the rate for whites.[27]

Into this bleak urban environment, New Economics for Women (NEW) introduced Salsa, Sabor y Salud, a 4-session bilingual program that teaches healthier approaches to cooking and eating, while reinforcing the shared Latino family values that unite residents as a cultural community. Culture became the path to attracting participants and connecting with the community.

Salsa, Sabor y Salud (SSS) promotes life-long healthy behaviors focused on the whole family. Participants range from infants to grandparents. NEW operates on the belief that if even one family member decides to make better food choices, the whole family gains.

NEW partners with schools and parent groups to involve both parents and kids in making healthy choices. Kids come home from school excited and their enthusiasm affects their parents, which makes them more likely to apply the lessons they've learned. In all, NEW presented the SSS series 42 times, with a total of 1044 participants over the 3 years of the program.[28]

SSS is designed to help the entire family take small steps toward a healthier way of life. Classes emphasize the importance of eating healthy food and engaging in regular physical activity to boost energy. Both kids and adults learn through cooking demonstrations, preparation of healthy recipes, tips for making better food choices, and lessons about the link between good food and good health.

Best-practices such as interactive nutrition-education classes, physical activities, food preparation, cooking demonstrations, and taste tests are central to the success of SSS. In the final class of this series, a celebration takes place. Participants prepare new or traditional recipes they've altered to use healthier ingredients. Taking time to share food and to talk about the class honors the learning that has taken place. Relationships are strengthened in the process.

NEW's unique approach builds on the Latino cultural values of family, tradition, and common language. The organization recognizes that big changes begin with small steps. Participants, especially mothers, said they enjoyed changing the way they cooked and found it meaningful to adapt their cherished traditional recipes with healthier, fresher ingredients.

In focus group sessions with 135 people who completed the program, participants reported they ate more or continued to try and eat more fruits and vegetables and said they increased their physical activity by an average of at least 45 minutes a week. Some formed neighborhood walking clubs. Overall, participants were working to improve their health behaviors and eating habits and motivating others to do so as well.[29] That's progress.

[25] Allison L. Diamant, Susan H. Babey, Joelle Wolstein and Malia Jones, "Obesity and Diabetes: Two Growing Epidemics in California," *Health Policy Research Brief*, UCLA Center for Health Policy Research, August 2010.

[26] Ibid.

[27] "Trends in Diabetes: A Reversible Public Health Crisis," *LA Health*, Los Angeles County Department of Public Health, November 2010.

[28] New Economics for Women, "Salsa, Sabor y Salud," presentation, LFNE Retro-Spectacular Conference, Sacramento, California, August 2010.

[29] New Economics for Women, "Retrospective Report FFY 2009-2011."

Collaborating help NEW reach local residents. By working through area schools, the organization connects with parents of Westlake-Pico students. St. Vincent's Medical Center provides screenings for BMI, heart rate, and blood sugar levels. NEW has also hosted community health fairs, offering cooking demonstrations, health testing, and other health resources to hundreds of local residents. The "Outcomes" table below shows increase in healthy behavior reported by SSS program participants. In short, participants reported improvements in many of the promoted behaviors such as eating more fruits and vegetables, drinking more water, and increasing their physical activity. That's making a difference in this community.

As a housing developer, NEW is committed to building relationships with other community organizations and area residents to ensure key programs continue. NEW's experience with Salsa, Sabor y Salud convinced staff that promoting nutrition education and physical activity are central to its mission. Because this program addresses key health issues, increases awareness, and often produces significant health behavior changes, staff at NEW have been inspired to continue the series beyond the end of *Network* funding.

Salsa, Sabor y Salud (SSS) Outcomes[30]

Significant increases in participants reporting

- Consuming 3½ to 6½ cups of fruit & vegetables daily
- Preparing recipes using a variety of fruits & vegetables
- Participating in at least 30 min physical activity every day
- Drink 5-8 cups of water every day

PROMOTING RECOVERY: HEALTHY FOOD AS SELF-CARE AND HEALING

"Soul Food"
Nextcourse, San Francisco

"As a domestic violence victim, it helped me to nurture myself, to start a new journey for both the soul and the body. It's something I'm doing for myself."

"Breakfast…only takes 5 minutes to improve your whole day."

These are some of the lessons learned by participants in "Soul Food," a food and nutrition-education program for women leaving jail or prison and for women escaping domestic violence. In this unique public/private partnership, Nextcourse works with the San Francisco Sheriff's Department (SFSD) Women's Recovery Center (WRC)[31] as part of its effort to provide services to help participants "achieve and maintain safe and healthy lifestyles."[32]

Soul Food created a unique nutrition-education program that taps into the power of food to heal, nurture, and bring people together. Participants in Soul Food are poor, often medically fragile, with low self-esteem and low expectations. Many struggle with substance abuse, mental health, or chronic disease while facing a variety of barriers. Unemployment, limited literacy, lack of job skills, homelessness, trauma, and related problems complicate the lives of many of these women.

To address these issues, Soul Food was developed as a fundamental strategy through which women at the WRC learn the skills necessary to nurture and heal themselves through healthy eating and active lifestyles. Program components of Soul Food include:

[30] Ibid.

[31] Until recently, this facility was known as the SFSD Women's Reentry Center.

[32] Community Works, Women's Reentry Center Brochure, San Francisco Sheriff's Department.

- "Healthy Eating on a Shoestring," which shows women how to select, prepare, and enjoy fresh, local, seasonal fruits and vegetables for meals and snacks. They discover how to fix tasty, healthy meals even on a hot plate.
- Monthly market walks combining smart grocery shopping trips with physical activity.
- "Nutrition and Recovery," which involves peer-interns (Champions for Change) helping participants explore the connections between food and mood. They discover good reasons to avoid sugar, learn about nutrition, prepare healthy recipes and engaging in physical activity—all of which increases their awareness of the meaning of food in their lives. Because nobody heals alone, participants find that cooking and eating together leads to better health and promotes healing relationships.

In follow-up, participants in Soul Food valued learning the nutritional differences between fresh ingredients and processed foods. They appreciated discovering: "how to read labels," "high amount of sugar in foods," and "you can find vitamins in frozen greens." The women were equally positive about cooking lessons to improve the taste of healthy foods even when cooking on a hot plate; statements like "making broccoli taste good," "prior to this class, I didn't know how to make an omelet," and "I ate dark, leafy greens for the first time" make this clear.[33]

The peer nutrition educators called "Champions for Change" are recruited from those who have attended Soul Food classes. These champions are participants who found personal meaning in their experience. They value what they learned and commit to carrying the program to more people. As peer educators, they follow their passion, researching nutrition topics, putting their learning into action through community gardening, creating healthy versions of favorite recipes, acquiring practical job skills and acting as leaders and role models for others in recovery. All receive additional nutrition training and all prepare and present their own workshops.

Successful community engagement projects change both participants and organizations. Soul Food is no exception. As interest in food and nutrition has grown, the WRC kitchen has been remodeled twice to accommodate Soul Food activities. Nextcourse has also reorganized and begun to manage the WRC's emergency food bank, which means healthier options are available, even in a crisis.

Soul Food's Impact: Healthy Thinking Leads to Healthy Behavior[34]

Healthy Thinking:
Have you noticed any changes in the way you think about food since taking the classes?

- "Cooking is more convenient, less complicated."
- "How to read nutrition labels."
- "Include a variety of colors from fresh foods in my diet."
- "Learned how to prepare to-go foods."
- "Cooking can be quick and easy."
- "You are what you eat."

Healthy Behaviors:
Give one example of how you have chosen a healthy food over an unhealthy food.

- "Instead of fried chicken, I bake it using a recipe from class."
- "Choosing peanut butter on fruit over granola bar with a high amount of sugar."
- "Made granola from class recipe instead of buying granola bars."
- "Now make my own smoothies with kale instead of going to Jamba Juice."

[33] From focus group results from women who attended a five-week series of Soul Food classes, reported in Nextcourse, "Soul Food," presentation, LFNE Retro-Spectacular Conference, Sacramento, California, August 2010.

[34] Ibid.

Chapter 3

COMMUNITY ENGAGEMENT BUILDS CAPACITY

One of the central goals of the LFNE Channel is to help build the capacity of community-based organizations to address nutrition education and related health issues. Thirteen of the 14 agencies responding to the 2011 Sustainability Report agreed that their affiliation with LFNE enhanced their capacity.[35]

- Seven contractors reported benefiting from networking opportunities with other organizations. Urban Sprouts, for example, not only connected with other organizations around the state, but also developed partnerships to expand capacity. The Sacramento Hunger Coalition appreciated "lessons learned" from other LFNE contractors, making it possible to further evolve their program. Sustainable Economic Enterprises of Los Angeles noted, "At [LFNE] meetings and conferences, program staff networked with other projects to learn from their successes and created dialogue on strengthening existing programming. The SEE-LA Good Cooking/Buena Cocina program has gained support and praise with statewide recognition through *Network*-funded outlets."[36]
- Six agencies identified the benefits received through LFNE Channel training, including access to a variety of tools, educational materials, and skill-building seminars.[37]

- Three agencies appreciated gaining experience with evidence-based evaluations, with one contractor commenting on the enhancement of their capacity by "the rigor of the evaluations." Two other agencies referred to their enhanced credibility after receiving LFNE funding, improving their image when seeking funding from other sources.[38]

Many community-based organizations have found that the best way to increase capacity is to get help from people in the community. This makes perfect sense; community members are the ones most affected by these organizations and are therefore more motivated to help them succeed. With the proper training and support, these engaged participants can greatly increase an organization's capacity and efficiency.

[35] Denise Perales, Dan Perales and Cheryl Mariscal Hergert. Local Food & Nutrition Education/Food Security Channel Sustainability Study Report," *Network* for a Healthy California, 2011, p. 43. Unpublished.

[36] Ibid.

[37] Ibid.

[38] Ibid.

When the community gets involved at this level, the participants benefit as much as the organization does. Community members develop a special pride in their work and a well-earned sense of ownership in the project. Any honoraria they receive underscores their importance, bolsters their self-esteem and encourages them to step up their involvement. Their enthusiasm energizes their peers, which leads to even wider community involvement. And they learn valuable work skills that are transferable to other jobs.

A "BOMB-DIGGITY" APPROACH TO HEALTHY EATING IN RURAL NORTHERN CALIFORNIA: YOUTH LEAD THE WAY

"Better Eating, Activity, and Nutrition for Students"
North Coast Opportunities, Inc., Ukiah

Kids play an important role in family nutrition. If they don't like a food, it's practically impossible to get them to eat it. If they get excited about a new food, their attitudes affect the whole family.

Children learn fast. "Aprendi que vegetales son buena para usted," said one first-grade student. *(I learned that vegetables are good for you.)* That's a crucial message of nutrition education and obesity prevention. Healthy eating is a vital part of preventing serious chronic diseases, including obesity and diabetes.

That's one reason for BEANS—Better Eating, Activity, and Nutrition for Students—founded by North Coast Opportunities, Inc. (NCO) in Ukiah. BEANS focuses on low-income families, at or below 185% of the federal poverty level. Many participants come from homes where English is a second language. The group reaches out through after-school programs in Ukiah, Fort Bragg, and Willets to influence the attitudes and behavior of children and teens.

Each year, the program recruits six high school students from each city. The teens sign on to the program for a year to serve as nutrition peer educators. These students have a mission: "to promote health by getting kids to eat more fruits and vegetables every day."[39] They receive a $1000 honorarium and weekly training in nutrition and cooking for the entire year. As peer educators learn about their own food choices, they expand their palates and hone their cooking skills by preparing ethnic recipes from around the world. At the same time, in preparing and delivering BEANS presentations, they develop strong communication and leadership skills.

To date, 50 peer educators have worked with youth enrolled in after-school programs in Fort Bragg, Ukiah, and Willits. Working in pairs, BEANS peer educators teach younger students about healthy eating. They present interactive hour-long lessons that include a hands-on cooking demonstration, a taste test, a nutrition lesson and a physical activity. The elementary students look forward to their lessons with "cool" BEANS teens, and they love cooking and eating.

Receiving nutrition education from peer educators motivates younger students to become more aware of what they eat and drink. They get interested in the connection between nutrition and health. Peer educators teach younger kids how to choose, prepare, and eat healthier meals. Taste tests are a big hit. Even when kids don't especially like a new taste, these classes teach them to be more open to trying new foods and encourage them to choose healthier alternatives for snacks and meals.

In a lesson called "Rethink Your Drink," students taste water flavored with fresh lemon or lime, cucumbers or strawberries. Kids like the flavored waters and their parents appreciate having a healthy, great tasting, inexpensive drink alternative to offer their children.

[39] North Coast Opportunities, program staff email communication (10/24/12) on Project Activity 2009-2012.

Both teens and their students expand their horizons as they make and taste healthy foods. After garden and classroom food demonstrations, the children take home healthy recipes for their parents, who discover how to stretch their food budget using fresh local produce. Some parents are surprised to discover their kids ***will*** eat fresh fruits and vegetables.

Do kids really like fresh, healthy meals? One sixth-grader described the taste of the lettuce-wrapped, all-veggie tacos prepared during a cooking demonstration: "Bomb-diggity!"

BEANS 50 Teen Peer Educators Reach Out[40]

Total students reached in after-school programs	1,211
Total children taught in community programs	174
Total participants in taste test at local farmers' markets	1,361
Total BEANS outreach contacts	3,571

**Results cover the first 2½ years of the 3-year program*

GARDEN CLASSROOMS GROW HEALTHIER STUDENTS, FAMILIES AND COMMUNITIES

"Urban Sprouts"
Neighborhood Parks Council, San Francisco

"Our gardens help students become more engaged in school and connect with food, the environment, and each other." –Staff member, Urban Sprouts[41]

The Urban Sprouts program was created to increase fruit and vegetable consumption by low-income youth and adults in southeastern San Francisco neighborhoods. In this program, school gardens function as hands-on classrooms for students and families to learn and grow together. The school gardens encourage physical activity and expand access to fresh produce in an urban area rife with liquor stores and fast-food restaurants.

Urban Sprouts developed garden-based nutrition programs at five public middle and high schools. In addition to working with students, the project also included parent-leadership groups to provide parents and guardians with nutrition information and to improve food access. The program is based on a specific learning model developed by Michelle Ratclife, Ph.D., cofounder of the Urban Sprouts. The model guides planning, intervention activities, and evaluations. Three primary interventions are involved:

- **Garden-based nutrition education and physical activity**. Students participate in Urban Sprouts over a 20-week period. That's enough time to plant, nurture, harvest, and eat produce fresh from the school garden. Student lessons also included physical activity and fitness goal-setting. Partner schools integrated the Urban Sprouts program into their science classes. Most teaching materials were drawn from *Nutrition to Grow On* (California Department of Education), *The Growing Classroom* (Life Lab Science), and *EatFit* (University of California).
- **Summer Program**. In collaboration with Garden for the Environment, a community demonstration garden, students seeking additional experience were able to volunteer for a 40-hour summer session to learn more about nutrition, gardening, and waste diversion, healthy eating, and sustainable agriculture. The Summer Program provides a team-building and youth empowerment experience. The session culminates with student presentations and take-home kits to share their learning with family and friends.

[40] North Coast Opportunities, program staff email communication (10/25/12) on project activity 2009-2012.

[41] Neighborhood Parks Council, "Urban Sprouts San Francisco, California FFY2011," p. 1.

- **Farmers in Residence**. Parents interested in gardening and learning more about food and nutrition are recruited as Farmers in Residence for the school garden. They receive additional training and develop classes to share their knowledge with other parents and guardians. They get people talking about the link between food and health and about how to provide better nutrition for their families. In the process, these parents gain confidence in themselves and build stronger relationships between school and family.

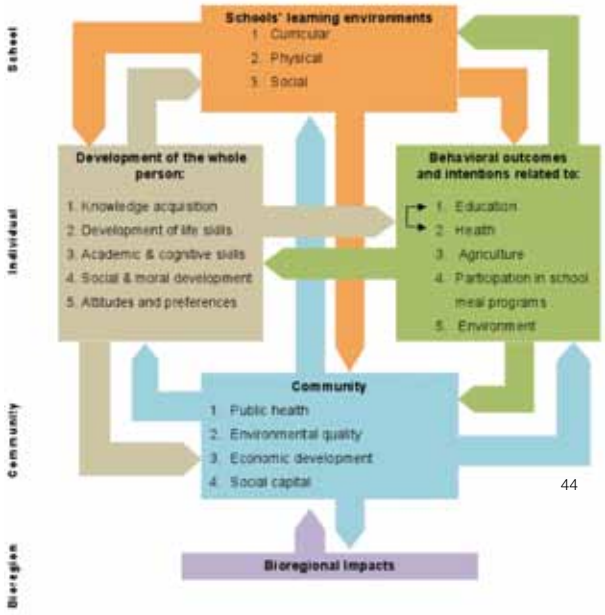
Urban Sprouts changes student behavior. After participating in Urban Sprouts programs, students reported higher levels of fruit and vegetable consumption and increased involvement in physical activities.[42] Students who participated in focus groups to evaluate the programs described what they learned in their own words:

> *"Instead of me drinking soda, I make fresh orange juice."*
>
> *"Eat a little bit more organic stuff like healthy drinks."*
>
> *"You would be motivated to come to class; you wouldn't be like this is just another day."*

Access to healthy food helps participants make better choices about what they eat. Both students and parents find opportunities for real community leadership on issues that matter in their lives. Parents directly involved in the school garden share their knowledge with other parents, students and teachers, and they reinforce their children's learning at home.

During the 2010-2011 school year, Urban Sprouts reached 809 students at six San Francisco schools in some of the most underserved of the city's neighborhoods. The program enabled 10 families to grow food in their own garden plots. An additional 22 school family members participated in Urban Sprouts cooking classes and events.[43]

During its 3-year LFNE project, Urban Sprouts often received inquiries about their approach. Staff members were frequently invited to present these ideas at conferences and workshops. They began developing the *Garden-based Education Model and Training Initiative* to share their model with other programs by providing training, technical assistance, and coaching to organizations interested in launching similar projects.



ENGAGING STUDENTS AND PARENTS IN FRESH APPROACHES TO FOOD

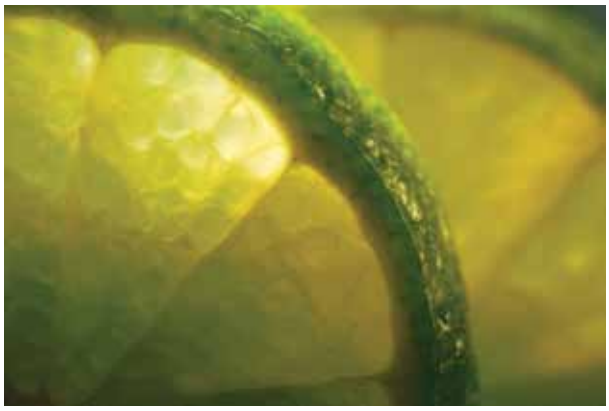
"Fresh Fest~Festival Fresco"
Collective Roots, East Palo Alto

"This class has been perfect for us! You have given us ideas of how to cook things we never imagined we would have been able to cook. For me, really, this class has totally opened up my eyes."
–A mother who attended "Cooking Matters."

[42] Urban Sprouts, "Evaluation and Outcomes." At http://www.urbansprouts.org/?page_id=101#evaluation

[43] Ibid.

[44] The Urban Sprouts model is described in detail at: http://www.urbansprouts.org/?page_id=6.



East Palo Alto has long been a community in need. One of the most densely populated cities in the greater San Francisco Bay area, East Palo Alto is home to some of the area's poorest residents. More than 14 percent of incomes fall below the Federal Poverty Level (FPL) and nearly half (44.3 percent) earn less than 185 percent of the FPL.[45] More than 80 percent of East Palo Alto's population is black or Hispanic, and 70 percent speak a language other than English.[46]

This is a population at great risk for obesity and diabetes, diet and lifestyle-related conditions that disproportionately affect African Americans, Latinos, and the poorest Californians.[47] How do we address these complex issues?

Collective Roots was formed in 2000 to address these challenges through programs for food system change—to improve access to fresh, affordable, local produce and provide garden-based learning for students and adults. Key partners and collaborators include the Ravenswood City School District, East Palo Alto Charter School, Pacific Coast Farmers' Market Association, and Three Squares. Funding for Fresh Fest/Festival Fresco comes from the *Network*, Palo Alto Community Fund, Palo Alto Weekly Holiday Fund, Sequoia Healthcare District, and Tides Foundation.

In 2009, the *Network* funded "Fresh Fest/Festival Fresco," designed to reach school children (K-8) with a science-based nutrition program that incorporates hands-on learning and physical activities in a 5-week series of classes. Fresh Fest includes a unique package of activities and travels to schools, after-school programs, and youth organizations. Highlights include:

- **On Your Mark, Get Set, Breakfast!:** Kids explore healthy breakfast options, including oatmeal, and run a race to reinforce the idea that a good breakfast helps students thrive.
- **Bicycle Blender:** Students power a blender that mixes nutritious fresh fruit smoothies that they enjoy while learning about the relationship between calories consumed and calories burned through physical activity.
- **Processed or Not:** Kids learn pizza can be healthy. After turning wheat berries into flour using a hand grinder, they make pizza topped with fresh vegetables. Students draw the parts of a seed and learn the differences in nutritional quality of unprocessed, minimally processed, and highly processed foods.
- **Interactive Cooking Demonstrations:** Using materials developed by the California Department of Public Health's "Harvest of the Month" program, students prepare healthy snacks including black bean tostados and Ethiopian lentils.

Students have fun with these lessons. They eat the healthy snack they prepared and take the recipes home to share with their families.

Children and youth act as "a unifying force in community," says Block, and when we shift our view of youth from problems to possibilities, an alternative future is viable.[48] They can serve as catalysts for greater parent involvement. To date, more than

[45] US Census Bureau. American Fact Finder. American Communities Survey. 3-year data. 2008-2010. Table C17002. Ratio of Income to Poverty. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_3YR_C17002&prodType=table

[46] United States Census, "East Palo Alto," State & County Quick Facts, 2010/2011. http://quickfacts.census.gov/gdf/states/06/0620956.html

[47] Diamant, et al, "Obesity and Diabetes," p. 4.

[48] Block, Community, p. 165.

120 parents have participated in "Cooking Matters" classes offered through Collective Roots. In Cooking Matters, they learn about nutrition, food budgeting, meal planning, and how to prepare healthy, affordable, tasty meals. Parental interest remains strong in these classes, because most people want to lead active lives and live in more healthful ways. This knowledge empowers them to make positive changes in their own lives and for their children.

Billy and Maria, parents of two children in East Palo Alto schools, both graduated from Cooking Matters and were excited and energized what they learned. Both are now loyal shoppers at the Palo Alto Community Farmers' Market. Maria signed on as a volunteer to teach Cooking Matters at the school where she works. Billy, who has diabetes, made a presentation to the County Board of Supervisors about the positive changes his family has experienced since having access to fresh, organic vegetables.

As the "Fresh Fest/Cooking Matters Outcomes" table, shows, a large majority of the parents reported they ate more vegetables (81 percent), more fruit (69 percent), and more whole grains after participating in the classes. And nearly all reported their cooking skills improved.

Fresh Fest/Cooking Matters: Outcomes[49]

Behavior	Percent
Eat more vegetables	81%
Eat more fruit	69%
Eat more low-fat or fat-free dairy products	53%
Eat more whole grains	71%
Improved cooking skills	90%

The enthusiasm of volunteers, staff, partners, parents, and students has enabled Collective Roots to grow and nourish East Palo Alto residents by providing nutrition education and garden-based learning programs that inspire participants to make healthy changes in their lives. Working through its dynamic staff and volunteers, active board of directors, and diverse community partners, Collective Roots educates and engages youth and communities in food system change through sustainable programs that impact health, education, and the environment.

[49] Collective Roots, "Year-end Impact Evaluation Report," 2011.

Chapter 4

COMMUNITY ENGAGEMENT PRODUCES STRONGER COMMUNITIES

When our attention shifts from fighting disease to creating better health, new possibilities begin to emerge. Imagine building a "community of care," by working with others to make needed changes, accepting ownership, taking action, committing to sustaining new behavior and to new ways of thinking and interacting.[50] Community engagement makes this possible.

FOOD AND HEALTH EDUCATION PROMOTE STABILITY FOR ONCE-HOMELESS FAMILIES

"Growing Youth Project"
Alameda Point Collaborative, Oakland

Homeless people in our cities face huge obstacles. Food insecurity, the threat of violence, and chronic diseases are rampant. Low income and lack of transportation—problems that can seem overwhelming—further complicate their lives.

The Growing Youth Project got its start in a youth-led community food assessment sponsored by the California Endowment in 2006. The assessment focused on 5 key areas: Access & Affordability, Hunger & Nutrition, Local Agriculture, Policy, and Community Resources. The findings of that assessment set the stage for developing a wide range of food, health, and farming activities at Alameda Point Collaborative (APC).[51]

APC is a supportive housing community located on a decommissioned naval base. Nearly 500 formerly homeless, low-income people live in 200 units once home to navy families. Residents include survivors of domestic violence, adults and children with disabilities (including substance abuse, mental illness, and HIV/AIDS), and veterans and their families.[52]

Growing Youth was designed to address the challenges these groups face. APC's urban farm forms the core of this program, which provides meaningful part-time employment, nutrition education, and leadership opportunities for youth. Residents of all ages benefit from increased access to fresh food from the garden: fruits, vegetables, eggs and honey.

APC employs teens as Community Educators (CEs) and provides them with training in nutrition, public speaking, workshop planning and lesson development. CEs acquire computer and communication skills directly transferable to other settings. CEs research and develop their own lesson plans for an eight-week series of nutrition and cooking classes they lead for children and their families. During monthly Family Health Nights, CEs distribute health and nutrition information and engage in dialog with other APC residents.

Most CEs say that before Growing Youth they thought of healthy foods as "tasting bad" or "gross." One teen initially described vegetables as "nasty,"

[50] Block, Community, p. 174.

[51] Alameda Point Collaborative, "2006 Food Security Findings and Recommendations," available at: http://www.apcollaborative.org/images/APC_GrowingYouth.pdf

[52] Dawn Carraway, Kate Casale, Tommy Freeman, Jerrard Green, Jernard Harris, Chanelle Haskins, and Farrell Williams, *Community Food Assessment of the Alameda Point Collaborative: The Growing Youth Project*, October 2005-August 2006.

but that perception began to change as she learned new ways to prepare them. While changing tastes and habits takes time, these students learn an important lesson early on: unhealthy foods have a negative impact on their health. Most say they're working on changing their behavior.[53]

Growing Youth empowers young people who were once homeless to become leaders. As they learn how to build healthier bodies, they help grow healthier families and a stronger community. Their excitement about healthy food inspires many children, parents, and guardians to make healthier choices about what they eat and how they live.

The Growing Youth Project is woven into the fabric of the APC community, which also founded Ploughshares Nursery, a nonprofit business venture. This environmentally sustainable three-acre retail nursery specializes in organically grown drought-tolerant and edible plants that are native to California. Ploughshares Nursery generates revenue to support APC housing, creates job training opportunities for residents and sells products that are safe for the environment.

PARTNERSHIP BRINGS HEALTHY FOOD AND NUTRITION FACTS TO HIGH-NEEDS POPULATION

"The Good Food Bag"
Sacramento Hunger Coalition/Community Services Planning Council, Sacramento

"Nutritious food can be simple."
"It was fun! I loved the camaraderie."
"I made the recipe and shared it with my neighbors."

These are some of the excited statements participants made about the food bank's "Fun with Cooking" program.[54] This program is serving a more diverse group than ever due to the changing face of poverty. Many who show up at the food bank are the working poor with children, whose paychecks don't stretch to provide groceries all month. More seniors show up too, their fixed incomes failing to keep up with rising prices and cutbacks in community services.

Responding to the growing need, four Sacramento-area community organizations formed a partnership to provide nutrition education for people using the food bank and community clinic. River City Food Bank, Center for AIDs Research, Education and Services (CARES), the Sacramento Hunger Coalition, and the Community Services Planning Council work together, each responsible for specific activities.

The food bank director Eileen Thomas wrote the curriculum. She shops for ingredients and leads cooking demonstrations. Margie Erwin, nutrition program coordinator for CARES, facilitates nutrition discussions, offers tips, and answers questions on healthy eating. The community services administrator handles paperwork, from class flyers to attendance records and monthly evaluations. A college intern helps prepare and distribute food bags of ingredients that participants take home to cook on their own.

"**The Good Food Bag**" includes two types of cooking/nutrition classes:

- **"Fun with Cooking"** single-session cooking demonstrations and nutrition education classes showing how to prepare simple, healthy recipes using fresh fruits and vegetables and whole grains. The presentations are fun, lively, and interactive, to engage participants. Following the class, each participant receives the recipe and a bag of groceries to prepare the recipe at home.
- **"Nutrition and You,"** a six-session series of classes that focus on nutrition and physical activity. All participants who completed an evaluation of the series reported eating more fruits and vegetables afterward.

[53] Focus group results from youth who participated in Growing Youth, in Alameda Point Collaborative's Growing Youth Project, "Community Educators Focus Group Summary," October 2011.

[54] Sacramento Hunger Coalition, "The Good Food Bag: Project Retrospective," August 12, 2011.

Recipes used in The Good Food Bag demonstrations come from cookbooks created through a CDPH/*Network* partnership and funded by the California United States Department of Agriculture (USDA)'s CalFresh Program. *Soulful Recipes, Healthy Latino Recipes and Everyday Healthy Meals* offer tasty, healthy meals people can prepare quickly and easily using fresh fruits and vegetables, healthy grains and foods available through the food bank. Organizations benefit from access to these healthy recipes, which are a hit with participants in nutrition-education classes.

Participants find the interactive Good Food Bag classes fun and energizing. That's important for motivating lasting changes. After each class, they eat the healthy meal they just prepared. Together they discover how to fix healthier meals quickly and easily. They also learn to connect healthy eating as a social experience.

The need for and success of The Good Food Bag has led to changes in its sponsoring organizations. CARES has expanded its commitment to nutrition, while the River City Food Bank has a new site, creating new opportunities for programs. As part of the sustainability effort, the Sacramento Hunger Coalition designed an Edible Landscape at Kennedy Estates housing development in Sacramento. Residents and volunteers planted 80 fruit and vegetable trees and shrubs, and residents received training to maintain the edible landscape. As participants promote the project to newer residents, the project becomes self-sustaining.

The Good Food Bag, "Fun with Cooking" Program Outcomes[55]

550	Total participants
87%	Reported increased fruit/vegetable consumption
44%	Reported preparing a demonstrated recipe
36%	Reported specific nutrition knowledge gained
35%	Reported specific food prep/safety knowledge gained

BUILDING PROMISING FUTURES BY PROMOTING HEALTHY CHOICES

"Nutritious Beginnings"
Child Development Resources, Ventura County

"Child Development Resources (CDR) provides a foundation to build promising futures for children. CDR collaborates with parents and the community to, as they put it, "deliver programs that enrich lives."

From 2003 to 2009, diabetes rates nearly doubled—from 5.5 percent to 9.0 percent—for Ventura County's Latino population.[56] Rising rates hit hardest among families with lower incomes. Reversing this trend is essential to build promising futures for children in this community.

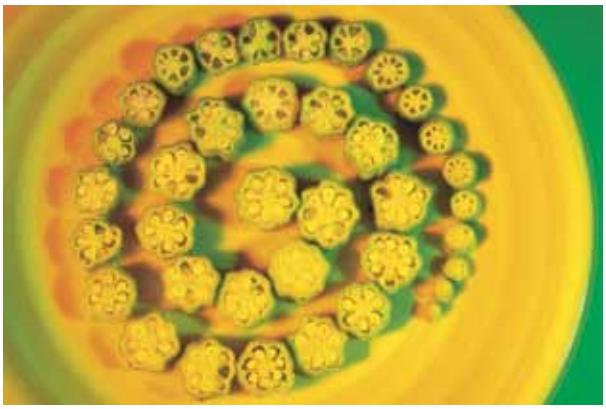
CDR approached this issue directly, working with parents of preschool children in the Head Start program. In addition to operating early childhood education and child care programs at 27 Head Start centers and at 43 home childcare sites in Ventura County, CDR also offers a program that brings one-on-one education to families through in-home visits. These existing relationships offered a unique opportunity.

Teachers facilitated nutrition education through a 6-part series of weekly home visits. They employed materials from "Healthy Beginnings" and "Harvest of the Month." The Healthy Beginnings curriculum focuses on healthy eating and age-appropriate physical activities for preschool children. California's Harvest of the Month is designed to empower and motivate students to enjoy and eat more fruits and vegetables and engage in daily physical activities.

These materials were woven into content the visiting teachers already used. Messages learned in classrooms were reinforced in home visits. Parents and children learned together, discovering how to choose and prepare healthier recipes. The program

[55] Source: "The Good Food Bag, Project Retrospective Presentation," August 12, 2011.

[56] California Health Interview Survey. CHIS 2003 and 2009. Adult Public Use File. Los Angeles, CA: UCLA Center for Health Policy Research. Ask CHIS http://www.chis.ucla.edu/main/default.asp.



was designed to engage all the senses and to be fun as well as educational. Families enjoyed the taste testing and physical activities included in the program.

As parents became more aware of how to make healthier choices, they acted as positive role models for their children. Some were surprised to find out how much influence they have on their children's choices; when they lead the way, their children are willing to try different foods. Parents want to do their best. They are eager for information, education, and training on healthier lifestyles. Many believe that if they are in better health, they'll be better parents. That knowledge often empowers parents to make changes in their own diet and activity levels.

This CDR program reached over 180 families with its health-wise message. Effectiveness was measured using a pre- and post-test of the *Fruit and Vegetable Checklist*. Families also completed a Monthly Activity Time Sheet. The results were positive.

Parents made significant increases in nearly every *Checklist* measure. Overall, combined fruit and vegetable consumption rose, and parents offered more fruit and vegetables to their children at home.[57] That solid progress supports the effectiveness of the CDR program. However, these data also revealed participants ate more fruits than vegetables. To increase vegetable consumption even more, future sessions may begin to highlight specific vegetables, one at a time.

The CDR is committed to making this program available after the term of the present funding is complete. The need for ongoing outreach and education on nutrition and physical activity is essential to CDR's mission of building bright futures for the county's children. With formation of Constructing Connections of Ventura County, CDR intends to optimize its collaborations with government leaders, developers, employers, banking institutions, private foundations, planners, the Chamber of Commerce and local private/nonprofit agencies.

[57] CDR Ventura. Year-end Impact Evaluation Report. FFY2011.

Chapter 5

COMMUNITY ENGAGEMENT DRIVES SUSTAINABILITY: FROM IDEA TO ACTION

"Involving the community and collaborating with its members are cornerstones of efforts to improve public health." –NIH, Principles of Community Engagement

New behaviors, programs, and policies cannot last without ongoing support and involvement. That's one reason the LFNE Channel promotes community engagement as the path to sustainability, to ensure the continuation of community health or quality of life benefits over time.[58]

Sustainability does not happen automatically. It results from mobilizing community assets and developing capacities and resources.[59] Community assets might include funding, training and education, nutrition tools and resources, sustainability coaching, exposure to new *Networks* and expertise.

A recent survey and phone interviews with LFNE contractors reveals steps these organizations took to sustain their nutrition education or food security projects. Of the 15 agencies that responded, 14 took direct action to continue their projects:[60]

- 12 wrote grant proposals.
- 11 partnered with other organizations.
- 9 allocated internal funds.

As the Ecology Center reported, "We were fortunate to receive initial funding from LFNE that got the program started. This model went on to inform the development of People's Grocery, Kaiser Farmers' Markets, East Bay Asian Youth Centers' nutrition-education program, and others."[61]

When asked what parts of their original project were sustained, only two organizations continued the original program: The Second Harvest Food Bank of Santa Cruz County and Sustainable Economic Enterprises of Los Angeles. Sometimes program changes are necessary to accommodate other changes in the organization or in the community.

- Five agencies offered reduced versions of the project. For example, Urban Sprouts continues its original program on a smaller scale. Lower funding led to a decision to reduce the number of partner schools, which means fewer students participate.[62]
- Six agencies offer modified versions of the project. An after-school nutrition program developed by Nextcourse evolved into "Culinary Leadership," a high-school elective seen as a model for student leadership training in nutrition education.[63]

[58] Center for Civic Partnerships. "Sustainability Toolkit: 10 Steps to Maintaining Your Community Improvements," Public Health Institute, 2011, available at http://www.civicpartnerships.org/docs/publications/Sustainability%20Toolkit%20Excerpt%20-%20Step%203.pdf

[59] Principle 7 of community engagement, presented in NIH, *Principles*, p. 59.

[60] Op. cit., LFNE, 2011 Sustainability Study," pp. 34-36.

[61] Ibid., p. 55.

[62] Ibid., pp. 35-36.

[63] Ibid., p. 35.

- Six agencies trained others to implement their approach, among them the Community Services Planning Council/Sacramento Hunger Commissions, which trained residents of the Kennedy Estate housing project to maintain an Edible Garden located on the estate. Residents who receive training then pass along the program to new community residents, creating a self-sustaining model.[64]

These LFNE contractors clearly saw the value of their nutrition education efforts. They determined the path to sustainability that made the most sense for them, and found ways to continue.

While fundraising was a common path to sustainability, coalition-building was also important.

- Nextcourse received sustainability training through the Center for Civic Partnership, which opened the door to additional help with strategic planning.[65]

- The Sacramento Hunger Coalition collaborates with a local immigrant support center to initiate an emergency food provider's forum. Its collaboration with the Center for AIDs Research, Education, and Services (CARES) makes it possible to continue Fun with Cooking and nutrition education classes for another year.[66]

These LFNE contractors benefitted both directly and indirectly from their collaborations and partnerships with other community-based organizations.

The *Network*, through the LFNE Channel, builds stronger communities that are more resilient and sustainable. LFNE projects have made a positive impact in neighborhoods and communities across California. They demonstrate the potential for diverse organizations and people to work together, learn from one another, and build capacity to ensure the sustainability of successful efforts.

Engaging individuals and families through community organizations empowers people to change their behavior, take steps that improve their health, connect with others at a deeper level and contribute to reweaving the social fabric. As people engage, they learn more about the issues, they become more aware of their choices. They become accountable for their decisions and committed to positive change.

Community engagement is the path to health promotion and to a deeper connection between people, organizations, and communities, which sets the stage for healthier choices throughout life.

[64] Ibid., p. 37.
[65] Ibid., p. 46
[66] Ibid.

A Call to Action

Each of us is part of many communities. Some of them need our help right now. The LFNE Channel's approach to working with community-based organizations offers excellent models for moving forward to improve health behaviors, food access, and participation in physical activity. Now is the time.

- Get involved. Community engagement works to promote healthier choices.
- Engage people from the community from the beginning. Look for ways to pass on skills. Building capacity in individuals and in organizations strengthens communities too.
- Commit to the long haul. Promoting healthy eating practices and physical activity are long-term investments.[67]
- It will be worth it. Without taking these steps, obesity and chronic diseases will continue to fuel the healthcare crisis upon us.

The community engagement approach to nutrition education and obesity prevention has the potential to improve the health and wellbeing of people and communities throughout California.

[67] Center for Civic Partnerships, "Fresh ideas for community nutrition and physical activity," Public Health Institute, Sacramento, California, 2002.

Resources

Community Engagement in Design and Planning, Prevention Institute, November 2011.

Demonstrates that community engagement is an effective mechanism for creating lasting health improvements by galvanizing resident participation to create healthy, equitable, and sustainable communities.

http://preventioninstitute.org/component/jlibrary/article/id-316/127.html

Engaging Communities in Changing Nutrition and Physical Activity Environments, November 2009.

A brief that discusses how HEAC and CCROPP are engaging communities. Presents promising practices for community engagement demonstrated by grantee achievements.

http://www.partnershipph.org/sites/default/files/HEAC_CCROPP_EngagingCommunities.Updated5.pdf

Principles of Community Engagement, Second Edition, National Institutes of Public Health, July 2011.

Principles provides public health professionals, health care providers, researchers, and community-based leaders and organizations with both a science base and a practical guide for engaging partners—individuals, groups, organizations, and agencies—in projects that affect them. The principles of engagement can be used by people in a range of roles, from the program funder who needs to know how to support community engagement to the researcher or community leader who needs hands-on, practical information about how to mobilize the members of a community to partner in research initiatives. This primer also provides tools for those who are leading efforts to improve population health through community engagement and profiles of successful projects

www.atsdr.cdc.gov/communityengagement/

Roadmap to Improving Food and Physical Activity Environments Tips and Tools for Community Change, Second Edition Partnership for the Public's Health, 2011.

A guide to examples, tips and lessons from the Healthy Eating, Active Communities (HEAC) program. It also includes success stories from HEAC, the Central California Regional Obesity Prevention Program (CCROPP), and from other California communities.

http://www.californiaconvergence.org

To learn more about the *Network* for Healthy California and find additional resources, visit: http://www.cdph.ca.gov/programs/CPNS/Pages/default.aspx

> **Fruits and Vegetables embody characteristics of a healthy community: connectedness, nourishing a strong safe core, and seeds of possibility.**
>
> –Vicki Sanderford-O'Connor

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A Report On:

Network for a Healthy California
2011 Tracking Survey

September 2012

Prepared for
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Chapter 1: Executive Summary

This report presents findings from the *Network for a Healthy California* 2011 Tracking Survey. Interviews were conducted with approximately 1,000 SNAP recipient mothers, 1000 SNAP eligible mothers and 600 low-income mothers (LIM) within the 130-185% FPL range. In addition, we interviewed a comparison group of approximately 675 California mothers with incomes at or above 185% FPL. Data were collected through a combination of telephone and in-person interviews in the fall of 2011.

This part of the report summarizes the main findings from the study.

Advertising Recall

The year's hiatus in advertising allowed us to assess the rate of residual recall of *Network* advertising. In the 2011 study we asked about recall of *Network* ads that ran in 2010, the year before, rather than the recall of current advertising that was the focus of previous studies. Results are surprising: 2011 recall scores are as high as in 2010, a year when the *Network* mounted a major advertising effort. On some of the measures, and for some audience segments, the 2011 scores are even higher than the 2010 scores. This pattern generally holds across all the 2011 advertising weight tiers and across all the language and race/ethnic groups broken out in the analysis.

There is evidence from previous studies that *Network* ad recall is slow to erode, suggesting that a single annual advertising flight may have relatively long term effects. Slow erosion, by itself, does not explain the unexpectedly high 2011 recall scores, however. Neither does yeah-saying bias, the tendency of respondents to falsely report recall of non-existent ads, which did not significantly increase this year. Instead, we believe that increased misattribution of *Network* ad recall explains the 2011 findings.

Two factors suggest that the rate of misattribution might be higher in the *Network* studies than in studies of other campaigns: the cluttered nature of the obesity prevention advertising category and the relatively low awareness of the *Network* brand. In addition to these factors, four others likely increased the rate of misattribution in 2011: progress in achieving campaign objectives; increases in

news coverage of the obesity epidemic and online activity; significant increases in social networking site use and frequency of use by *Network* audiences; and, increased exposure to non-ad interventions from already high levels.

Network *Awareness*

About one-third of both the recipient and eligible audiences are aware of the *Network* on an aided basis, a percentage that has remained relatively stable over recent surveys. CalFresh recipients were most likely to be aware of the *Network* (38%).

Rethink Your Drink *Awareness*

Recall of *Rethink Your Drink* campaigns is up from 2010. Recipient recall increased from 48% in 2010 to 64% in 2011. Eligible recall increased from 41% to 52%. *Network* audiences are generally more likely to report recall of the campaigns than the higher-income comparison group.

Access to Workplace Programs

Ten percent of eligible mothers and 15% of recipient mothers enjoy access to employer nutrition-related benefits at work in 2011, no significant change from 2009 and 2010 levels. About nine in ten recipients and seven in ten eligibles with access say they use the benefits. Compared to *Network* audiences, higher-income mothers are significantly more likely to report access (25%). However, there are no significant differences in usage levels; in fact, more recipients (85%) report use than any other group.

About 10% report access to physical activity-related benefits, no significant change from 2009/2010. Fifty-eight percent of recipients and 59% of eligibles with access report using the benefits, about the same as in the previous years. Higher-income mothers are more likely to report access to these benefits (30%) but their rate of use is comparable to *Network* audiences. Eligibles (59%) and recipients (58%) reported the highest rates of use.

Exposure to Other Non-Advertising Interventions

Exposure to other interventions (e.g. classes and workshops, food demonstrations, health fairs and festivals) remains high: 86% of recipients and 69% of eligible mothers report exposure to one or more. Exposure among both groups has significantly increased since 2010.

The 2011 rate of exposure among recipients is on par with the rate among higher-income moms (83%). The rate of exposure is significantly lower among LIM (66%) and eligible mothers (69%).

Knowledge

Recommended Intake of Fruit/Vegetables and Level of Physical Activity-done

The level of knowledge about the recommended level of fruit and vegetable consumption has significantly increased with the new simplified half plate recommendation but only among eligible mothers (63%) and not recipients (37%). Two of the three *Network* audiences (the LIM and eligible mothers) outscored the higher-income comparison group.

Knowledge about the adult physical activity recommendation (150 minutes per week) is very low. Only 13% of recipients could supply the correct answer, not significantly different from the higher-income comparison group (25%). A majority of LIM and eligible mothers were knowledgeable about the children's recommendation compared with only about one-third of recipients. Their knowledge levels were comparable to the higher-income comparison group (50%).

Recall of choosemyplate.gov

There is little awareness of the choosemyplate.gov website among any of the study populations. Only about one in five *Network* audience members reported recall on either on aided or unaided basis. The data on choosemyplate.gov is similar to data from previous studies on the mypyramid.gov website.

Efficacy of Preventative Behaviors

The overwhelming majority of respondents accept that there are disease preventative benefits associated with *Network* recommended behaviors. These data have changed little over time although there was an increase in the acceptance of the preventative benefits of fruit and vegetable consumption among recipients in 2011. Higher-income mothers are more likely to understand the preventative benefits of both behaviors but knowledge levels are very high across all the groups.

Social Norms

Despite the lack of advertising in 2011, there was a significant increase in most of the normative measures among recipients. Among eligible mothers, 2011 levels resemble those in 2010. Despite recent increases, the normative climate remains weak, much weaker among *Network* audiences than among higher-income mothers in California. Only one-quarter to one-third of the low-income audiences perceive significant peer support; among higher-income mothers the percentages are much greater.

Self-Efficacy

There have been increases since 2010 in the proportion of recipients reporting high self efficacy, especially on the family change related self efficacy measures. Otherwise, the data on self efficacy are flat for the most part since 2010, a year in which there were increases on many of the measures.

Network audiences lag behind the comparison group in 2011 on healthy eating related self efficacy but the gap is closeable. For example, on personal fruit and vegetable consumption, the gap is in the 8-15% range. On physical activity self efficacy, *Network* audiences compare well with higher income mothers. This pattern of differences has been consistent over recent year's surveys.

Mother's Behavior: Level of Fruit and Vegetable Consumption and Physical Activity

There has been positive movement on these measures since 2010 among recipients. On the 5-a-day measure, the percentage of recipient mothers eating the recommended number of servings increased from 55% to 60%. On the previous cups measure it increased from 43% to 48%. Among eligible mothers, the 2010-2011 trends are either negative or flat. Last year's study showed no change within either audience on fruit and vegetable consumption. On physical activity the data have been generally flat in recent years except for a decline from 2009 to 2010 among recipients.

Network audiences are on par with higher-income mothers on fruit and vegetable consumption using the recent cups-per-day measure; they were less likely to respond affirmatively, however, when asked whether they eat half a plate for most meals. Seventy one percent of higher-income mothers reported half a plate compared with 51%-64% of the *Network* audiences. Half a plate is the new consumption recommendation.

Network audiences (almost one half of each) were more likely than their higher-income counterparts (about one third) to say they were eating more fruit compared to a year ago. Except for recipients (52%) who reported increased consumption, there is no difference between the populations (43%-47%) on vegetable consumption. *Network* audiences reported significant increases in both fruit and vegetable consumption last year.

On physical activity measures, *Network* audiences equal or outperform their higher income counterparts. They perform best on the measure that combines work and leisure time activity, a difference that was also apparent in 2010 study data.

Mother's Behavior: Promoting Family Change

On promoting family change, there has been positive movement on almost all the measures since 2010 among both the recipient and eligible audiences. Large majorities reported engaging in almost all the recommended behaviors. These 2011 increases follow annual increases on most of the measures over the last several surveys. In terms of comparisons with higher-income mothers, *Network* audiences for the first time generally do as well as their more affluent counterparts.

Race/Ethnic Differences on Outcome Measures

We found a number of differences based on race/ethnicity in the 2011 data:

- *Normative Beliefs*: Whites tended to be a leader on personal physical activity norms as well as on those related to healthy eating, physical activity and sugary beverage changes in the family. African Americans also tended to be a leader on personal physical activity norms as well as activity-related family changes. In addition, there has been positive movement since 2010 among African Americans on eating-related family changes. With regard to Hispanics, there has been positive movement since 2010 on eating and activity-related family changes. These differences are generally consistent with patterns identified in previous surveys.

- *Self-Efficacy Beliefs*: Whites tended to lead on eating-related family change measures. African Americans tended to lead on personal physical activity related measures. Hispanics lagged behind the other groups on personal fruit and vegetable consumption; somewhat surprisingly, they tended to lead on personal physical activity-related beliefs in 2011. There was positive movement from 2010 to 2011 on eating-related family change measures among Hispanics. These differences are generally consistent with patterns identified in previous surveys.

- *Personal Fruit and Vegetable Consumption:* All of the race/ethnic groups showed negative movement since 2010 on some of the personal fruit and vegetable consumption measures, mirroring trends within the general samples. Hispanics led the other groups in personal fruit and vegetable consumption in 2011. Patterns on this measure have varied across recent studies.

- *Personal Level of Physical Activity*: There is a clear pattern across all the recent studies including the 2011 study: Hispanics are significantly more likely to lag on this measure. On a positive note, there has been positive movement since 2010 among Hispanics on this measure.

- *Family Change Behaviors*: Among Whites there has been positive movement since 2010 on sugary beverage and eating-related family changes. African Americans tended to lag on activity-related family changes in 2011; they posted positive movement since 2010, however, on eating-related family changes. Among Hispanics there has been positive movement since 2010 on sugary beverage and eating-related family changes. There have been no clear patterns on these data across recent surveys.

Price and Access Barriers to Behavior Change

Food Price Barriers

About half of eligibles believe that fruit and vegetables are too expensive, a significant increase from the 2010 level. Significantly fewer recipients share this view – 40% for the price of vegetables and 47% for fruit. The recipient data has not changed since 2010. As with previous surveys, comparison group respondents were less likely to report the price concerns.

Fruit & Vegetable Access Barriers

In 2008, 26% of recipients reported that they could not find good, fresh produce where they lived. By 2010, the percentage dropped to 19%. In 2011, it has dropped further to 16% but decline is not significant. Among e1igibles, 15% reported the problem in 2011, a percentage similar to the previous two years. Compared to *Network* audiences, significantly fewer higher-income respondents reported access problems.

Physical Activity Access Barriers

About one in ten eligibles and recipients reported difficulty in finding places to be physically active in 2011, a rate that has not changed since 2010. *Network* audiences are far more likely to experience this problem than higher-income mothers.

Menu Labeling and Restaurant Ordering

The vast majority of higher-income mothers (69%) reported reading calorie information on menus when it is available at fast food or chain restaurants. *Network* audiences are significantly less likely to do so. Thirty nine percent of eligible mothers, 40% of LIM, and 53 % of recipients reported reading the information.

Of those reading the information, the vast majority make use of it in their ordering decisions at least most of the time. Among recipients the majority is the smallest, 54%.

Most of the time, the majority of mothers do not look for fresh fruit and vegetables when dining in these restaurants. *Network* audiences were the most likely to say that they never do.

Large numbers of *Network* audience members – 50% of LIM and eligible mothers and 42% of recipients – encounter a price barrier to ordering fresh fruit and vegetables at least half the time when they are available.

These data were collected for the first time in the 2011 survey.

Social Media

About eight in ten eligible and recipient mothers report access to the Internet in 2011, a significant increase for recipients. Among LIM, the 2011 access rate is comparable. One hundred percent of higher-income mothers reported access. While the differences between the three *Network* audiences and the comparison group are significant it is striking that digital divide has shrunk to the extent that it has.

Six in ten recipient and eligible mothers have an online profile at a social networking site in 2011, a major increase since 2010 for both groups. Seventy percent of LIM reported a profile. Seventy seven percent of higher-income mothers reported one, still a significantly greater percentage than for the *Network* audiences. As in last year's study *Network* audiences report more frequent use of the sites. About forty percent of eligibles and nearly half of LIM (47%) check them several times per day, compared with only 20% of higher-income mothers. Recipients reported less of the heaviest use than the other *Network* audiences (23%).

In 2011, 68% of LIM and 66% of eligibles own a cell phone that with Internet access, comparable to the proportion of higher-income mothers. Recipients are significantly less likely to, 56%. Across the study populations, the vast majority of those with the phones use the Internet searching capabilities of their phones.

Public Policy Reforms

There is overwhelming support across all the study populations for the idea that stores accepting CalFresh should be required to offer a variety of fresh fruit and vegetables and that the stores be allowed to offer CalFresh customers lower-priced specials for healthy food items. There was also overwhelming support for joint use of school facilities for physical activity. While support levels are very high across all the study populations (about 80% or higher), the levels are highest among the *Network* audiences.

Comparisons With Higher-Income Group

As part of our effort to assess campaign effectiveness, we once again looked at differences between *Network* audiences and the higher-income comparison group.

Similar to last year's study, low-income mothers are once again far more likely than their higher-income counterparts to report price barriers to increased fruit and vegetable consumption. They are more likely to report barriers in accessing fresh produce as well as places to be physically active. They also live in far less supportive normative environments than their higher-income counterparts.

Despite these challenges, *Network* audience members generally compare well on the behavioral measures, even more so in 2011 than in 2010. They also compare well on knowledge for the first time. On self efficacy, *Network* audiences generally do as well or better than the higher-income group when we compare the scores on physical activity related behaviors. On healthy eating related ones, the data are more mixed.

Chapter 2: Study Objectives and Methodology

In order to assess the effectiveness of the *Network's* social marketing campaign promoting healthy eating and physical activity a series of annual audience surveys has been implemented since 2004. The surveys have tracked changes in campaign exposure as well as trends with regard to knowledge, attitudinal and behavioral outcomes. This report represents data from the 2011 study, the eighth in the series.

Study Objectives

The specific objectives of the 2011 survey were to:

- Assess recall of campaign advertising messages in a year when no new advertising messages were being disseminated in order to assess levels of residual recall from the previous year,
- Asses audience exposure to other (non-advertising) interventions promoting healthy eating and physical activity during the advertising hiatus,
- Determine trends with regard to basic knowledge about healthy eating and physical activity as well as social norms and self-efficacy beliefs,
- Track changes in the eating, physical activity and family change behaviors being promoted by the *Network*, and,
- Compare *Network* audience trends with those of their higher-income California counterparts.

Methodology

Study Populations

This year's survey included four study populations: California CalFresh recipient mothers (recipients), mothers who are not CalFresh recipients but are eligible (eligibles), mothers with incomes in the 130-185% FPL range (LIM, for low-income mothers), and a comparison group of California mothers with incomes exceeding 185% FPL (higher-income mothers). All were 18-54 years of age with at least one child aged 0-17. The first three populations comprise the main target audiences of the *Network* campaign.

The survey populations have changed somewhat over the course of the annual studies:

2004 Study

The first study entailed four samples: current CalFresh recipients (males as well as females); low-income mothers (LIM) of children aged 0-14; Californian 9-11 year olds from low-income families and the general adult population of the State (both male as well as female). For the LIM and children's samples respondents were required to be from families with annual incomes at or below 185% of the Federal Poverty Level (FPL).

2005 Study

In 2005, it was decided to limit the adult study populations to mothers (aged 18-54) of children under the age of 18. Therefore, in 2005, the year of the first tracking study, the three adult study populations were mothers (aged 18-54) of children aged 0-17 currently participating in the CalFresh, low-income mothers (LIM) eligible for CalFresh but not enrolled in the program and mothers in the general population. The sample of 9- to 11-year-olds from low-income families remained unchanged. The definition of low-income also remained the same (185% of the Federal Poverty Level). Given the change in the definition of the 2005 study populations, the 2004 adult data were reconfigured to include mothers only for trend analysis purposes. Males and any females who were not mothers were separated out.

2006 Study

In 2006, U.S. Department of Agriculture (USDA) funding guidelines regarding surveys dictated a further change to the composition of the samples. The guidelines limited funding of surveys to populations who meet CalFresh eligibility criteria, namely those with annual household incomes at or below 130% FPL. This had no impact on funding for the CalFresh recipient sample.

However, the general population sample had to be eliminated and the income eligibility criterion was reduced from 185% of FPL to 130% of FPL for the low-income mothers and children samples. As a result, readers should be cautious in interpreting trend data for these audiences. While funds from other sources were found to augment the main sample of mothers with approximately 300 mothers at higher incomes (130%-185% of FPL), the 2006 sample is predominantly made up of the lowest-income mothers.

Commencing in 2006, the non-CalFresh-recipient adult study populations were relabeled. Those mothers at/below 130% FPL who were not recipients were labeled as *CalFresh eligibles*. Those mothers in the higher 130-185% FPL group were labeled as *low-income mothers (LIM)*. We have carried forward these monikers in subsequent years.

2007 Study

In 2007, additional funds were found to augment the study samples. The 2007 study comprised four adult populations: a) CalFresh recipient mothers, b) CalFresh eligible mothers (at/below 130% FPL), c) LIM (between 130% and 185% FPL), and d) higher-income mothers (at/above 185% FPL). Also, since previous studies indicated a relationship between CalFresh participation and campaign outcomes, we decided to exclude program participants from the other low-income adult samples. For trend analysis purposes, the earlier year's samples were reanalyzed in order to exclude any CalFresh recipients included within them.

2008 Study

In 2008, only two populations were included in the study: CalFresh recipient mothers and CalFresh eligible mothers. No survey was conducted with LIM due to resource constraints. In addition, there was no comparison population of higher- income mothers (also because of funding limitations) and no sample of low-income 9-11 year olds because of a hiatus in communication efforts targeted to them.

2009 Study

In 2009, sufficient resources were available to reinstate all of the (adult) samples: CalFresh recipient mothers, CalFresh eligible mothers, low-income mothers (LIM), and higher-income mothers (at/above 185% FPL).

2010 Study

The 2010 study surveyed the same populations as the 2009 study

2011 Study

The 2010 study surveyed the same populations as the 2009 and 2010 studies.

Data Collection

Data for the higher-income mothers were collected using computer-assisted telephone interviewing (CATI) methods. CATI methods were also used to collect data from CalFresh recipient mothers. In 2008, because a CalFresh recipient list was not available from the *Network*, CalFresh mothers were interviewed using public location intercept methods. They were selected in the same shopping malls as the CalFresh eligible mothers, the other 2008 study population.

In 2004, we used a *Network* supplied list for the CATI sample of CalFresh recipients, one that included both men and women. In subsequent years the list was of mothers only. Since the incidence of qualified respondents was generally high each year, it was cost-effective to collect data by telephone. In 2005, 996 interviews were completed with CalFresh recipients and 1,000 interviews were completed in the 2006-2011 studies.

Unfortunately, there is no cost-effective approach for sampling the other populations on a household basis, so the decision was made in 2004 to survey these populations through face-to-face interviews in shopping malls and other venues where low-income parents congregate. While we are conscious of the shortcomings of the intercept design (*e.g.*, the inability to formally generalize findings to the populations being studied), budget and efficiency concerns took precedence.

A total of 1,000 adult interviews and 400 child interviews were completed in malls in 2004 and 2005. In 2006, 1,300 interviews were completed with low-income mothers (1,000 at or below 130% FPL and 300 with incomes between 130%-185% FPL) and 400 with low-income children. In 2007, 1,400 interviews were completed with low-income mothers who were not current CalFresh recipients and 400 with low-income children. The additional 400 interviews with low-income mothers with incomes in the 130%-185% FPL range were done in order to better explore differences between the two income segments and to study how the differences might have evolved over time.

In 2008, approximately 1,000 interviews were completed with non-CalFresh-recipients (130% FPL) who were eligible for the program. In 2009, we interviewed 997 mothers eligible for the program and 460 LIM (130-185% FPL). In 2010, we interviewed 964 eligible mothers and 442 LIM. In 2011, we completed interviews with 1052 mothers eligible for the program and 559 LIM.

Data Collection Periods

Year eight (2011) data were collected from October-December, 2011. In previous years data were also collected in the fall as the year's flight of advertising came to an end.

Interview Length

The adult interviews were approximately 25 minutes in length.

Design of Telephone Samples

A list of current California CalFresh recipient mothers was provided to us by the *Network* in order to prepare the samples. This list was comprised of all females age 18-54 receiving CalFresh benefits within the three months prior to the commencement of the study. There also had to be one or more children under age 18 living in the same household. Each year we drew a random sample of records from this list.

Historically, cell phone numbers were removed from the sample files. Due to the rapidly increasing number of cell-phone-only households, particularly among our target audiences, in 2007 the decision was made to conduct telephone interviews with CalFresh mothers over cell phones. These procedures were carried over into the later studies.

In the 2007-2011 studies the higher-income mothers were sampled through a targeted sample frame, one that was designed to increase the probability of finding mothers of children aged 0-17. The sample frame was designed by Field Research in collaboration with Marketing Systems Group (MSG), a leading supplier of survey samples. Since we used data on household composition to select the households, only those in the universe of households with listed landline telephone numbers were eligible for selection. While this introduced coverage problems with the sample, we opted for the approach in order to increase sampling efficiency and minimize costs. All households in the sample were screened by interviewers in an effort to find mothers at or above 185% of FPL.

We made at least six attempts to reach a number and complete an interview. In many instances, more than six attempts were made; for example, when we knew the number was a working residential number. Call attempts were carefully timed on different days of the week and at different times of day in order to increase the probability of finding an eligible respondent willing to be interviewed. Multiple appointment times were offered to maximize convenience for respondents. All "soft" refusals were called back in an attempt to gain an interview.

Design of Mall Intercept Samples

Field Research identified California shopping malls with on-site research organizations and significant numbers of low-income customers. Data on customer demographic characteristics were provided by the mall research organizations. In addition, we examined U.S. Census data on the demographic composition of the market area for each mall.

Based on these data, in 2004 we selected a mall in each major region of the State including the following cities: Hayward/Newark, Sacramento, Fresno, Bakersfield, Sylmar (in the Los Angeles area), Ventura, Riverside and San Diego.[1] The number of completed interviews in each region was roughly proportional to the region's share of the State's total population.

2005 Changes

In 2005, an adjustment was made to improve this proportionality; the number of interviews from Central Valley sites was decreased and the number from Los Angeles was increased. In order to do so, we added malls in Redondo Beach and the City of Industry in Los Angeles County. In other changes, we added a facility in Santa Ana (Orange County) and replaced Hayward/Newark (Alameda County) with San Francisco. We also added a research facility in the Watsonville/Salinas area.

2006 Changes

In 2006 we retained the same general distribution of interviews across the State. Given the increased number of study respondents, two additional malls were added, one in Oakland and one in Tracy. We also added a new mall in Los Angeles to replace one that closed. An additional facility (Watsonville/Salinas) declined to participate in that year's survey.

2007 Changes

For the 2007 tracking survey, we again retained the general distribution of interviews across the state. Two new malls were added in the Inland Empire, one in San Bernardino County and one in Riverside County, to replace a mall that closed. We also added two local data collection partners, Field Management on the west side of Los Angeles (to replace a facility that closed) and Elliot Benson in Sacramento. In 2007, there were 15 intercept sites for the tracking survey.

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[1] *In several communities (Fresno, Sacramento and Watsonville/Salinas) on-site research organizations did not exist at an appropriate mall. Field Research, instead, contracted with nearby research organizations to conduct the intercept interviews at various public locations.*

2008 Changes

For the 2008 survey, one location in the Los Angeles area, Sylmar, was dropped from the study; their cases were reallocated to other Los Angeles area locations. Also, one San Francisco location, Carlene Research, closed its facility; these cases were reallocated to new facilities in Hayward and Milpitas.

2009 Changes

In 2009, we again maintained the same general distributions of interviews across the State although the number of interviews in the Central Valley was increased in order to obtain large enough sample sizes in the Bakersfield, Sacramento and Fresno media markets. To accommodate, interviews were shifted away from Los Angeles. The Bay Area quota was also decreased slightly.

Three intercept sites closed before 2009 data collection, Field Management's Los Angeles and Milpitas locations and Consumer Pulse in Los Angeles. Four malls were added to make up for the closures: two Quick Test sites located in low-income shopping centers in Los Angeles and two sites run by C&C Research, one in Los Angeles and one in Milpitas. We also added a second site in San Diego to decrease the burden on another location.

Lastly, we looked to add an intercept location in one of the new media markets added to the *Network's* media buy in 2009. We were unable to find malls with interviewing capabilities that met our study criteria in time for data collection. We contracted with an independent research consulting firm in Chico, Gary Bess Associates, but they were only able to complete 9 intercept interviews.

2010 and 2011 Changes

There were no changes in 2010 and 2011.

Screening Methods

Mall interviews were conducted on different days and times of the week over a number of weeks. On each working shift, interviewers were instructed to approach all appropriately aged females in order to screen them for eligibility. To be selected for the sample of the CalFresh eligible, the female had to report having one or more children age 0-17 and household income at 130% of FPL. Those in the LIM sample had to report the same except that their incomes had to fall within the 130-185% FPL range.

One-third of the interviews were completed with African Americans, one-third with Latinas, and one-third with Californians of other racial/ethnic backgrounds. Interviewing teams in the malls were bilingual, and most malls were required to complete one half of their interviews with Hispanic mothers in Spanish.

Each adult mall study respondent received a $10 incentive; beginning in 2007, it was increased to $15.

Survey Questionnaire Development

Field Research worked closely with the *Network* and campaign team to design the 2004 survey. On most study topics, existing measures were used. Sources include the California Dietary Practices Survey, BRFSS and the NIH-Behavioral Change Consortium. In ensuing years, changes were made to the questionnaires; they are explained below.

Each year, the instruments were adapted for use with those preferring to be interviewed in Spanish. Interviewing was not offered in other languages. See the appendix to this report for the current version of the survey instruments.

2005 Modifications

The survey questionnaire was modified in 2005 to incorporate questions on the new dietary guidelines issued in 2005. In addition, many questions that referenced the previous fruit and vegetable consumption recommendation (five servings) were changed to their approximate cup equivalent, four cups. As the new recommendations varied depending on one's age, gender and level of physical activity, we chose four cups because it corresponded to the amount sedentary women age 18-54 should eat.

2006 Modifications

No changes were made to the instruments in 2006.

2007 Modifications

In 2007 a number of major changes were made in the questionnaires. New knowledge measures focusing on cups rather than servings were added, consistent with the revised dietary guidelines for Americans; new aided and unaided *mypryamid.gov* awareness items were added; and additional new self-efficacy belief measures related to fruit and vegetable consumption and physical activity were added.

Modifications to family change measures were made to be more consistent with new advertising messages. Modifications to normative belief measures were also made to bring them into conformity with the new family change behavioral measures. In addition, minor changes were also made to the behavior change benefits and barriers and policy change advocacy measures.

2008 Modifications

In 2008, a new filter question for unaided ad recall was added to better capture the emphasis in the advertising on change advocacy; measures of unaided recall for radio and outdoor ads were eliminated; questions about ad acceptance, brand awareness and recall of direct mail efforts and the *Network* website were added to the instrument.

Importantly, the social normative measures were modified to focus on what respondents believe that their peers are actually doing rather than what they think. A small number of self-efficacy measures were also added to tie the constructs more closely to the *Network* communications strategy. In addition, new workplace intervention exposure measures were substituted and open-ended, follow-up questions were added to the family change behavioral series to capture how respondents actually promote fruit and vegetable consumption and physical activity to their children.

2009 Modifications

In 2009, there was a major overhaul of the study's self-efficacy measures as they relate to fruit and vegetable consumption and family dietary change; the previous measures related to physical activity remained essentially unchanged. The new fruit and vegetable measures more validly assess self-efficacy in the face of real world situations and challenges confronting low-income mothers. They are explained further in the main body of the report. Measures were also added on new survey topics, social media use and interest in new classroom, support group and other behavior change resources.

2010 Modifications

In 2010, minor changes were made to the fruit and vegetable consumption measure. Major changes were made to the physical activity behavioral measures; a new work measure was developed as well as one that combines work and leisure time physical activity. New measures were added on sugar sweetened beverages and awareness of *Rethink Your Drink* campaigns. New measures were also added to the social media section and a battery of items was added on public policies that have been proposed in response to the obesity crisis.

2011 Modifications

In 2011, new public policy items were added as were a series of questions on menu calorie labeling and restaurant ordering practices.

Quality Controls/Processing

On an ongoing basis throughout the data collection period, mall intercept data were reviewed for valid ranges, logical consistency, and other quality indicators in order to be sure that the data were being collected according to study protocol. Personnel from Field Research then independently validated fifteen percent of the completed intercept surveys. After all the editing and validation work was completed, the open-ended responses were coded and the data sets were prepared for analysis.

Sample Weighting

In the mall surveys data are weighted to reflect the actual distribution of racial/ethnic characteristics within the California low-income population. This is necessary since we completed equal numbers of interviews with African Americans (one-third), Latinas (one-third) and non-Hispanic Whites and Others (one-third).

Study Team

The 2011 study team was led by Larry L. Bye, Senior Research Director/Vice President of Field Research. During the course of the project, Mr. Bye left Field Research and became a Senior Fellow at NORC at the University of Chicago. He completed his work on the project from his position at NORC. Kevin Howard, Survey Supervisor, and Jackie Mallory, Interviewing Supervisor, assisted Mr. Bye with oversight of data collection and with data analysis and report preparation.

Sharon Sugerman and Alyssa Ghirardelli, from the *Network*, also played a central role in measures development and overall study planning, as did Lex Matteini from Runyon, Saltzman & Einhorn.

Overview of Analysis Plan

A main focus is on annual trends over the three year period, 2009-2011 Eight-year (2004-2011) trends are presented for a small group of important variables if measures have remained constant over the entire period. For the trend analysis, we have focused on CalFresh recipient and eligible mothers only; significant differences are noted in the report where they exist.

A second main focus is on audience comparisons – the analysis of differences between the four study populations: CalFresh recipients, CalFresh eligible mothers, LIM and the higher-income comparison group. Our main objective was to identify differences between *Network* audiences and the comparison group. The inclusion of the higher-income comparison group is part of our effort to assess

campaign effectiveness since a *Network* goal has been to address income-based disparities on the issues.

In this year's study we also examined differences based on race/ethnicity.

Report Reading Notes

- Percentages adding up to more than 100% indicate that respondents were allowed to give multiple answers to the question.
- Sometimes, where figures do not add to the totals shown, differences are due to rounding.
- All bases shown for report tables are un-weighted.
- Throughout the tables, when an asterisk (*) appears in a data cell, it means that the sample size is very small (less than 10); when a double dash (--) appears it means 0; and, when double asterisks (**) appear at the top of a column of numbers it means that so few people were asked the question that significance testing is not possible.
- Unless otherwise stated, the only differences across audiences and over time discussed in the report are those found to be statistically significant using a t-test at the 95% confidence level.
- The circles appearing on report tables are meant to visually identify differences that are statistically significant.

Findings for racial/ethnic groups whose proportions are too small to report alone are summarized in a single category labeled Other. Whites refers to non-Hispanic Whites.

Chapter 3: Detailed Findings

This chapter presents detailed study findings, beginning with reported exposure to the campaign.

3.1 Reported Exposure

The first part of this chapter presents data on reported exposure to advertising and other interventions promoting healthy eating and physical activity.

3.1.1 *Network for a Healthy California* Advertising Recall

The year's hiatus in advertising allowed us to assess the rate of residual recall of *Network* advertising. In the 2011 study we asked about recall of *Network* ads that ran in 2010, the year before, rather than the recall of current advertising that was the focus of previous studies. Data were collected on aided recall only. Results are surprising: 2011 recall scores are as high as in 2010. On some of the measures, and for some audience segments, the 2011 scores are even higher than the 2010 scores. This pattern generally holds across all the 2011 advertising weight tiers and across all the language and race/ethnic groups broken out in the analysis.

Data from the 2011 survey are presented below.

Aided Recall Data

To assess aided recall all respondents (regardless of whether they reported unaided recall or not) were read brief descriptions of the recent[2] *Network* ad

[2] *The 2004 survey included descriptions of ads from the 2004 California Nutrition Network campaign. The 2005 survey described ads from the Frontlines campaign which was launched that year. The same Frontlines campaign ads ran during 2006. The 2007 and 2008 campaigns featured the new Ownership ads under the Network/Champions for Change brand. The Ownership campaign was run in 2009 as well, but there were new outdoor and radio ads. Radio was run in Spanish only. In 2010, the 2009 outdoor and radio ads continued to run but there was a new What's Harder? television campaign. For the 2011 survey we asked about the ads that ran most recently, the 2010 ads.*

executions (TV, radio and outdoor) and then asked whether they recalled seeing or hearing any of them in the last three months. Respondents were asked about recall of executions in the language they completed the survey in; respondents who completed the survey in English were not asked about radio ads since all radio advertising was targeted to Spanish speakers.

Recall scores were adjusted to account for the tendency to give false affirmative or "yea-saying" responses. Respondents were asked about a non-existent ad and responses from individuals who reported recalling nonexistent ads were removed from the calculation of recall scores.

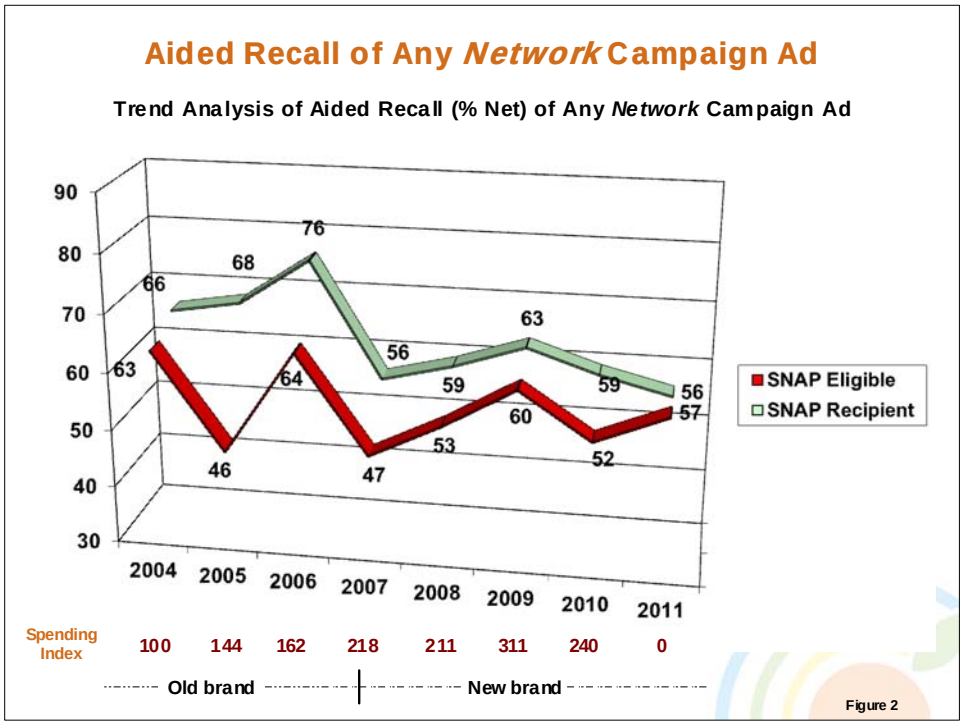
The following section provides findings for net aided recall as well as recall for each medium, TV, radio, and outdoor.

Aided Recall Trends

First, we present data on CalFresh recipients' and CalFresh eligibles' aided recall of *Network* ads over time including the data from the 2011 study.

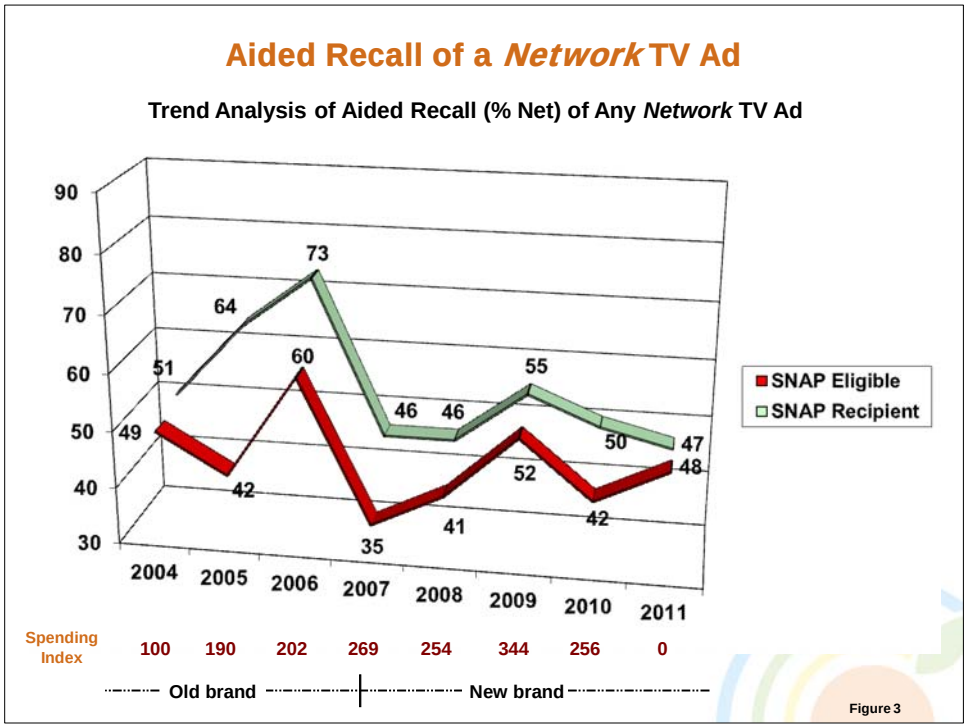
Eight-year trends

This section presents trend data on statewide recall scores over the past eight years including 2011. We look first at net recall and then at medium-specific recall.

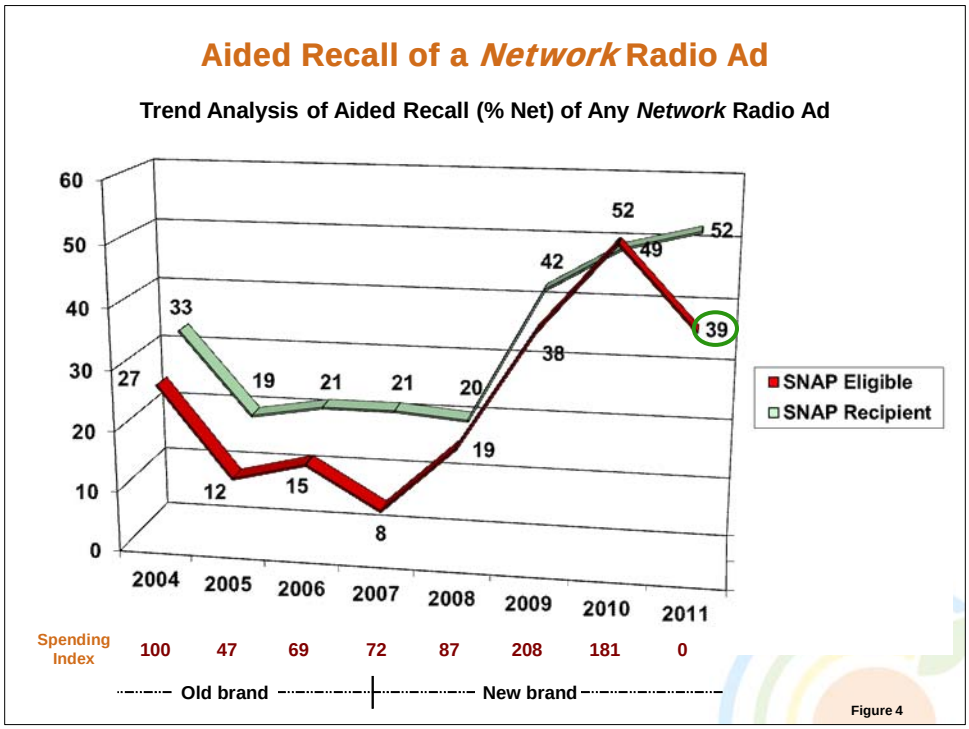


- The above figure presents the net aided recall data. Net aided recall represents the total percentage of respondents recalling one or more of the *Network* ads. The level of aided recall declined in 2011 for recipients and increased for eligibles although the differences are not statistically significant.

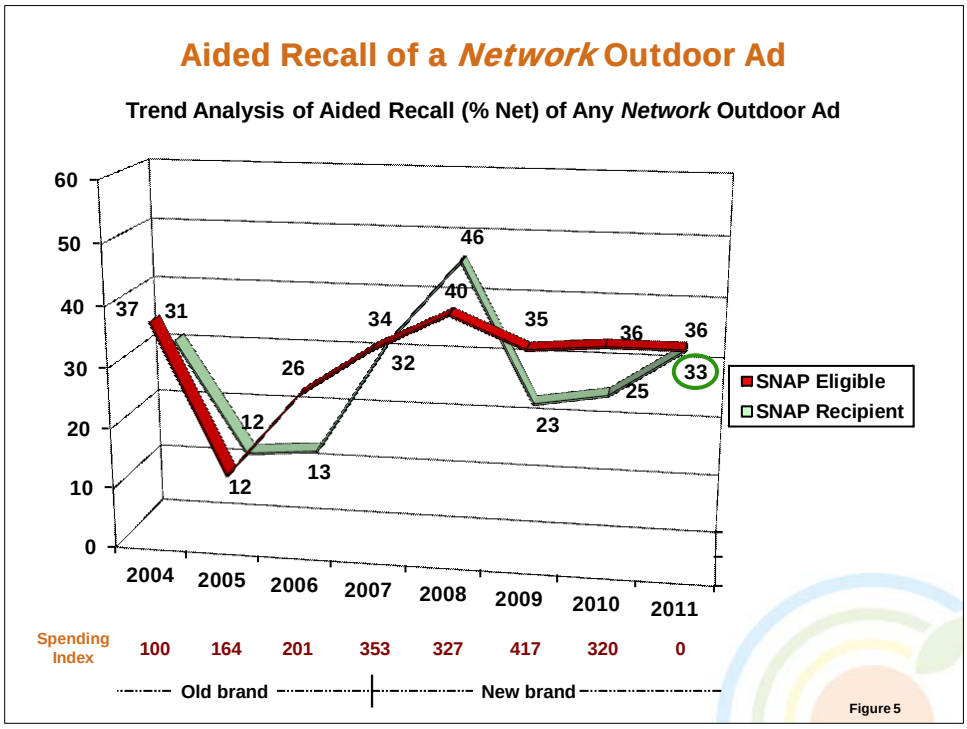
- The spending index data at the bottom of the figure shows how advertising expenditures changed over time. The index treats 2004 spending as 100%; any percentage greater than 100% represents a proportional increase in spending. In general, spending increased from 2004 through 2009. The 2009 spending increase was a very significant one. Spending in 2010 significantly declined from 2009 levels.



- Television spending increases significantly over the years, especially in 2009. 2010 spending for television was lower than in 2009.



- The rate of radio recall increased in 2011 for recipients, but decreased significantly for eligibles. The 2010 radio ads were the same as those that ran in 2009. Radio advertising was in the Spanish language and was targeted to Hispanics.



- 2011 outdoor recall increased among recipients but stayed the same for eligible mothers. The outdoor campaign (Rules) has run since 2007.
- Spending on outdoor increased in recent years, peaking in 2009. In 2010 spending is at about the 2008 level.

Recall of Campaign by Weight Tier

This section displays recall scores for the past three years by weight tiers. Weight is a measure of the reach and frequency of the ads being run and is largely a function of the amount of financial resources available to the campaign and the buying strategy.

Starting in 2007 the state was split into three weight tiers: high, medium and low. The Los Angeles, Fresno and Bakersfield markets comprise the high weight tier from 2007 through 2010.The Sacramento-Stockton-Modesto market falls into the medium weight tier. The third and lowest weight tier consists of the Bay Area (San Francisco, Oakland and San Jose) and San Diego markets. The 2010 weight tiers were used in displaying the 2011 data.

Table 3-1. Aided Recall of Any *Network for a Healthy California* Ad in the Last Three Months, by Market Weight						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	642	540	546	739	634	597
	%	%	%	%	%	%
High Weight	68	57	52	67	67	62
Los Angeles	68	59	53	65	69	62
Fresno	86	50	45	57	60	60
Bakersfield	68	50	56	68	71	68
Medium Weight	35	49	78	57	57	52
Sacramento	39	49	78	64	53	49
Low Weight	58	40	64	60	44	47
Bay Area	59	53	77	61	42	41
San Diego‡	28	25	51	50	41	55
Total	60	52	57	63	59	56

Note: DMA Tiers - Markets that make up categories have changed over time. In 2009, San Diego was in the medium tier. The 2010 tiers were used to display the 2011 data.

‡ In San Diego and the Bay Area, the campaign was mainly Hispanic media in 2010.

For 2011, aided recall of ever seeing ad.

- The 2011 recall level increased significantly in the medium and low weight markets for the CalFresh eligible mothers.

Table 3-2. Aided Recall of Any *Network for a Healthy California* TV Ad in the Last Three Months, by Market Weight						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	731	703	697	850	811	811
	%	%	%	%	%	%
High Weight	60	45	45	60	58	54
Los Angeles	59	47	44	60	60	57
Fresno	76	38	50	62	52	48
Bakersfield	53	35	45	53	50	47
Medium Weight	26	47	55	47	49	41
Sacramento	27	47	55	55	46	42
Low Weight	44	31	53	50	33	37
Bay Area	41	38	58	53	28	34
San Diego‡	24	20	46	40	35	42
Total	52	42	48	55	50	47

‡ In San Diego and the Bay Area, the campaign was mainly Hispanic media in 2010.

For 2011, aided recall of ever seeing ad.

- 2011 recall of *Network* TV ads was significantly higher among recipients living in high weight markets than in medium or low weight markets. Compared to 2010, 2011 recall increased significantly in the medium and low weight markets for the CalFresh eligible mothers and in the medium weight market for recipient mothers.

- In general, recall scores seem to be associated with weight across the years, although in 2011 this was reversed amount the CalFresh eligible mothers.

Table 3-3.
Aided Recall of a *Network for a Healthy California* Outdoor Ad in the Last 3 Months, by Market Weight

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	818	686	744	854	793	743
	%	%	%	%	%	%
High Weight	39	38	33	24	31	38
Los Angeles	37	38	34	24	30	38
Fresno	55	32	31	25	32	39
Bakersfield	33	47	30	21	42	41
Medium Weight	20	42	45	22	22	26
Sacramento	24	42	46	24	23	24
Low Weight	42	25	39	21	15	26
Bay Area	43	30	57	19	16	25
San Diego	16	19	26	19	12	27
Total	35	36	36	23	25	33

For 2011, aided recall of ever seeing ad.

- On outdoor, 2011 recall significantly increased in the low weight markets for the CalFresh eligible mothers and in the high and medium weight markets, as well as in the general market, for CalFresh recipient mothers.

Recall of Campaign by Language

This section displays statewide recall scores by language. The English-speaking audience is comprised of those respondents who chose to complete the interview in English while those who chose to complete the interview in Spanish make up the Spanish-speaking audience. As in the previous sections, we will first display the net recall scores followed by the medium-specific data.

As the following data illustrate, recall scores across all mediums are once again higher among the Spanish-speaking audience than the English-speaking audience. This pattern has been persistent throughout these studies.

We have noted the apparent differences between recall of Spanish-speaking and English-speaking audiences; however, no statistical test of significance was conducted.

Table 3-4. Aided Recall of Any *Network* Campaign Ad in the Last 3 Months, English-Speaking Audience						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	563	464	458	541	438	492
	%	%	%	%	%	%
Yes, Recall Any Ad	54	48	55	59	52	50
No/Don't Know Any Ad (net)	46	52	45	41	48	50
No recall of any ad	45	52	43	41	48	50
Don't know if recall any ad	<1	<1	2	--	--	<1

For 2011, aided recall of ever seeing ad.

- About half of the English-speaking respondents reported recall of a *Network* ad in 2011.
- Recall scores remain flat from 2009-2010. The changes from 2010 to 2011 were not significant.

Table 3-5 Aided Recall of Any *Network* Campaign Ad in the Last 3 Months, Spanish-Speaking Audience						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	138	76	88	198	196	105
	%	%	%	%	%	%
Yes, Recall Any Ad	82	71	64	75	74	85
No/Don't Know Any Ad (net)	18	29	36	25	26	15
No recall of any ad	18	29	35	25	26	15
Don't know if recall any ad	--	--	1	--	--	--

For 2011, aided recall of ever seeing ad.

- Much higher recall scores were observed among the Spanish-speaking audience. Sixty-four percent of Spanish-speaking CalFresh eligible mothers recall a *Network* ad in 2011 compared to 55% of English-speaking ones. Similarly, among recipients, 85% of Spanish-speakers reported recall compared with 50% of English-speakers.
- Recall among Spanish-speaking recipient mothers rose significantly in 2011.

Table 3-6. Aided Recall of Any *Network* TV Ad in the Last 3 Months, English-Speaking Audience						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	634	577	568	607	532	620
	%	%	%	%	%	%
Yes, Recall TV Ad	48	37	44	54	44	42
No/Don't Know TV Ad (net)	52	63	56	46	56	58
No recall of any ad	51	62	55	--	55	57
Don't know if recall any ad	2	2	2	--	<1	<1

For 2011, aided recall of ever seeing ad.

- Among eligible English speakers the increase in 2011 recall from 2010 was significant.
- CalFresh recipient scores were significantly higher than those of the eligible mothers in 2009 and 2010, but were lower in 2011.

Table 3-7. Aided Recall of Any *Network* TV Ad in the Last 3 Months, Spanish-Speaking Audience						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	97	178	199	243	279	169
	%	%	%	%	%	%
Yes, Recall TV Ad	65	59	58	58	60	68
No/Don't Know TV Ad (net)	35	42	43	42	40	33
No recall of TV ad	35	38	40	42	39	32
Don't know if recall TV ad	--	3	3	--	1	1

For 2011, aided recall of ever seeing ad.

- Recall of *Network* TV in 2011 was higher among the Spanish-speaking audience than the English-speaking audience.

Table 3-8. Aided Recall of Any *Network* Radio Ad in the Last 3 Months, Spanish-Speaking Audience						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	122	144	156	251	298	186
	%	%	%	%	%	%
Yes, recall radio ad	38	52	39	42	49	52
No/Don't know radio ad (net)	62	48	61	58	51	48
No recall of radio ad	62	48	61	57	51	48
Don't know if recall radio ad	<1	--	1	<1	--	--

For 2011, aided recall of ever seeing ad.

- Radio recall significantly decreased among eligible mothers. Among CalFresh recipients it rose slightly in 2011.

Table 3-9. Aided Recall of Any *Network* Outdoor Ad in the Last 3 Months, English-Speaking Audience						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	701	568	615	617	526	592
	%	%	%	%	%	%
Yes, recall outdoor ad	32	33	36	21	21	30
No/Don't know outdoor ad (net)	68	68	65	79	79	70
No recall of outdoor ad	66	65	62	79	79	69
Don't know if recall outdoor ad	2	2	3	--	<1	1

For 2011, aided recall of ever seeing ad.

- Among English-speaking recipients there has been a significant increase in recall from 2010 levels. Among eligible mothers there was a decline, but it was not significant.

Table 3-10. Aided Recall of Any *Network* Outdoor Ad in the Last 3 Months, Spanish-Speaking Audience						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	117	118	129	237	267	151
	%	%	%	%	%	%
Yes, recall outdoor ad	45	45	38	28	33	46
No/Don't know outdoor ad (net)	55	56	62	72	67	54
No recall of outdoor ad	54	55	61	71	67	54
Don't know if recall outdoor ad	<1	1	1	<1	<1	--

For 2011, aided recall of ever seeing ad.

- As with the previous scores, the Spanish-speaking audiences reported higher recall of *Network* outdoor ads than their English-speaking counterparts.
- Among the Spanish-speaking CalFresh recipient audience, there was a significant increase in recall in 2011. There was a decrease among CalFresh eligibles, although not a significant one.

Recall of Campaign by Race/Ethnicity

The next set of tables present data on ad recall by race/ethnicity over time. The first table shows net recall scores, followed by medium-specific recall. The tables indicate that 2011 rates of recall were quite high across all of the audience segments.

Table 3-11. Aided Recall of Any *Network* Campaign Ad in the Last 3 Months, by Race/Ethnicity*						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	642	540	546	739	634	597
	%	%	%	%	%	%
Total	60	53	57	63	58	56
Race/Ethnicity						
Non-Hispanic White	51	48	54	56	48	42
Black/African American	62	49	53	66	53	61
Hispanic	64	59	59	67	68	66
All others	63	43	54	48	29	45

For 2011, aided recall of ever seeing ad.

- Hispanics had higher net recall scores in 2011 than other groups. This was true among both eligibles and recipients.
- Latinas also had relatively stable recall scores from 2010 to 2011.
- African American recipients also had relatively high rates of recall in 2011, although their scores were lower than those of Latinas.
- Among CalFresh recipients in the Non-Hispanic White category, recall was significantly lower than both African Americans and Latinas.

Table 3-12. Aided Recall of Any *Network* TV Ad in the Last 3 Months, by Race/Ethnicity						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	731	703	697	850	811	789
	%	%	%	%	%	%
Total	52	42	48	55	50	47
Race/Ethnicity						
Non-Hispanic White	43	41	45	49	40	33
Black/African American	53	35	44	60	41	49
Hispanic	55	46	50	57	58	55
All others	54	36	42	48	23	33

For 2011, aided recall of ever seeing ad.

* *On this and succeeding tables addressing race/ethnic differences, circles are used only to visually identify over time differences, not differences between race/ethnic groups in a particular year. The latter are identified in the text accompanying the table.*

- Hispanics had the highest recall TV recall scores in 2011 among both eligibles and recipients. The difference is significant. They also led, or compared well, with the other segments in 2009 and 2010.

- African American scores increased among both eligibles and recipients in 2011.

- Whites and Others tended to score lower than African Americans and Hispanics. Among recipients Whites scored significantly lower than both African Americans and Hispanics.

Table 3-13.
Aided Recall of Any *Network* Outdoor Ad in the Last 3 Months,
by Race/Ethnicity

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011#	2009	2010	2011#
N Unweighted	818	686	735	854	793	743
	%	%	%	%	%	%
Total	35	36	36	23	25	33
Race/Ethnicity						
Non-Hispanic White	32	28	37	16	14	26
Black/African American	33	37	42	27	26	33
Hispanic	38	41	36	25	28	38
All others	34	27	29	18*	22	35

For 2011, aided recall of ever seeing ad.

- Hispanics had significantly higher recall scores for outdoor ads than Non-Hispanic Whites in 2011.

- In 2011, African Americans had the highest scores among eligibles Hispanics had the highest scores among recipients.

- Across the populations and years, Whites and Others have tended to lag behind the African Americans and Hispanics.

- In terms of trends over time, among recipients scores increased significantly in 2011 within all the groups except African Americans.

Explaining the 2011 Recall Findings

We have collected evidence suggesting that *Network* ads have a rather long shelf life. 2010 Tracking Study data showed slow erosion in recall. The 2010 net recall score only dropped from 64% to 52% within the recipient audience at the end of a six week survey fielding period, two months after the end of the year's ad flight. Within the eligible audience, the net recall score dropped from 58% to 45%. There was no erosion whatsoever within the LIM audience and none on the TV recall measure among any of the three *Network* audiences. The slow erosion may

be due to how much mothers care about the issues being addressed by the campaign. These data suggest that a single annual advertising flight may have longer term effects.

Slow erosion, by itself, certainly cannot explain the unexpectedly high 2011 recall scores. Neither can yeah-saying bias, the tendency of respondents to falsely report recall of non-existent ads. There were no significant increases in these false reports in 2011. Instead, we believe that increased misattribution explains the 2011 findings. Misattribution is the faulty attribution of an advertising message from a different campaign to the one being assessed and is a factor in all studies of ad recall.

Two factors suggest that the rate of misattribution might be higher in the *Network* studies than in studies of other campaigns: the cluttered nature of the obesity prevention advertising category and the relatively low awareness of the *Network* brand:

- *Multiple players in the category*: Our own unaided ad recall data over the years have documented that there are multiple players in the *Network*'s advertising space. For example, in 2008-2009 among the eligible audience, we saw references to complementary campaigns (e.g. the California First Five effort, Kaiser Permanente's *Thrive*) and generically described campaigns outnumber references to the *Network* campaign by 2:1 ratios. Among recipients the ratio was about 4:1. The campaigns are similar in design and content. In situations like this, the chances of misattribution increase.

- *Relatively low* Network *brand awareness:* The relatively low brand awareness is likely further contributing to the rate of misattribution. The relatively low level of awareness is largely due to limited advertising resources and the recency of the new brand. About one-third of eligible and recipient mothers reported awareness in recent surveys. Band awareness was much higher with the earlier 5-a-Day brand, which had been in place for many years.

In addition to these factors, others likely increased misattribution in 2011:

- *Progress in achieving campaign objectives*: There has been progress since 2010 in achieving campaign objectives. As the balance of this report explains, there has been significant positive movement on many of our most important outcome measures since 2010. This positive movement builds on similar positive movement in last year's study. Marketing and sales successes can lead to increased recall. The *Network*'s recent successes may therefore be further increasing misattribution.

- *Increases in news coverage and online activity:* According to an analysis prepared by Citizen Paine, the *Network*'s public relations subcontractor, there was a significant increase in coverage of the obesity epidemic in

2010, an increase that has generally been sustained in 2011.[3] The Obama *Let's Move* campaign and other developments on the issue may be responsible for the increase in coverage. This increased national awareness of the issue is then likely being amplified through blogs and other on-line media sources. The analysis by Citizen Paine documented an explosion of on-line activity related to the obesity prevention issue from 2010 to 2011 using data supplied by Google News.[4]

- *Significant increases in social networking site use and frequency of use: Network* audiences are increasingly making use of on-line media. Use of social networking sites increased greatly from 2010 levels and two of the three *Network* audiences report significantly more frequent use of sites than their higher-income counterparts. More use of more media increases the likelihood of misattribution.

- *Increased exposure to non-ad interventions this year from already high levels*: As a later section of the report documents, exposure to these interventions, always high, significantly increased in 2011. These types of interventions are an important part of the obesity prevention landscape and increased participation in them may have further contributed to recall attribution problems.

3.1.2 *Network for a Healthy California* Recall & Website Use

The *Network's* Champions for Change brand was developed in 2006 and introduced in 2007. It replaced the earlier, well-established *5-a-Day* brand which had been in place for many years. In 2008 we added measures to the tracking survey to measure recall of the new brand as well as use of the *Network* website.

Network *Recall and Web Site Exposure: Trends*

The first group of tables in this section presents trend data on aided *Network* recall and use of the website.

[3] L. Bye, *Network for a Healthy California* 2001 Benchmark Survey: Conclusions and Recommendations, August 22, 2012.

[4] L. Bye, *Network for a Healthy California* 2011 Benchmark Survey: Preliminary Findings, March, 2012.

Table 3-14. Recall of a *Network for a Healthy California*, The Champions for Change						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	996	961	1050	1005	1010	1000
	%	%	%	%	%	%
Yes, recall the *Network*	30	34	32	32	35	38
No/Don't know the *Network* (net)	70	66	68	68	65	62
No recall of the Network	65	63	64	65	62	60
Don't know if recall the Network	6	3	4	3	3	3

- Approximately one-third of both audiences recall the *Network* on an aided basis. This percentage has increased slightly since 2008. Nevertheless, it remains low.

Table 3-15. Use of a *Network for a Healthy California*, The Champions for Change Website						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	994	960	1046	1006	1010	1000
	%	%	%	%	%	%
Yes, used *Network* website	5	6	5	2	4	4
No/Don't know used *Network* website (net)	96	94	95	98	96	96
No use of the website	93	93	93	98	96	96
Don't know if used the website	2	1	2	<1	<1	<1

- Use of the Champions for Change website remains low. The *Network* has not extensively promoted the website to date.

Network *Recall and Website Use: Study Population Comparisons*

The following tables compare the four study populations.

Table 3-16. Recall of a *Network for a Healthy California*, The Champions for Change, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	556	1050	1000
	%	%	%	%
Yes, used *Network*	29	29	32	38
No/Don't know used *Network* (net)	71	71	68	62
No use of the network	68	65	64	60
Don't know if used network	3	6	4	3

- CalFresh recipients were significantly more likely to recall it than the higher-income comparison group.

Table 3-17. Use of a *Network for a Healthy California*, The Champions for Change Website, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	556	1046	1000
	%	%	%	%
Yes, used *Network* website	2	5	5	4
No/Don't know used *Network* website (net)	98	94	95	96
No use of the website	98	91	93	96
Don't know if used the website	1	3	2	<1

- All three *Network* audiences were significantly more likely to report visiting the website than higher-income mothers.

3.1.3 *ReThink Your Drink* Awareness

The *Network* is beginning to support *ReThink Your Drink* campaigns, efforts to persuade families to eliminate or reduce sugary beverage consumption. In 2010 we added measures to assess awareness of these campaigns.

Table 3-18. Recall of flyers, billboards, or other materials asking to *ReThink Your Drink*,				
	CalFresh Eligible Mothers		CalFresh Recipients	
	2010	2011	2010	2011
N Unweighted	963	1048	1009	1000
	%	%	%	%
Yes, recall *ReThink Your Drink*	41	52	48	64
No/Don't know *ReThink Your Drink* (net)	59	48	52	37
No recall	57	46	51	35
Don't know	2	3	1	2

- Recall of *ReThink Your Drink* increased significantly for both eligibles and recipients in 2011.

Table 3-19. Recall of flyers, billboards, or other materials asking to *ReThink Your Drink*, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	558	1048	1000
	%	%	%	%
Yes, recall *ReThink Your Drink*	39	44	52	64
No/Don't know *ReThink Your Drink* (net)	61	56	48	37
No recall	58	52	46	35
Don't know	3	4	3	2

- CalFresh recipients and eligibles had significantly higher recall than higher-income mothers.

Table 3-20. Where Saw or Heard *ReThink* Message, If Recall It, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	113	134	263	367
	%	%	%	%
Child's School	11	2	3	2
My School	–	–	–	1
Doctor's Office/Health Setting	16	5	8	11
WIC Office	2	9	12	19
Outdoors	19	26	18	13
Transit	6	8	6	4
Welfare Office	–	–	<1	2
Grocery Store	9	6	8	7
Other	13	18	13	14
No Source Recalled	19	19	23	23
Don't know	6	9	8	5

- When asked where they were exposed to *ReThink Your Drink* messages, many could not a recall a source. Higher-income mothers tended to mention outdoor advertising and health settings. *Network* audiences tended to mention outdoor advertising as well as WIC venues. Some also mentioned health care settings.

- Although the data are not presented in tabular fashion in the report we also examined recall by media market. *Network* audiences in the Bay Area and San Diego media markets were significantly more likely to recall seeing *ReThink Your Drink* messages, while those in Fresno were significantly less likely to recall seeing them.

3.1.4 Exposure to Non-Ad Interventions

In addition to mass media, the *Network* is a primary sponsor of a variety of other interventions to promote increased fruit and vegetable consumption and physical activity across the State. These interventions include the distribution of posters, brochures and other communication products; classes and workshops; food demonstrations; and health fairs. Data on exposure to these types of efforts are presented in this section. The *Network* is also working on promoting its message in the work environment; these data are presented in section 3.1.4.

Table 3-21. Exposure to Healthy Eating and Physical Activity Interventions in the Last 3 Months						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	974	935	1010	1003	1005	995
	%	%	%	%	%	%
Overall exposure to one or more non-ad intervention	66	63	69	80	81	86
Participated in a class or workshop	18	17	24	31	27	33
Attended a live food demonstration	21	22	31	30	33	34
Children brought information home	28	27	39	44	47	50
Attended health festival or fair	45	51	55	46	59	55
Other written materials	53	45	53	59	61	74

- Written materials and health fairs/festivals continue to be the ways *Network* audiences are most frequently exposed to health messages. Among recipients, overall exposure as well as mentions of classes/ workshops and written materials significantly increased in 2010. Among eligibles there were significant increases for all interventions except health fairs/festivals.

- Participation in workshops and attendance at live food demonstrations are the least common interventions.

Table 3-22. Exposure to Healthy Eating and Physical Activity Interventions in the Last 3 Months, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	670	534	1010	995
	%	%	%	%
Overall exposure to one or more non-ad intervention	83	66	69	86
Participated in a class or workshop	23	22	24	33
Attended a live food demonstration	34	26	31	34
Children brought information home	41	33	39	50
Attended health festival or fair	49	53	55	55
Other written materials	66	48	53	74

- Across all the study populations, written communication products and health fairs or festivals have the highest exposure rates. Live food demonstrations and classes have the lowest rates.

- Except for recipients, the low-income populations are significantly less likely to be exposed than their higher-income counterparts.
- Recipients are more likely than their higher-income counterparts to be exposed to classes/workshops and written materials.

Exposure to Non-Ad Interventions: Race/Ethnic Differences

The following table presents data on exposure to non-ad interventions by race/ethnicity. Throughout the remainder of the report, we will present similar tables for key study variables.

Table 3-23.
Exposure to and Participation in Healthy Eating and Physical Activity Interventions in the Last 3 Months, by Race/Ethnicity

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	974	935	1010	1003	1005	1010
	%	%	%	%	%	%
Total	66	63	69	80	81	86
Race/Ethnicity						
Non-Hispanic White	62	63	64	77	80	83
African American	67	65	67	79	79	90
Hispanic	68	64	69	81	82	86
All others	66	57	77	76	80	89

- For 2011, recipient scores were significantly higher than eligibles among Whites, African Americans and Hispanics, as well as in total.

3.1.5 Exposure to Workplace Interventions

In addition to mass media and the community-based interventions, the *Network* has a worksite program to encourage employers to increase healthy food options and physical activity opportunities for their employees.

Data from these measures are presented below. The trend data are presented first followed by the 2011 study population comparisons.

Exposure to Workplace Interventions: Trends

Overall, access to workplace interventions promoting healthy eating and physical activity remains low. The data indicate fairly high use of the benefits, however, when they are available.

Table 3-24. Access to Employer-Provided Nutrition Related Benefits						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	963	1050	1002	1007	999
	%	%	%	%	%	%
Yes	8	9	10	11	12	15
No/Don't know/Not applicable (net)	92	91	90	89	88	86
No	67	67	60	51	48	50
Don't know	<1	1	1	<1	<1	<1
Not applicable	25	23	28	38	40	35

Table 3-25. Use of Access to Employer-Provided Nutrition-Related Benefits, Among Those That Report Access						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	82	92	107	108	125	148
	%	%	%	%	%	%
Yes	75	63	70	77	89	85
No/Don't know (net)	25	37	30	23	11	15
No	22	31	28	23	11	15
Don't know	3	6	2	--	--	--

- Overall, access to employer provided benefits remains low, ranging from 10 to 15 percent.
- Of those mothers offered benefits, about seven in ten eligible mothers are using them; among recipients, the percentage is greater.
- Among eligibles there were increases over time in "not applicable" responses, indicating there was an increase in unemployment.

Table 3-26. Access to Employer-Provided Physical Fitness Benefits						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	994	961	1049	1002	1009	999
	%	%	%	%	%	%
Yes	6	5	7	8	9	10
No/Don't know/Not applicable (net)	84	95	93	93	92	90
No	68	70	64	54	52	56
Don't know	<1	1	1	<1	<1	1
Not applicable	25	24	29	38	40	33

Table 3-27. Use of Access to Employer-Provided Physical Fitness Benefits, Among Those That Report Access						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	64	64	69	75	86	102
	%	%	%	%	%	%
Yes	54	67	59	51	59	58
No/Don't know (net)	47	33	41	49	42	42
No	44	30	38	49	42	42
Don't know	3	3	3	--	--	--

- The data indicate that employer-provided fitness benefits are even less common than nutrition benefits.
- When it is available, there is somewhat less use of fitness benefits than nutrition benefits. In 2011, about six in ten eligible mothers and recipients reported use.

Exposure to Workplace Interventions: Study Population Comparisons

Table 3-28. Access to Employer-Provided Nutrition-Related Benefits, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	559	1050	999
	%	%	%	%
Yes	25	10	10	15
No/Don't know/Not applicable (net)	75	90	90	85
No	47	66	60	50
Don't know	1	1	1	<1
Not applicable	27	23	28	35

Table 3-29. Use of Access to Employer-Provided Nutrition-Related Benefits, Among Those That Report Access, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	156	55	107	148
	%	%	%	%
Yes	82	68	70	85
No/Don't know (net)	18	32	31	15
No	17	32	28	15
Don't know	<1	–	2	–

- There is a significant income based disparity in access to workplace benefits; the three low-income audiences are less likely than their higher-income counterparts to report access.
- CalFresh recipients are the most likely to use the benefits if they have access.

Table 3-30. Access to Employer-Provided Physical Fitness Benefits, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	559	1049	999
	%	%	%	%
Yes	30	9	7	10
No/Don't know/Not applicable (net)	71	72	93	90
No	45	67	64	56
Don't know	1	1	1	1
Not applicable	25	23	29	33

Table 3-31. Use of Access to Employer-Provided Physical Fitness Benefits, Among Those That Report Access, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	175	52	74	102
	%	%	%	%
Yes	57	52	59	58
No/Don't know (net)	43	48	41	42
No	43	48	38	
Don't know	–	–	3	–

- Again, we see income-based disparities in access to employer benefits – this time those related to physical activity. *Network* audiences were significantly less likely to have access than their higher-income counterparts.
- Of those who report accesses, eligible and recipient mothers were more likely than all others to say they took advantage of the benefits.

3.2 Determinants of Behavior: Knowledge, Attitudes and Beliefs

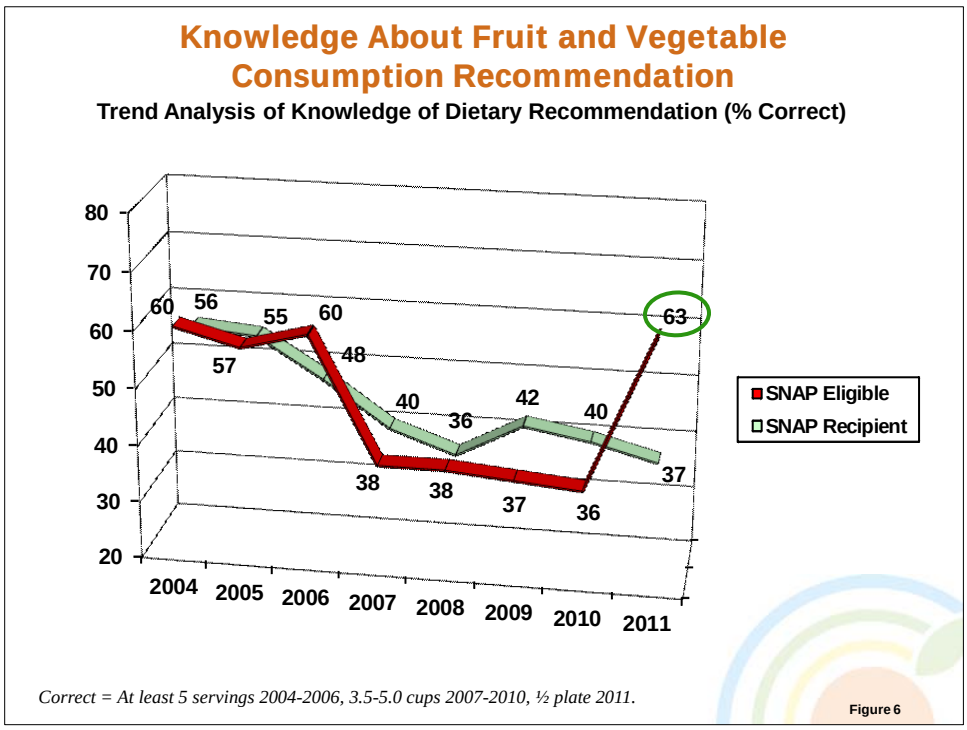
The next section presents data on knowledge, attitudes and beliefs.

3.2.1 Knowledge of Dietary Recommendation & Awareness of My Plate Website

The first data presented in this section are on the behavioral recommendation with regard to fruit and vegetable consumption and awareness of the choosemyplate.gov website.

Knowledge and Awareness Trends

In order to trend the data on fruit and vegetable consumption knowledge we looked at the percentage of respondents giving the correct answer for the current year. For 2011 the correct answer is one half plate. In 2007-2010, the correct answer was 3.5-5.0 cups, which is the range for 18-54 year old females of all physical activity levels. In previous years, the correct answer was 5 or more servings.



- From 2010 to 2011 there was a significant increase for eligibles but not for recipients. Our expectation was that knowledge levels would increase given the new easy-to-understand half plate consumption recommendation.

Table 3-32. Recall of "MyPyramid.gov"/"choosemyplate.gov"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	189	143	311	221	227	363
	%	%	%	%	%	%
Yes, recall MyPyramid.gov/choosemyplate.gov (net)	28	21	19	16	14	21
Unaided recall	15	15	2	9	4	3
Aided recall	14	6	17	7	10	18
No/Don't know (net)	72	79	81	84	86	79

* prior to 2011, website was mypyaramid.gov

- Awareness of choosemyplate.gov, the new website that replaced mypyramid.gov, remains low.

Knowledge and Awareness: Study Population Comparisons

The following tables display data on how knowledge levels of *Network* audiences compare to those of higher-income mothers.

Table 3-33. Knowledge of Recommended Level of Fruit and Vegetable Consumption, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	659	538	996	863
	%	%	%	%
Correct, one half of plate	42	61	63	37
Less than half	18	20	15	23
More than half	38	9	10	26
Incorrect/don't know recommendation (net)	58	40	37	64
Don't know recommendation	3	11	12	15

- Eligibles and LIM were significantly more likely to be knowledgeable about the correct consumption recommendation than their higher-income counterparts.
- Both recipients and higher-income mothers were significantly more likely than eligibles and LIM to respond more than half.

Table 3-34. Recall of "choosemyplate.gov", 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	318	142	311	363
	%	%	%	%
Yes, recall choosemyplate.gov (net)	26	21	19	21
Unaided recall	4	2	2	3
Aided recall	22	19	17	18
No/Don't know outdoor ad (net)	74	79	81	79

- There are fairly low levels of recall among all respondents.
- CalFresh eligibles recall the website at a significantly lower rate than the higher-income mothers.

Knowledge of Dietary Recommendation: Race/Ethnic Differences

The following table shows the data on race/ethnic differences.

Table 3-35. Knowledge of Recommended Level of Fruit and Vegetable Consumption, by Race/Ethnicity (% 3.5 – 5 cups / half plate)						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	993	960	966	1004	1010	863
	%	%	%	%	%	%
Total	42	40	63	37	36	37
Race/Ethnicity						
Non-Hispanic White	42	38	60	42	39	34
African American	44	40	60	31	34	33
Hispanic	39	43	64	37	34	39
All others	52	27	70	26	45	35

* Prior to 2011, the recommended level was 3.5 - 5 cups. In 2011 it was 1/2 plate.

- "All others" had the highest knowledge level in 2011 among eligibles. None of the differences between the eligible races/ethnicities were significant.
- Hispanics had the highest scores among recipients. None of the differences between the recipient races/ethnicities were significant.

- In terms of trends, there have been significant increases from 2010-2011 in all of the race/ethnic groups within the eligibles audience, as well as for the total eligibles.

3.2.2 Knowledge the Efficacy of Preventative Behaviors

The data presented below indicate broad and strong agreement about the efficacy of public health recommended preventative behaviors. These data have changed little since this series of studies began.

Table 3-36.
Disagreement that "Eating fruits and vegetables *does not* reduce your risk of getting diseases like Type II diabetes, cancer or heart disease"

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	996	962	1051	1005	1008	997
	%	%	%	%	%	%
Disagree (net)	73	74	72	70	68	73
Strongly disagree	63	54	57	55	55	57
Somewhat disagree	10	14	15	14	12	16
Agree/Neither (net)	24	31	27	28	31	26
Don't know	3	1	2	2	3	1

- In 2009, in an effort to assess possible problems with this measure, we revised the question by getting rid of the double negative. Results indicated that the measure was indeed problematic for some respondents. Disagreement levels increased when the double negative phrasing was eliminated. In order to facilitate trend analysis, we have retained the original measure in order to see changes over time. Readers should keep in mind that the actual levels of knowledge are likely higher than the data suggest.

- There have been no significant changes over time for the eligibles.

- In 2011 there was a significant increase from 2010 among recipients for the disagree (net) measure, as well as a significant decrease for the agree/neither (net) measure.

Table 3-37. Agreement that "Being physically active will reduce your risk of getting diseases like Type II diabetes, cancer or heart disease"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	996	962	1050	1006	1010	999
	%	%	%	%	%	%
Agree (net)	93	90	88	93	95	93
Strongly agree	76	74	74	84	87	83
Somewhat agree	17	15	15	9	8	10
Disagree/Neither (net)	7	10	12	6	5	7
Don't know	<1	<1	1	<1	<1	1

- On this measure, there is broad and strong agreement about specific chronic disease prevention benefits of physical activity.

Table 3-38. Disagreement that "Eating fruits and vegetables *does not* reduce your risk of getting diseases like Type II diabetes, cancer or heart disease," 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	558	1051	997
		%	%	%
Disagree (net)	92	76	72	73
Strongly disagree	83	62	57	57
Somewhat	9	14	15	16
Agree/Neither (net)	10	23	27	26
Don't know	1	1	2	1

- *Network* audiences are less likely than higher-income mothers to accept the disease preventative benefits of increased fruit and vegetable consumption.

Table 3-39. Agreement that "Being physically active will reduce your risk of getting diseases like Type II diabetes, cancer or heart disease", 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	557	1050	999
	%	%	%	%
Agree (net)	97	86	88	93
Strongly agree	93	73	71	83
Somewhat agree	3	13	16	10
Disagree/Neither (net)	3	14	12	7
Don't know	--	<1	1	1

- Agreement about the efficacy of physical activity for chronic disease prevention is broad and strong across all the audiences.
- Higher-income mothers and recipients were significantly more likely to agree than either LIM or eligibles.

3.2.3 Social Normative Beliefs

Social normative beliefs are known to be one of the main determinants of health behavior and changing them is a primary focus of the *Network* campaign. Our measures of normative support have evolved over time. Initially, we asked people their perceptions of what their peers thought. In 2008, we modified the measures to focus on what respondents perceived their peers were actually doing. The new measures were based on the work of Sorenson.[5]

Data on normative support are presented in the following section. They show a continued increase in perceived support among CalFresh recipient and eligible mothers but, at the same time, a tremendous disparity in higher- and lower-income normative environments.

Social Normative Beliefs: Trends

Data on social normative beliefs for CalFresh eligibles and recipients are presented below.

[5] *Sorenson G, et al.* The Influence of Social Context on Changes in Fruit and Vegetable Consumption: Results of the Healthy Directions Studies, *Framing Health Matters. 2007;97(7):1216-27.*

Table 3-40. Social Normative Beliefs: Healthy Eating and Physical Activity, "How many people you know eat enough fruits and vegetables every day?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	958	1050	1004	1008	996
	%	%	%	%	%	%
Most/All	24	29	28	28	26	30
Some	44	38	41	39	37	41
Few/None	50	31	24	31	32	26
Don't know	2	3	7	3	5	3

- There is fairly limited support for increased daily fruit and vegetable consumption. Only about one-quarter of mothers believe most of the other people they know "eat enough fruit and vegetables."
- There was a significant decrease in both groups from 2010 to 2011 in the percentage that said "few/none."

Table 3-41. Social Normative Beliefs: Healthy Eating and Physical Activity, "How many people you know are physically active every day?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	958	1045	1004	1008	1000
	%	%	%	%	%	%
Most/All	23	29	26	20	23	26
Some	45	40	44	41	41	41
Few/None	30	29	23	39	34	32
Don't know	3	3	6	1	3	2

- Normative support for daily physical activity increased among CalFresh recipients across all three years. None of the increases are significant, however.

Table 3-42. Social Normative Beliefs: Family Change Efforts, "How many mothers you know make it easy for their children to eat fruits and vegetables everyday?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	961	1050	1009	1008	998
	%	%	%	%	%	%
Most/All	28	35	33	31	30	36
Some	44	37	44	39	38	39
Few/None	24	25	17	27	29	22
Don't know	4	3	7	3	3	4

- Among eligibles, from 2010 to 2011 there was a significant increase in those that said "some" as well as a significant decrease for those that said "few/none."
- Among recipients, the increase from 2010 to 2011 for those that said "most/all" is significant, as was the decrease among those that said "few/none."

Table 3-43. Social Normative Beliefs: Family Change Efforts, "How many mothers you know set limits on the amount of unhealthy food they have in their home for their children to snack on?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	961	961	1009	1008	1008
	%	%	%	%	%	%
Most/All	23	29	27	25	24	30
Some	41	40	43	38	39	39
Few/None	32	25	22	33	33	27
Don't know	4	6	8	4	4	5

- The increase in social normative support from 2010 to 2011 is significant among CalFresh recipients.

Table 3-44. Social Normative Beliefs: Family Change Efforts, "How many mothers set limits on the amount of sweetened beverages they have in their home for their children to drink?"				
	CalFresh Eligible Mothers		CalFresh Recipients	
	2010	2011	2010	2011
N Unweighted	961	1049	1009	998
	%	%	%	%
Most/All	28	27	25	30
Some	38	42	40	37
Few/None	28	23	31	29
Don't know	6	7	4	5

- This measure was added to the study for the first time in 2010.
- There was a significant increase from 2010 to 2011 among recipient mothers who said "most/all."

Table 3-45. Social Normative Beliefs: Family Change Efforts, "How many mothers you know make it easy for their children to be physically active every day?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	959	1049	1001	1008	997
	%	%	%	%	%	%
Most/All	33	37	40	32	32	39
Some	41	40	39	37	40	38
Few/None	22	20	15	79	26	20
Don't know	4	3	6	2	3	4

- More evidence of an improving normative environment: a significant increase in the proportion of recipient mothers that said "most/all" mothers they know engage in this behavior, as well as a significant decrease for eligible mothers that said "few/none."*

* This pattern of positive change among CalFresh recipients is one that repeats across many of the other important outcome measures. There is evidence that they are more likely to be help-seekers and that participation in programs is associated with positive belief and behavioral outcomes. For example, recipients are significantly more likely than eligibles to be WIC program participants and these dual program participants are likely to have higher scores on some of our outcome measures.

Table 3-46. Social Normative Beliefs: Family Change Efforts, "How many mothers you know set limits on the amount of TV their children watch each day?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	959	1049	1001	1008	1008
	%	%	%	%	%	%
Most/All	24	27	26	20	18	25
Some	36	36	40	34	37	36
Few/None	35	31	25	45	40	34
Don't know	6	6	8	3	5	5

- Among CalFresh recipients, the increase from 2010 to 2011 is a significant one. There was no corresponding increase among CalFresh eligibles.

Social Normative Beliefs: Study Population Comparisons

The following tables illustrate how the normative environment for *Network* audiences compares to the environment for higher-income mothers; the differences are striking. These 2011 findings replicate those from 2010. There are almost no differences between *Network* audiences.

Table 3-47. Social Normative Beliefs: Healthy Eating and Physical Activity, "How many people you know eat enough fruits and vegetables every day?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	673	559	1050	996
	%	%	%	%
Most/All	47	27	28	30
Some	43	47	41	41
Few/None	7	20	24	26
Don't know	3	6	10	3

* Small n.

- More higher-income mothers believe that most people they know eat enough fruit and vegetables every day. The difference between them and lower-income mothers is significant.

Table 3-48. Social Normative Beliefs: Healthy Eating and Physical Activity, "How many people you know are physically active every day?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	673	559	1050	996
	%	%	%	%
Most/All	43	28	26	26
Some	45	44	44	41
Few/None	12	22	23	32
Don't know	<1	4	6	2

- *Network* audiences were also significantly less likely to perceive normative support for daily physical activity.

Table 3-49. Social Normative Beliefs: Family Change Efforts, "How many mothers you know make it easy for their children to eat fruits and vegetables every day?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	558	1050	998
	%	%	%	%
Most/All	55	35	32	36
Some	35	45	44	39
Few/None	7	16	17	22
Don't know	3	5	7	4

- A majority of the higher-income mothers believe most or all mothers they know make it easy for their kids to eat fruits and vegetables every day. Only about one-third of the *Network* audiences believe the same. The difference is significant.

Table 3-50. Social Normative Beliefs: Family Change Efforts, "How many mothers you know set limits on the amount of unhealthy food they have in their home for their children to snack on?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	558	1050	998
	%	%	%	%
Most/All	37	26	26	25
Some	46	45	40	36
Few/None	14	23	25	34
Don't know	4	6	8	5

- Again, significant differences are observed between the normative support perceived by mothers in *Network* audiences versus mothers in the higher-income group.

Table 3-51. Social Normative Beliefs: Family Change Efforts "How many mothers set limits on the amount of sweetened beverages they have in their home for their children to drink?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	559	1049	998
	%	%	%	%
Most/All	43	28	27	30
Some	39	44	42	37
Few/None	15	23	23	29
Don't know	3	5	7	5

- On this issue, two of the three *Network* audiences lag behind the higher-income comparison group.

Table 3-52. Social Normative Beliefs: Family Change Efforts "How many mothers you know make it easy for their children to be physically active every day?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	557	1049	997
	%	%	%	%
Most/All	60	39	40	39
Some	35	43	39	38
Few/None	4	16	15	20
Don't know	1	2	6	4

- These data further illustrate the difference between the normative environments of *Network* audiences and those of the higher-income audience. The difference between the two groups is significant.

Table 3-53. Social Normative Beliefs: Family Change Efforts "How many mothers you know set limits on the amount of TV their children watch each day?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	557	1049	997
	%	%	%	%
Most/All	36	26	26	25
Some	46	45	40	36
Few/None	14	23	25	34
Don't know	4	6	8	5

- The data indicate low support across the board for limiting TV time. Just over one-third of higher-income moms believe other mothers set limits on TV. Significantly fewer *Network* audience members believe the same.

Social Normative Beliefs: Race/Ethnic Differences

The next set of tables display the data on race/ethnic differences. The first two tables look at normative support for individual behaviors followed by tables on support for family change behaviors.

Table 3-54.
Social Normative Beliefs about Meeting Recommendations,
"How many people you know eat enough fruit and vegetables every day?"
(% Most/All), by Race/Ethnicity

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	958	1050	1004	1008	996
Total	24	29	28	28	26	30
Race/Ethnicity						
Non-Hispanic White	23	28	31	30	24	29
African American	28	25	27	27	25	31
Hispanic	25	30	27	27	26	30
All others	22	29	26	30	34	31

- There are no significant differences in these social normative beliefs.

Table 3-55.
Social Normative Beliefs about Meeting Recommendations,
"How many people you know are physically active every day?"
(% Most/All), by Race/Ethnicity

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	946	950	1045	1006	1009	1000
	%	%	%	%	%	%
Total	23	29	26	20	23	26
Race/Ethnicity						
Non-Hispanic White	24	27	28	24	34	34
African American	26	26	27	29	25	32
Hispanic	22	28	25	16	18	21
All others	22	35	28	22	25	29

- Across all the years and audiences, Whites and African Americans tend to score higher than the other two groups.
- In 2011 recipient Whites and African Americans scored significantly higher than recipient Hispanics.

- In terms of over time trends, the increases among recipient Whites and Other eligibles is significant from 2009-2010. For 2010-2011 there were no significant differences.

Table 3-56.
Social Normative Beliefs about Supporting Fruit and Vegetable Consumption,
"How many mothers you know make it easy for their children to eat fruits and vegetables every day?"
(% Most/All), by Race/Ethnicity

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	961	1050	1000	1008	998
	%	%	%	%	%	%
Total	28	35	32	31	30	36
Race/Ethnicity						
Non-Hispanic White	31	30	40	37	36	44
African American	29	29	32	31	34	36
Hispanic	28	37	28	28	27	33
All others	24	36	32	39	34	29

- For the eligible Whites there was a significant increase from 2010 to 2011 and a significant decrease for eligible Hispanics.
- Eligible Whites scored significantly higher than eligible Hispanics in 2011.
- There was a significant increase for the Hispanic recipients from 2010 to 2011.
- Recipient Whites scored significantly higher than recipient Hispanics in 2011.

Table 3-57. Social Normative Beliefs about Supporting Fruit and Vegetable Consumption, "How many mothers you know set limits on the amount of unhealthy food they have in their home for their children to snack on?" (% Most/All), by Race/Ethnicity						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	993	960	1050	1000	1009	998
	%	%	%	%	%	%
Total	23	29	27	25	24	30
Race/Ethnicity						
Non-Hispanic White	22	29	35	34	34	35
African American	29	22	30	23	26	31
Hispanic	24	29	25	21	22	28
All others	16	35	20	30	20	31

- Race/ethnic differences on this measure form no clear pattern over time.
- From 2010 to 2011 African Americans scores within the eligible population increased significantly.
- In 2011 eligible Whites scored significantly higher than both eligible Hispanics and "others."
- From 2010 to 2011 Hispanic scores within the recipient population increased significantly.
- In 2011 recipient Whites scored significantly higher than recipient Hispanics.

Table 3-58. Social Normative Beliefs about Supporting Physical Activity, "How many mothers you know make it easy for their children to be physically active every day?" (% Most/All), by Race/Ethnicity						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	958	958	1001	1008	1008
	%	%	%	%	%	%
Total	33	37	40	32	32	39
Race/Ethnicity						
Non-Hispanic White	36	40	48	46	50	47
African American	34	37	40	33	34	44
Hispanic	33	35	36	25	25	34
All others	25	46	38	39	37	42

- Among recipients in 2011, Whites significantly lead both African Americans and Hispanics on this measure.
- Among eligible in 2011, both Whites and African Americans scored significantly higher on this measure.
- In terms of trends, there was a significant increase among Hispanics in the recipient audience from 2010 to 2011.

Table 3-59.
Social Normative Beliefs about Supporting Physical Activity,
"How many mothers you know set limits on the amount of TV their children watch each day?"
(% Most/All), by Race/Ethnicity

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	991	958	1049	1002	1008	1008
	%	%	%	%	%	%
Total	24	27	26	20	18	25
Race/Ethnicity						
Non-Hispanic White	19	25	28	22	25	29
African American	25	18	24	23	23	23
Hispanic	26	26	25	18	15	25
All others	19	40	27	26	14	11

- Among recipients in 2011, both Whites and Hispanics scored significantly higher than "others."
- In terms of trends over time, perceived support significantly increased among recipient Hispanics from 2010 to 2011.

Table 3-60. Social Normative Beliefs about Supporting Fruit and Vegetable Consumption, "How many mothers you know set limits on the amount of sweetened beverages they have in the home for children to drink?" (% Most/All), by Subgroups				
	CalFresh Eligibles		CalFresh Recipients	
	2010	2011	2010	2010
N Unweighted	961	963	1009	1010
	%	%	%	%
Total	28	27	25	30
Race/Ethnicity				
Non-Hispanic White	26	35	32	37
African American	20	28	28	29
Hispanic	29	24	22	27
All others	29	24	25	27

- Among both recipients and eligible Whites lead; they are significantly more likely to perceive support than were Hispanics in both groups.
- From 2010 to 2011 there were significant increases for both eligible Whites and African Americans.

3.2.4 Self-Efficacy Beliefs

Self-Efficacy is another primary determinant of health behavior. The Champions for Change brand focuses on empowering mothers to make changes in their families and in their communities. Consistent with this emphasis, one of the major goals of the *Network* campaign is to influence self-efficacy beliefs.

Beginning in 2007, we adopted measures developed by University of California–Davis researchers[6] in order to assess self-efficacy related to personal fruit and vegetable consumption. They addressed many of the important constituent behaviors related to overall personal consumption. They did not, however, reference the numerous barriers encountered in the course of daily life. Additionally, they did not measure the intensity of the beliefs, i.e., the degree of confidence about successfully performing the behaviors. As a result, the scores seemed inflated. In 2009, to address these concerns, we selected measures based on work done by Helen Henry and colleagues at the University of Minnesota [7] with low-income African American mothers.

[6] *Townsend M, Kaiser L.* Development of a Tool to Assess Psychosocial Indicators of Fruit and Vegetable Intake for Two Federal Programs. *Journal of Nutrition Education and Behavior 2005; 37(2):170-84.*

[7] *Henry H, Reimer K, Smith C and Reicks M.* Associations of Decisional Balance, Processes of Change, and Self-Efficacy with Stages of Change for Increased Fruit and Vegetable Intake among Low-Income, African American Mothers. *Journal of the American Dietetic Association 2006; 106:841-9.*

Measures for personal physical activity were adopted from the work of Sallis et. al[8] in 2007. These measures have essentially remained unchanged in succeeding years. The Sallis approach assesses two dimensions related to personal physical activity: the ability to "make time for physical activity" and the ability to "stick to a physical activity plan."

Both the Henry and Sallis approaches allowed us to develop similar scales for self-efficacy related to family change efforts. The individual measures were modeled on the personal change ones and the same methods were used to develop the scaled (composite) variables.

These self-efficacy findings are presented below. The findings related to personal self-efficacy appear first, followed by those related to family change efforts. We report only the scaled measures.

Self-Efficacy Beliefs: Trends

The first table below presents data on the level of self-efficacy related to personal fruit and vegetable consumption.

Respondents were asked how sure they were that they could do a variety of behaviors on a scale of 1 to 5, 1 being not at all sure and 5 being extremely sure. In order to create a scaled measure, respondents received one point for each "1" response, 2 points for each "2" response and so forth. No points were awarded for "don't know" responses. We then calculated a mean score for each respondent (from 0-5). A respondent was considered to have "high efficacy" if they had a mean score greater than 4. Respondents with a mean score greater than 3 and up to 4 are in the "medium efficacy" group. Respondents with a mean score of 3 or less comprise the "low efficacy" group.

Table 3-61.
Level of Self-Efficacy Related to Personally Increasing
Fruit and Vegetable Consumption

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	963	1052	1006	1010	1000
	%	%	%	%	%	%
High Efficacy (> 4.0 – 5.0)	47	51	47	38	40	43
Medium Efficacy (> 3.0 – 4.0)	37	31	36	38	40	36
Low Efficacy (0 – 3.0)	17	17	17	25	20	20
Mean	3.9	3.9	3.9	3.7	3.8	3.8

[8] *Sallis JF, Pinski RB, Grossman RM, Patterson, TL and Nader PR. The development of self-efficacy scales for health-related diet and exercise behaviors. Health Education Research 1988; 3: 283-92* <http://socialmarketing-nutrition.ucdavis.edu/tools/somarkToolsList.php?key_m=26.>

- Less than half of CalFresh mothers have high levels of self-efficacy related to increased fruit and vegetable consumption.
- Data indicate slightly higher levels of self-efficacy among CalFresh eligibles than CalFresh recipients, but the difference between the audiences is not significant in 2011.

The next two tables present the data on personal physical activity. The first presents the data on the "making time" dimension. The second presents the data on the "sticking to a plan" dimension. The Sallis measures ask respondents to assess how confident they are about their ability to initiate and maintain regular physical activity. In developing our scale, respondents were given two points for each "I know I can" response and one point for each "maybe I can" response.

Table 3-62.
Level of Self-Efficacy Regarding Making Time for Physical Activity

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	958	938	1008	987	986	983
	%	%	%	%	%	%
High Efficacy (5.0-6.0)	33	39	40	33	40	42
Medium Efficacy (3.0-4.0)	40	40	39	40	38	39
Low Efficacy (0-2.0)	27	20	22	27	23	19
Mean	3.6	3.9	3.9	3.6	3.8	4.0

Note: We used a selection of measures developed by Sallis to measure self-efficacy related to making time for physical activity. In 2009 we replaced the measure "how sure are you that you can get up early or make time in your day… for physical activity" with "stick to your physical activity plan even when undergoing a stressful life change."

- Within both audiences, there was an increase from 2010 to 2011, but this increase was not significant.

Table 3-63.
Level of Self-Efficacy Regarding Sticking to Physical Activity Plan

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	945	914	993	982	980	976
	%	%	%	%	%	%
High Efficacy (5.0-6.0)	33	43	37	38	44	50
Medium Efficacy (3.0-4.0)	38	35	38	39	37	34
Low Efficacy (0-2.0)	29	24	26	23	20	17
Mean	3.5	3.9	3.7	3.7	4.0	4.2

Note: We used a selection of measures developed by Sallis to measure self-efficacy related to sticking to a physical activity plan. In 2009 we replaced the measure "how sure are you that you can stick to your physical

activity plan when social obligations are very time consuming" with "stick to your physical activity plan even when you have chores to do."

- For eligible mothers, there was a significant decline on this measure from 2010 to 2011
- For recipient there was a significant increase from 2010 to 2011.
- The family change-related self-efficacy findings are presented in the next set of tables.

Table 3-64.
Level of Self-Efficacy Related to Promoting Healthy Eating in Family

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	964	1052	1006	1010	1000
	%	%	%	%	%	%
High Efficacy (> 4.0 – 5.0)	54	59	65	65	66	73
Medium Efficacy (> 3.0 – 4.0)	36	34	26	28	29	23
Low Efficacy (0 – 3.0)	10	8	8	8	5	5
Mean	4.0	4.1	4.2	4.2	4.3	4.3

Note: All new self-efficacy measures were used in 2009 inspired by the work of Helen Henry. In 2011 we added "Say "no" to your kids when they ask for afternoon sweets?" to this group of measures.

- *Network* audiences are more confident of their ability to promote family changes than personal changes. A majority of mothers in both audiences display high levels of efficacy.
- There has been a significant increase from 2010 to 2011 for both eligibles and recipients.
- In 2009 through 2011 recipients display more confidence than eligibles in their ability to get their family to eat more fruit and vegetables.

Table 3-65.
Level of Self-Efficacy Related to Promoting Physical Activity in Family

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	964	1052	1006	1010	1000
	%	%	%	%	%	%
High Efficacy (> 4.0 – 5.0)	60	59	60	43	43	53
Medium Efficacy (> 3.0 – 4.0)	27	28	27	38	39	34
Low Efficacy (0 – 3.0)	13	13	14	20	17	13
Mean	4.1	4.2	4.2	3.8	3.9	4.1

- About six in ten eligible mothers and five in ten recipients report a high level of self-efficacy with regard to family physical activity promotion.
- From 2010 to 2011 there was a significant increase in self efficacy for recipient mothers.

Self-Efficacy Beliefs: Study Population Comparisons

This section presents data on how the self-efficacy beliefs of *Network* audiences compare with those of the higher-income audience.

Table 3-66.
Level of Self-Efficacy Related to Personally Increasing Fruit and Vegetable Consumption, 2011 Study Populations

	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	559	1052	1010
	%	%	%	%
High Efficacy (>4.0-5.0)	58	50	47	43
Medium Efficacy (>3.0-4.0)	36	32	36	36
Low Efficacy (>0-3.0)	7	17	17	30
Mean	4.1	3.9	3.9	3.8

Note: Calculations are based on Helen Henry's article. Respondents were given 1 point for a response of 1 (on a scale of 1-5), 2 points for a response of 2, etc. Each dimension was given equal weight and we calculated an average for each respondent based on the number of dimensions for which there was a valid response.

- CalFresh recipients are less likely to report high self-efficacy than the other audiences. *Network* audiences are significantly less likely to report high levels of self-efficacy than higher-income moms.

Table 3-67.
Level of Self-Efficacy Regarding Making Time for Physical Activity, 2011 Study Populations

	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	661	535	993	976
	%	%	%	%
High Efficacy (5.0-6.0)	37	40	40	42
Medium Efficacy (3.0-4.0)	44	40	39	39
Low Efficacy (0-2.0)	19	20	21	19
Mean	3.9	3.9	3.9	4.0

Note: Levels of efficacy were determined by the Sallis approach. Two points were given for each "I know I can" response, and one point for each "maybe I can" response.

- There is a relatively low level of confidence in the ability to make time for regular physical activity.
- There is no difference between audiences.

Table 3-68. Level of Self-Efficacy Regarding Sticking to a Physical Activity Plan, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	660	535	993	976
	%	%	%	%
High Efficacy (5.0-6.0)	40	40	37	50
Medium Efficacy (3.0-4.0)	38	35	38	34
Low Efficacy (0-2.0)	22	25	26	17
Mean	3.8	3.8	3.7	4.2

Note: Efficacy levels were calculated using the Sallis, et. al approach as described on previous tables.

- On this dimension, CalFresh recipients displayed the highest self-efficacy. The difference between them and the higher-income mothers is significant.

Table 3-69. Level of Self-Efficacy Related to Promoting Healthy Eating in Family, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	559	1052	1000
	%	%	%	%
High Efficacy (>4.0-5.0)	83	64	65	73
Medium Efficacy (>3.0-4.0)	16	26	26	23
Low Efficacy (0-3.0)	1	9	8	5
Mean	4.5	4.2	4.2	4.3

Note: Measures were inspired by the work of Helen Henry and we used the same approach as described for self-efficacy related to fruit and vegetable consumption to calculate family change efficacy levels.

- Across all audiences, mothers show more confidence in their ability to make changes in their families' eating habits than their own; the majority display high self-efficacy on this dimension.
- *Network* audiences have significantly lower levels of self-efficacy than higher-income moms.

- CalFresh recipients also do particularly well on this measure. Nearly three-fourths are in the high-efficacy group, a greater proportion than among CalFresh eligible mothers and LIM.

Table 3-70.
Level of Self-Efficacy Related to Promoting Physical Activity in Family,
2011 Study Populations

	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	559	1052	1000
	%	%	%	%
High Efficacy (>4.0-5.0)	54	60	60	53
Medium Efficacy (>3.0-4.0)	36	27	27	34
Low Efficacy (0-3.0)	10	14	14	13
Mean	4.1	4.2	4.2	4.1

Note: Measures were inspired by the work of Helen Henry and we used the same approach as described for self-efficacy related to fruit and vegetable consumption to calculate family change efficacy levels.

- Two of the three *Network* audiences outpace the comparison group on this important measure. Unlike on the previous measure, on this one recipients lag behind the other two *Network* audiences.

- Levels of self-efficacy are higher for behaviors related to family change than personal change.

Self-Efficacy Beliefs: Race/Ethnic Differences

Data on self-efficacy for race/ethnic groups are presented below.

Table 3-71.
Level of Self-Efficacy Related to Personally Increasing Fruit and Vegetable Consumption,
by Race/Ethnicity (% High Efficacy)

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	963	1052	1006	1010	1000
	%	%	%	%	%	%
Total	47	51	47	38	40	43
Race/Ethnicity						
Non-Hispanic White	50	55	50	47	58	55
African American	53	54	49	52	41	47
Hispanic	46	47	44	30	34	36
All others	40	61	54	46	45	55

- Hispanics are significantly less likely to feel highly efficacious compared with African Americans, Whites and "others" within the recipient group in 2011.

Table 3-72. Level of Self-Efficacy Regarding Making Time for Physical Activity, by Race/Ethnicity (% High Efficacy)						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	958	938	1008	987	986	983
	%	%	%	%	%	%
Total	33	39	40	33	40	42
Race/Ethnicity						
Non-Hispanic White	32	40	45	34	41	41
African American	31	41	40	43	41	41
Hispanic	36	38	37	31	40	43
All others	25	41	42	18	31	37

- Hispanic recipients scored significantly higher than Hispanic eligibles. Otherwise, there were no significant race/ethnic differences in 2011.

Table 3-73. Level of Self-Efficacy Regarding Sticking to Physical Activity Plan, by Race/Ethnicity (% High Efficacy)						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	945	914	993	982	980	976
	%	%	%	%	%	%
Total	33	43	37	38	44	50
Race/Ethnicity						
Non-Hispanic White	34	39	39	36	42	40
African American	40	46	40	45	44	44
Hispanic	32	42	32	37	46	55
All others	30	48	46	26	41	43

- In terms of the trend data, over-all the eligibles reported significantly decreased levels of self-efficacy, while the recipients reported significantly higher levels.

- The Hispanic changes from 2010 to 2011 in both audiences are significant while those in the other groups are not; Hispanic eligibles reported significantly decreased levels of self-efficacy, while Hispanic recipients reported significantly higher levels of efficacy.

- For 2011 eligibles, African Americans had significantly higher levels of efficacy than Hispanics.
- For 2011 recipients, Hispanics had significantly higher efficacy levels than both Whites and African Americans.

Table 3-74.
Level of Self-Efficacy Related to Family Change Behaviors to Support Healthy Eating, by Race/Ethnicity (% High Efficacy)

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	964	1052	1006	1010	1000
	%	%	%	%	%	%
Total	54	59	65	65	66	73
Race/Ethnicity						
Non-Hispanic White	53	61	65	71	73	78
African American	60	63	59	66	65	74
Hispanic	52	57	66	63	63	70
All others	57	61	68	62	67	76

- In 2011, recipient Whites reported significantly higher levels of efficacy than eligible Whites. Recipient African Americans also scored significantly higher than eligible African Americans.
- From 2010 to 2011 recipient Hispanics showed a significant increase.
- Among recipients in 2011, Whites reported significantly higher levels of efficacy than recipient Hispanics.

Table 3-75.
Level of Self-Efficacy Related to Family Change Behaviors to Support Physical Activity, by Race/Ethnicity (% High Efficacy)

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	997	964	1052	1006	1009	1000
	%	%	%	%	%	%
Total	60	59	60	43	43	53
Race/Ethnicity						
Non-Hispanic White	56	56	61	48	51	56
African American	59	62	56	56	52	59
Hispanic	62	59	59	37	40	51
All others	57	63	66	40	43	47

- Overall, eligibles reported significantly higher efficacy levels than recipients in 2011, although the recipient scores increased significantly from 2010 to 2011.
- In 2011, eligible Hispanics scored significantly higher on this measure than did recipient Hispanics.

3.2.5 Barriers to Adopting Recommended Behaviors

This section presents data on beliefs about barriers to fruit and vegetable consumption and physical activity.

Perceived Barriers: Trends

The data presented below illustrate that cost continues to be a big barrier to increased fruit and vegetable consumption among CalFresh recipient and eligible mothers. With regard to physical activity, time remains a big barrier for many.

Fruit and Vegetable Consumption

Table 3-76.
Perceived Barriers to Eating Fruit and Vegetables,
Agreement that "I feel fruit is too expensive"

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	996	964	1052	1006	1008	1000
	%	%	%	%	%	%
Agree (net)	44	41	52	53	45	47
Strongly agree	19	16	26	32	26	27
Somewhat agree	26	25	26	21	19	20
Disagree/Neither (net)	56	58	48	47	55	52
Don't know	<1	1	<1	<1	<1	<1

- From 2010 to 2011 there was a significant increase in net agreement among eligible moms.

Table 3-77. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I feel vegetables are too expensive"						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	996	964	1051	1005	1008	1000
	%	%	%	%	%	%
Agree (net)	39	36	50	45	37	40
Strongly agree	16	14	23	25	20	21
Somewhat agree	23	22	27	20	17	20
Disagree/Neither (net)	61	63	50	55	63	60
Don't know	<1	1	<1	<1	<1	<1

- From 2010 to 2011 there was a significant increase in net agreement for eligibles.
- Cost continues to be the biggest of the barriers we assessed with regard to increasing fruit and vegetable consumption. As expected, it is a bigger barrier to buying fruit than vegetables, although the differences are not great.
- There has been movement on both measures with both audiences over time. The declines in previous years have been replaced by increases in 2011.

Table 3-78. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I feel vegetables are not liked by my family"						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	996	961	1051	1006	1010	1000
	%	%	%	%	%	%
Agree (net)	27	22	22	21	20	18
Strongly agree	12	7	7	11	7	6
Somewhat agree	15	15	16	10	13	12
Disagree/Neither (net)	73	77	77	79	80	82
Don't know	<1	1	<1	<1	<1	<1

Table 3-79. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I feel fruit is not liked by my family"						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	994	962	1046	1006	1010	1000
	%			%	%	%
Agree (net)	16	14	12	11	12	11
Strongly agree	7	4	4	5	7	5
Somewhat agree	10	10	8	6	5	5
Disagree/Neither (net)	83	85	88	89	88	89
Don't know	<1	1	<1	--	<1	<1

- As one would expect, more mothers believe their families dislike vegetables than fruit.
- The general pattern on these measures is also one of decline although the drops are not statistically significant.

Table 3-80. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I can't find good, fresh fruit and vegetables in my neighborhood"						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	996	961	1052	1005	1010	999
	%	%	%	%	%	%
Agree (net)	19	14	15	19	19	16
Strongly agree	9	5	6	13	12	9
Somewhat agree	10	9	9	6	6	7
Disagree/Neither (net)	80	86	85	81	81	84
Don't know	<1	1	1	<1	<1	<1

- Access to fresh produce seems to be declining as a barrier.

Physical Activity

Table 3-81. Perceived Barriers to Physical Activity, Agreement that "I am too busy or can't find the time to be physically active"						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	992	964	1052	1004	1008	997
	%	%	%	%	%	%
Agree (net)	33	21	21	25	18	20
Strongly agree	12	6	6	12	8	8
Somewhat agree	21	14	16	13	11	12
Disagree/Neither (net)	67	79	79	75	82	80
Don't know	<1	1	1	--	<1	<1

Table 3-82. Perceived Barriers to Physical Activity, Agreement that "I would have less time for my friends and family if I do physical activities"						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	963	1050	1006	1009	994
	%	%	%	%	%	%
Agree (net)	29	22	21	20	18	18
Strongly agree	10	8	7	11	9	9
Somewhat agree	19	14	15	10	9	9
Disagree/Neither (net)	71	77	78	79	82	82
Don't know	<1	1	1	<1	1	<1

- Time continues to be viewed as the biggest barrier to physical activity by both audiences.
- Among both audiences there have been declines over the years on both measures.

Table 3-83. Perceived Barriers to Physical Activity, Agreement that "I can't find places to be physically active"						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2010
N Unweighted	996	963	1051	1006	1010	998
	%	%	%	%	%	%
Agree (net)	19	15	14	16	14	13
Strongly agree	8	7	5	9	9	8
Somewhat agree	11	9	9	7	5	5
Disagree/Neither (net)	81	84	85	84	86	87
Don't know	<1	1	1	<1	<1	<1

- From 2010 to 2011 there was a decline for this measure, but not a statistically significant one.

Perceived Barriers: Study Population Comparisons

This section presents the comparative data on barriers. As expected, cost and access are once again seen as bigger barriers by *Network* audiences than by higher-income mothers.

Fruit and Vegetable Consumption

Table 3-84. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I feel fruit is too expensive" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	559	1052	1000
	%	%	%	%
Agree (net)	34	48	52	47
Strongly Agree	12	16	26	27
Somewhat Agree	22	32	26	20
Disagree/Neither (net)	66	52	48	52
Don't know	<1	<1	<1	<1

Table 3-85. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I feel vegetables are too expensive" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	559	1051	1000
	%	%	%	%
Agree (net)	26	44	50	40
Strongly agree	9	16	23	21
Somewhat agree	18	29	27	20
Disagree/Neither (net)	74	55	50	60
Don't know	--	<1	<1	<1

- Cost is a barrier to more *Network* audience members than higher-income mothers. Higher-income mothers are significantly less likely to agree that fruit and vegetables are too expensive.

Table 3-86. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I feel vegetables are not liked by my family" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	558	1051	1000
	%	%	%	%
Agree (net)	21	23	22	18
Strongly agree	4	6	6	6
Somewhat agree	18	17	16	12
Disagree/Neither (net)	79	77	77	82
Don't know	<1	<1	<1	<1

Table 3-87. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I feel fruit is not liked by my family" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	558	1046	1000
	%	%	%	%
Agree (net)	5	13	12	11
Strongly agree	1	5	4	5
Somewhat agree	4	8	8	5
Disagree/Neither (net)	95	87	88	89
Don't know	<1	--	<1	<1

- Interestingly, the preference disparity between the low- and higher-income groups exists with regard to fruit rather than vegetables. There are no significant differences with regard to vegetables.

Table 3-88. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I can't find fresh fruit and vegetables in my neighborhood" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	559	1052	999
	%	%	%	%
Agree (net)	9	12	15	16
Strongly agree	5	4	6	9
Somewhat agree	5	9	9	7
Disagree/Neither (net)	91	87	85	84
Don't know	--	1	1	<1

- Neighborhood access to fresh produce is a significantly greater barrier for eligible and recipient mothers. Recipients were most likely to report the barrier.

Table 3-89. Perceived Barriers to Eating Fruit and Vegetables, Agreement that "I don't have time to prepare fruits and vegetables" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	559	1052	999
	%	%	%	%
Agree (net)	8	13	14	7
Strongly agree	1	3	5	4
Somewhat agree	6	10	9	3
Disagree/Neither (net)	92	87	86	93
Don't know	1	<1	1	<1

- Two of the *Network* audiences were more likely to report this time barrier than the comparison group. This measure was added to the survey in 2010.

Physical Activity

Table 3-90. Perceived Barriers to Physical Activity, Agreement that "I am too busy or can't find the time to be physically active" 2011 3Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	558	1052	997
	%	%	%	%
Agree (net)	26	21	21	20
Strongly agree	7	7	6	8
Somewhat agree	19	14	16	12
Disagree/Neither (net)	74	79	78	80
Don't know	<1	<1	1	<1

- Recipients were significantly less likely to agree on this time barrier measure.

Table 3-91. Perceived Barriers to Physical Activity, Agreement that "I would have less time for my friends and family if I do physical activities" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	559	1050	994
	%	%	%	%
Agree (net)	22	21	21	18
Strongly agree	6	6	7	9
Somewhat agree	16	15	15	9
Disagree/Neither (net)	78	79	78	82
Don't know	<1	<1	1	<1

- There are no income based differences on this time barrier measure.

Table 3-92. Perceived Barriers to Physical Activity, Agreement that "I can't find places to be physically active" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	559	1051	998
	%	%	%	%
Agree (net)	6	13	14	13
Strongly agree	3	5	5	8
Somewhat agree	3	8	9	5
Disagree/Neither (net)	93	86	85	87
Don't know	1	1	1	<1

- Simple access is a significant barrier specific to low-income audiences. Only 13-14% report that it is a barrier, however.

Table 3-93. Perceived Barriers to Physical Activity, Agreement that "Our family can't afford activities and programs to be active" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	557	1051	998
	%	%	%	%
Agree (net)	15	25	29	42
Strongly agree	5	9	13	25
Somewhat agree	10	17	16	17
Disagree/Neither (net)	85	75	70	57
Don't know	<1	<1	1	1

- When phrased in terms of cost, the percentages increase, suggesting that cost barriers are important with regard to staying active. This measure was also added in 2010.
- Significantly more *Network* audience members report cost barriers. Recipients are most likely to, 42%

Table 3-94. Perceived Barriers to Physical Activity, Agreement that "Our family drives often, instead of walking, biking, and using public transit" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	559	1052	998
	%	%	%	%
Agree (net)	76	62	51	57
Strongly agree	54	42	30	41
Somewhat agree	23	20	20	16
Disagree/Neither (net)	23	38	48	42
Don't know	1	1	1	1

- This measure was added in 2010.
- A majority of all four populations report driving rather than using alternative forms of transportation.
- As expected, the three low-income populations are less likely to report driving.

3.3 Behaviors

The following sections present the data on fruit and vegetable consumption, physical activity and family change efforts.

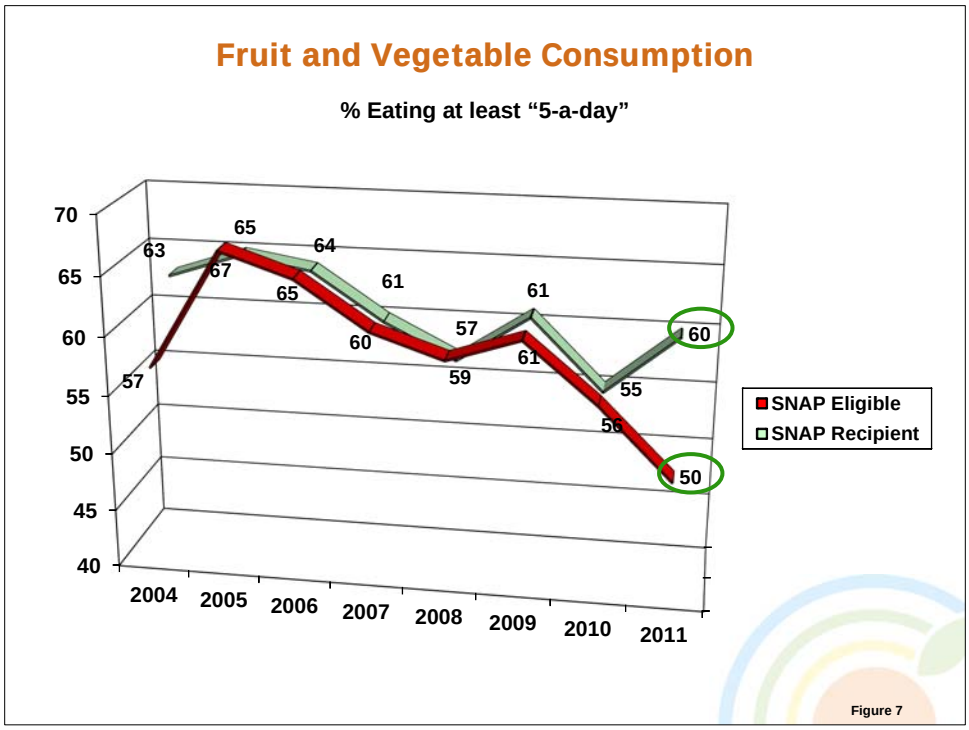
3.3.1 Fruit and Vegetable Consumption

Individual fruit and vegetable consumption is the first behavior discussed. To collect consumption data we used a measure from the CDC's Behavioral Risk Factor Surveillance Survey (BRFSS). The question asks how often respondents eat various types of fruit and vegetables. BRFSS has provided a formula to convert these responses into a daily number of cups and servings.

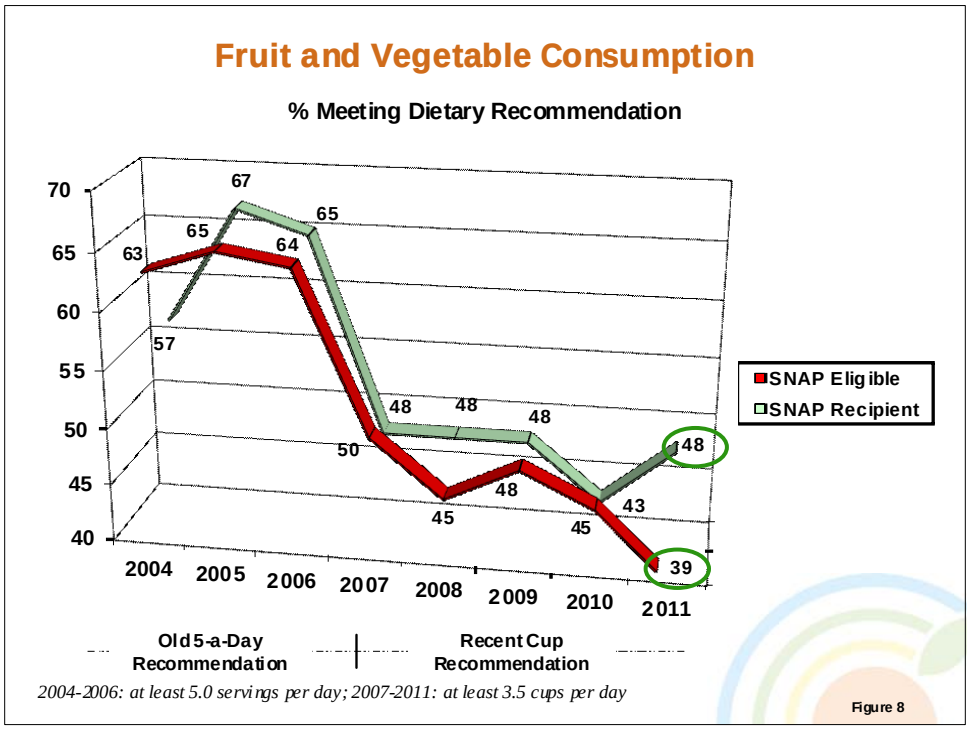
Fruit and Vegetable Consumption: Trend Tables

We have analyzed the consumption data in two ways. The first figure below provides data on how many respondents reported eating at least five servings of fruit and vegetables every day for each year of the study. This allows us to look at how consumption has changed over the longest period of time.

Second, we wanted to look at the percentage of respondents who are meeting the current dietary recommendation. For 2007-2010, the recommendation was 3.5-5.0 cups per day. For 2011, it is one-half plate at meals. Because we cannot convert responses from the survey food intake measures into plate proportions we have opted to use the 2007-2010 cups measure as our second trend variable in 2011. These data are presented in the second table below.



- According to the 5-a-day measure, fruit and vegetable consumption has been relatively stable in recent years. The decline from 2009 to 2010 was due to a slight modification in the survey measures.
- From 2010 to 2011 there was a significant decrease for eligibles and a significant increase for recipients.



- The figure above displays the data on the proportion of the two audiences meeting the 3.5.-5.0 cups consumption recommendation.
- For 2010 to 2011 there was a significant increase for recipients and a significant decrease for eligibles.

Fruit and Vegetable Consumption: Study Population Comparisons

The following table displays data suggesting that *Network* audiences actually do slightly better on consumption than higher-income mothers.

Table 3-95.
Meeting Recommendation for Daily Fruit and Vegetable Consumption,
2010 Study Populations

	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	668	546	1023	970
	%	%	%	%
Yes, eating 3.5 cups	45	38	39	48
No, eating some other amount	55	62	61	52

- The differences between the comparison group and *Network* audiences are not statistically significant.

Table 3-96. Self-Reported Differences in Consumption Over Last Year, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	559	1049	1000
	%	%	%	%
"Compared to one year ago, are you eating more fruit, less, or about the same?"				
More	37	46	47	48
Less	6	8	11	12
About the same	58	45	4	41
Don't know	--	1	<1	--
"Compared to one year ago, are you eating more vegetables, less, or about the same?"				
More	43	46	47	52
Less	4	9	10	7
About the same	53	44	43	40
Don't know	--	1	<1	--

- The previous table shows that *Network* audiences are significantly more likely to report increased fruit consumption over the last year, and the differences are quite large. For vegetable consumption the *Network* audiences also were more likely to report increased consumption, but only recipients were significantly higher. These measures were added to the survey in 2010.

Table 3-97. How Often Meeting Half-Plate Recommendation for Fruit and Vegetable Consumption, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	555	1048	999
	%	%	%	%
Every Meal	13	20	22	19
Most Meals	58	34	29	44
Some Meals	24	34	35	29
Hardly Any Meals	5	9	11	5
Never	1	3	3	1
Don't Know	<1	1	1	1

- The new recommendation is to consume half a plate of fruit and vegetables. As a result, in 2011 we added a new measure to gather data on this issue.

- *Network* audiences are were significantly more likely to state that they meet the half-plate recommendation both for every meal and for some meals.
- Higher-income moms were significantly more likely to report that they met this recommendation for most meals.
- The higher-income mothers were significantly more likely than all of the *Network* audiences to report this level for *at least* most meals
- The relatively high level of consumption reported on this measure suggests that reporting bias may be confounding the estimate.

Fruit and Vegetable Consumption: Race/Ethnic Differences

Race/ethnic differences are presented in the table below. For this analysis we looked at data bearing on the recent cups behavioral recommendation.

Table 3-98.
Meeting Recommendation for Daily Fruit and Vegetable Consumption,
by Race/Ethnicity (% Eating at Least 3.5 Cups)

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	959	922	1023	987	968	970
	%	%	%	%	%	%
Total	48	45	39	48	43	48
Race/Ethnicity						
Non-Hispanic White	40	40	34	45	39	50
African American	43	47	37	50	41	52
Hispanic	51	48	42	48	43	46
All others	52	39	37	58	41	47

- Overall, recipients in 2011 scored significantly higher than eligibles.
- From 2010 to 2011 the proportion of recipients meeting the recommendation increased significantly, while eligibles decreased significantly.
- In 2011, recipient Whites and African Americans scored significantly higher than did eligible Whites and African Americans.
- From 2010 to 2011 there was a significant decrease in this measure for eligible African Americans, while there was a significant increase for recipient Whites.

Table 3-99. "Compared to one year ago, are you eating more fruit, less, or about the same?" (% More), by Race/Ethnicity				
	CalFresh Eligibles		CalFresh Recipients	
	2010	2011	2010	2011
N Unweighted	964	1049	1010	1000
	%	%	%	%
Total	53	47	51	48
Race/Ethnicity				
Non-Hispanic White	52	46	46	40
African American	49	49	49	46
Hispanic	55	50	54	52
All others	48	38	48	42

- Overall, from 2010 to 2011 eligibles reported eating significantly less fruit that one year ago
- From 2010 to 2011 there were significant decreases for eligible "others", as well as significant decreases for recipient Whites and "others"

Table 3-100. "Compared to one year ago, are you eating more vegetables, less, or about the same?" (% More), by Race/Ethnicity				
	CalFresh Eligibles		CalFresh Recipients	
	2010	2011	2010	2011
N Unweighted	963	1047	1010	999
	%	%	%	%
Total	53	47	56	52
Race/Ethnicity				
Non-Hispanic White	54	49	51	41
African American	49	46	47	50
Hispanic	55	48	59	58
All others	48	40	53	53

- Overall, in 2011 recipients were significantly more likely to report eating more vegetables than eligibles
- Overall, from 2010 to 2011 eligibles' scores decreased significantly
- In 2011 recipient Hispanics scored significantly higher than recipient Whites
- From 2010 to 2011 there were significant decreases among eligible Hispanics and "others", as well as for recipient Whites

3.3.2 Personal Level of Physical Activity

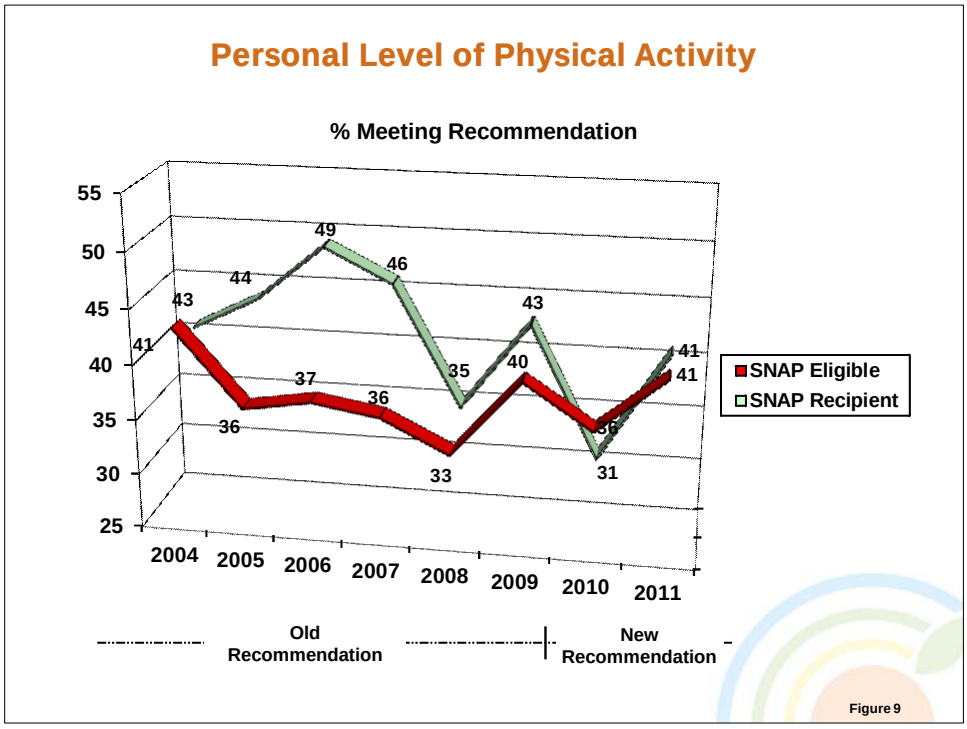
In this section we present data on physical activity levels. To assess physical activity level, respondents are asked a series of questions based on BRFSS measures; they capture the number of days per week a respondent is active and for how many minutes at a time they are active. In order to limit survey length we combined the measures on moderate and vigorous activity.

The previous behavioral recommendation was framed in terms of activity at least five days a week for 30 minutes at a time. The new recommendation, commencing in 2010, is for 150 minutes of activity per week, regardless of how many days. We report both measures.

Another change: commencing in 2010, we added a separate measure for work-related activity since we believe that many low-wage workers have jobs that are physically demanding.

Personal Level of Physical Activity: Trend Tables

Trend data on physical activity are shown below.



- As a result of our addition of a new, separate work-related activity measure, the old measure was changed beginning in 2010 to represent leisure time activity only. As a result, trends should be viewed with caution.

- There was a significant increase for recipients in 2011.

Table 3-101. Personal Activity During Leisure Time, Performing at Least 150 Minutes Per Week						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	963	1052	1006	1005	998
	%	%	%	%	%	%
150 minutes or more per week	52	51	54	54	45	53
Less than 150 minutes per week	30	28	27	34	35	32
Not at all	17	20	19	12	19	14
Don't know	1	1	1	1	<1	2

- The behavioral recommendation, as described above, is 150 minutes per week. These data are presented in the table above. There was a significant increase among recipients from 2010 to 2011.

Personal Level of Physical Activity: Study Population Comparisons

The following table shows physical activity behaviors by study population.

Table 3-102. Personal Level of Leisure Time Physical Activity, 2011 Study Populations, 5 Days Per Week				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	549	1039	997
	%	%	%	%
Meeting recommendation: at least 5 days a week and at least 30 minutes on those days	40	46	41	41
At least 5 days a week, but less than 30 minutes at a time	9	5	5	6
Less than 5 days a week	42	30	32	34
Not physically active	7	18	19	14
Don't know	1	1	2	5

- *Network* audiences were significantly more likely to say they were not physically active. They were less likely to say they were active for less than 5 days a week. However, there are no significant differences between the proportions of the groups meeting the behavioral recommendation.

Table 3-103. Personal Level of Leisure Time Physical Activity, 2011 Study Populations, Performing at Least 150 Minutes Per Week				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	559	1052	998
	%	%	%	%
150 minutes or more per week	59	60	54	53
Less than 150 minutes per week	34	22	27	32
Not at all	7	18	19	14
Don't know	--	1	1	2

- When we use the 150 minutes/week measure, a greater proportion of each audience reports being at the recommended level.
- Recipients were significantly less likely to report working 150 minutes or more per week than were higher-income mothers. Otherwise, the *Network* audiences compare well with the higher-income mothers.
- LIM and eligible mothers were significantly less likely to report that they were physically active for less than 150 minutes per week.
- *Network* audiences were significantly more likely to report no exercise.

Table 3-104. Physical Activity During Work Time, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	558	1047	1000
	%	%	%	%
High	2	6	7	9
Medium	41	47	52	56
Low	56	46	41	36
Don't know	--	<1	<1	<1

Note: Points were assigned based on whether or not respondents reported sitting or laying down, standing or walking at work, and whether or not they lifted or carried items of light, moderate or heavy weights. The more active, the more points were assigned and the higher the overall score.

- As expected *Network* audiences are more likely than the comparison group to be active at work. The differences are significant.

Table 3-105. Combined Physical Activity During Leisure and Work Time, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	627	454	836	841
	%	%	%	%
Very Active	31	45	43	42
Active, mostly during leisure time	33	28	24	21
Active, mostly during work time	12	12	18	24
Inactive	24	15	15	14
Don't know	--	--	--	--

Note: To be active in leisure time, the respondent had to report at least 150 minutes per week and report low physical activity at work. To be active at work, the respondent had to report moderate to high levels of physical activity and fewer than 150 minutes of physical activity per week during leisure time. *Very active* represents respondents who reported at least 150 minutes of physical activity per week during leisure time and high levels of physical activity during work time. Conversely, *inactive* represents respondents who reported fewer than 150 minutes per week and low levels during work time.

- When we combine the new leisure and work measures, *Network* audiences do significantly better than their higher-income counterparts.

Personal Level of Physical Activity: Race/Ethnic Differences

Data on physical activity levels by race/ethnicity are presented below.

Table 3-106. Meeting Recommendation for Personal Level of Physical Activity, by Race/Ethnicity (% At Least 30 Minutes a Day for 5 Days a Week)						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	992	959	1039	1005	1001	997
	%	%	%	%	%	%
Total	40	36	41	43	31	41
Race/Ethnicity						
Non-Hispanic White	53	40	46	53	37	53
African American	45	41	42	49	41	45
Hispanic	32	33	36	38	28	35
All others	48	45	54	36	24	36

- Overall, in 2011 recipients had a significant increase in their scores.
- From 2010 to 2011 there were significant increases in scores for recipient Whites and Hispanics.

- In 2011 eligible Whites and "others" scored significantly higher than eligible Hispanics
- In 2011 recipient Whites and African Americans reported significantly higher scores than recipient Hispanics.

3.3.3 Family Change Behaviors

The *Network* campaign seeks to empower mothers to make changes in their families and communities. To date, the main focus has been on family change. The next section presents these data.

Family Change Behaviors: Trends

The following tables present the over time data. In general they point to positive changes from 2009 to 2011.

Table 3-107.
Family Change Behaviors Promoting Healthy Eating,
"How often do you make it easy for children living in your home to eat fruit and vegetables?"

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	980	942	1032	990	1004	992
	%	%	%	%	%	%
Every day	68	64	72	69	67	74
Every week	21	25	20	23	24	20
Every month	4	4	4	4	4	3
Less than every month	4	2	1	1	3	2
Not at all	2	4	2	1	2	1
Don't know	2	1	1	<1	<1	<1

- There are significant increases in this behavior within both audiences from 2010 to 2011; large majorities of both now report engaging in this behavior.

Table 3-108. Family Change Behaviors Promoting Healthy Eating, "Have you set limits on the amount of unhealthy food you have in your home for your children to snack on?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	993	961	1047	991	1002	997
	%	%	%	%	%	%
Yes, set limits	77	76	79	86	81	88
No	20	23	20	13	18	11
Don't know	3	1	1	<1	1	1

- Large majorities of mothers in both audiences also now report setting limits on unhealthy snack foods.
- The increases from 2010 to 2011 are significant among recipients.

Table 3-109. Family Change Behaviors Promoting Physical Activity, "How often do you make it easy for children living in your home to be physically active?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	973	934	1047	990	1001	997
	%	%	%	%	%	%
Every day	69	68	74	67	63	70
Every week	21	21	19	27	28	26
Every month	4	3	3	3	4	2
Less than every month	2	3	2	2	2	2
Not at all	2	3	1	2	3	1
Don't know	2	1	1	<1	1	<1

- Over two-thirds of respondents said they make it easy for children in their home to be active every day. This again represents significant increases from 2010 among both audiences.
- Once again, these percentages are much larger than those for the associated normative beliefs. Perceptions about the prevalence of the behaviors seem to lag considerably behind the actual prevalence of the behaviors.

Table 3-110. Family Change Behaviors Promoting Physical Activity, "How often do you and your children do physical activity together?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	978	932	1033	993	1000	991
	%	%	%	%	%	%
Every day	49	48	53	32	26	40
Every week	31	34	33	47	51	45
Every month	7	7	6	9	9	7
Less than every month	4	5	4	3	5	4
Not at all	5	5	4	8	9	3
Don't know	4	2	1	<1	1	<1

- Among recipients there has been a significant increase from 2010 to 2011.
- Large majorities of recipients say that they do physical activity together at least weekly.

Table 3-111. Family Change Behaviors Promoting Physical Activity, "Have you set limits on the amount of time that your children watch TV each day?"						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	992	957	1046	972	997	997
	%	%	%	%	%	%
Yes, set limits	66	52	69	67	68	77
No	31	45	30	32	31	22
Don't know	3	3	1	<1	<1	1

- There was a significant increase from 2010 to 2011 for both audiences.

Family Change Behaviors: Study Population Comparisons

The next tables present data on how *Network* audiences compare to the higher-income audience.

Table 3-112. Family Change Behaviors Promoting Healthy Eating, "How often do you make it easy for children living in your home to eat fruit and vegetables?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	673	553	1032	992
	%	%	%	%
Every day	78	74	72	74
Every week	16	17	20	20
Every month	2	3	4	3
Less than every month	2	2	1	2
Not at all	3	2	2	1
Don't know	1	2	1	<1

- Roughly three-quarters of the mothers make it easy for their children to eat fruit and vegetables every day. The difference between eligibles and the higher-income audience is significant. The other *Network* audiences compare favorably to the higher-income mothers.

Table 3-113. Family Change Behaviors Promoting Healthy Eating, "Have you set limits on the amount of unhealthy food you have in your home for your children to snack on?" 2011 Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	5559	1047	997
	%	%	%	%
Yes, set limits	89	82	79	88
No	11	16	20	11
Don't know	<1	2	1	1

- Large majorities of all audiences limit the amount of junk food in their home. *Network* audiences were less likely to, but the differences are significant only for the LIM and eligibles.

Table 3-114. Family Change Behaviors Promoting Healthy Eating, "Have you set limits on the amount of sweetened beverages you have in your home?" 2011 Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	671	558	1050	995
	%	%	%	%
Yes, set limits	94	85	81	92
No	6	14	19	7
Don't know	1	1	<1	1

- Very large majorities in each group set limits on sweetened beverages.
- Higher-income mothers are significantly more likely to, in comparison to LIM and eligibles.

Table 3-115. Family Change Behaviors Promoting Healthy Eating, "How often do you make it easy for children living in your home to be physically active?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	673	553	1028	993
	%	%	%	%
Every day	73	73	74	70
Every week	23	22	19	26
Every month	3	1	3	2
Less than every month	1	1	2	2
Not at all	1	2	1	1
Don't know	1	2	1	<1

- Only recipients lag on this measure. Overall, this behavior is very common within each of the four populations.

Table 3-116. Family Change Behaviors Promoting Physical Activity, "How often do you and your children do physical activity together?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	671	552	1033	991
	%	%	%	%
Every day	12	55	53	40
Every week	55	32	33	45
Every month	15	7	6	7
Less than every month	8	2	4	4
Not at all	9	3	4	3
Don't know	1	2	1	<1

- *Network* audiences seem to engage in physical activity with their children more frequently than the higher-income audience. The differences in the percentages reporting daily activity together are significant. We found this same pattern in 2009 and 2010.
- Among *Network* audiences, CalFresh recipients lag behind the other audience segments. CalFresh eligibles and LIM were significantly more likely to say they were physically active with their children every day.

Table 3-117. Family Change Behaviors Promoting Physical Activity, "Have you set limits on the amount of time that your children watch TV each day?" 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	670	557	1046	978
	%	%	%	%
Yes, set limits	73	66	69	77
No	26	31	30	22
Don't know	1	3	1	1

- Except for recipients, *Network* audiences lag on this measure. Recipients were more likely to say they set limits than were higher-income mothers, although this difference was not significant. Only LIM scored significantly different than the higher-income mothers.

Family Change Behaviors: Race/Ethnic Differences

Data on race/ethnic variations are presented in the following section.

Table 3-118. Family Change Behavior to Support Healthy Eating By Making it Easy (% Every Day), by Race/Ethnicity						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	980	942	1032	990	1004	992
	%	%	%	%	%	%
Total	68	64	72	69	67	74
Race/Ethnicity						
Non-Hispanic White	67	64	75	70	71	78
African American	71	72	68	63	57	71
Hispanic	67	63	70	70	66	73
All others	73	67	78	70	78	73

- From 2010 to 2011 eligible Whites and Hispanics reported significantly higher scores.
- From 2010 to 2011 recipient African Americans and Hispanics reported significantly higher scores.

Table 3-119. Family Change Behavior to Support Healthy Eating By Setting Limits on Unhealthy Foods (% Yes), by Race/Ethnicity						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	993	996	1047	972	991	1002
	%	%	%	%	%	%
Total	77	76	79	86	81	88
Race/Ethnicity						
Non-Hispanic White	80	74	80	83	83	90
African American	79	70	78	91	83	88
Hispanic	76	77	79	85	79	88
All others	88	84	78	91	81	83

- Overall, in 2011 recipients reported higher scores on this measure than eligibles.
- In 2011, recipient Whites, African Americans and Hispanics all reported significantly higher scores than eligible Whites, African Americans and Hispanics.

- From 2010 to 2011 eligible African Americans showed significant increases for this measure.
- From 2010 to 2011 recipient Whites and Hispanics reported significantly higher scores.

Table 3-120.
Family Change Behavior to Support Healthy Eating By Setting Limits on Sweetened Beverages (% Yes), by Race/Ethnicity

	CalFresh Eligibles		CalFresh Recipients	
	2010	2011	2010	2011
N Unweighted	961	1050	1003	995
	%	%	%	%
Total	79	81	86	92
Race/Ethnicity				
Non-Hispanic White	78	79	88	95
African American	76	76	83	91
Hispanic	80	80	86	92
All others	80	90	86	87

- Overall, in 2011 recipients reported significantly higher scores than eligibles.
- Overall, from 2010 to 2011 recipient scores for this measure increased significantly.
- In 2011, recipient Whites, African Americans and Hispanics reported significantly higher scores than eligible Whites, African Americans and Hispanics.
- From 2010 to 2011 recipient Whites and Hispanics scores increased significantly.

Table 3-121. Family Change Behavior to Support Physical Activity By Making it Easy (% Every Day), by Race/Ethnicity						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	973	938	1028	990	1001	993
	%	%	%	%	%	%
Total	69	68	74	67	63	70
Race/Ethnicity						
Non-Hispanic White	73	68	78	78	71	76
African American	72	79	76	76	69	65
Hispanic	68	66	70	59	59	68
All others	65	71	84	70	70	70

- Overall, in 2011 recipients reported significantly higher scores than eligibles.
- Overall, from 2010 to 2011 both eligibles and recipients had significantly higher scores.
- From 2010 to 2011 eligible Whites reported significantly higher scores.
- From 2010 to 2011 recipient Whites and Hispanics had significantly higher scores.
- In 2011 eligible Whites and "others" scored significantly higher than eligible Hispanics.
- In 2011 recipient Whites scored significantly higher than recipient Hispanics.

Table 3-122. Family Change Behavior to Support Physical Activity By Doing it Together (% Every Day), by Race/Ethnicity						
	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	978	932	1033	993	1000	991
	%	%	%	%	%	%
Total	49	48	53	32	26	40
Race/Ethnicity						
Non-Hispanic White	52	50	52	36	29	44
African American	52	56	54	36	23	35
Hispanic	49	47	50	30	26	40
All others	39	45	65	29	24	39

- Overall, in 2011 eligibles scores significantly higher than recipients on this measure.
- Overall, from 2010 to 2011 recipient scores increased significantly.
- In 2010 eligible Hispanics and "others" scored significantly higher than recipient Hispanics and "others."
- From 2010 to 2011 eligible "others" reported significantly higher scores.
- From 2010 to 2011 recipient White and Hispanic scores increased significantly.
- In 2011 eligible "others" scored significantly higher than eligible Whites.

Table 3-123.
Family Change Behavior to Support Physical Activity By Setting Limits (% Yes), by Race/Ethnicity

	CalFresh Eligibles			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	992	957	1046	972	997	998
	%	%	%	%	%	%
Total	66	52	69	67	68	77
Race/Ethnicity						
Non-Hispanic White	62	49	65	61	62	75
African American	61	51	63	67	71	73
Hispanic	69	54	71	69	70	79
All others	65	52	72	75	64	79

- Overall, in 2011 recipients scored significantly higher on this measure than eligibles.
- Overall, from 2010 to 2011 both eligibles and recipients showed significant increases for this measure.
- In 2011 recipient Whites, African Americans and Hispanics reported significantly higher scores than eligible Whites, African Americans and Hispanics.
- From 2010 to 2011 all four of the eligible racial/ethnic groups showed significant increases.
- From 2010 to 2011 recipient Whites and Hispanics reported significant increases.
- In 2011 eligible Hispanics scored significantly higher than eligible Whites.

3.3.4 Use of Internet and Social Networking Media

This section presents the data on Internet and social network media use.

Internet and Social Networking Media: Trends

In 2008 we included a measure of Internet access on the tracking survey for the first time. The table below shows the data on Internet access for 2009-2011. The subsequent tables display data on social media use. These measures were added in 2009.

Table 3-124.
Access to the Internet – Either at Home or Any Other Location
at Least Once a Week

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	962	1048	1005	1009	999
	%	%	%	%	%	%
Yes, have weekly access	73	73	77	74	78	83
No	26	27	24	26	22	17
Don't know	<1	<1	--	--	<1	--

- Internet access is increasing; among recipients this increase is significant.
- The vast majority of audience members now have access to the Internet on an at least weekly basis.

Table 3-125.
Use of Social Networking Sites:
Have Created a Profile Online that Others Can See

	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	995	962	1048	985	1009	999
	%	%	%	%	%	%
Yes, have profile	46	52	60	42	42	61
No	54	48	40	58	58	39
Don't know	<1	--	<1	<1	2	<1

- About sixty percent of audience members have put up a profile on a social networking website. There has been a significant increase from 2010 to 2011.

Table 3-126. Use of Social Networking Sites: Most Common Mode of Accessing Social Networking Profile						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	455	490	619	414	409	594
	%	%	%	%	%	%
Home computer	75	57	47	68	66	54
School computer	3	3	1	2	2	2
Work computer	5	1	2	2	2	1
Library computer	4	3	5	5	3	4
Mobile device	13	36	45	22	26	39
Don't know / not sure	<1	<1	1	0	<1	<1

- Mobile device access increased significantly from 2010 to 2011, while home computer access decreased significantly.

Table 3-127. Use of Social Networking Sites: Frequency of Use of Social Networking Sites						
	CalFresh Eligible Mothers			CalFresh Recipients		
	2009	2010	2011	2009	2010	2011
N Unweighted	473	505	651	416	417	608
	%	%	%	%	%	%
Several times a day	24	37	38	18	22	23
Once a day	28	22	22	25	24	27
Every few days	19	15	14	19	17	18
Once a week	13	14	12	14	13	12
Less often	16	12	14	24	24	20
Don't know / not sure	1	<1	1	<1	<1	1

- Users of the sites are relatively frequent users.
- There was slight increase in the number of the most frequent users among the eligible population from 2010 to 2011.

Internet and Social Networking Media: Study Population Comparisons

The following tables show how Internet access, and use of social networking sites, differs among the study populations. The data indicate that *Network* audiences have quite high rates of Internet access and site use; although, not as

high as higher-income mothers. Those who use these sites do so more frequently than higher-income mothers.

Table 3-128. Access to the Internet – Either at Home or Any Other Location at Least Once a Week, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	674	558	1048	999
	%	%	%	%
Yes, have weekly access	100	84	77	83
No	--	16	24	17
Don't know	--	1	--	--

- Low-income audiences were significantly less likely to have access than their higher-income counterparts, but overwhelming majorities report access.

Table 3-129. Use of Social Networking Sites: Have Created a Profile Online that Others Can See, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	673	548	1032	999
	%	%	%	%
Yes, have profile	77	70	60	61
No	23	30	40	39
Don't know	--	<1	<1	<1

- Higher-income mothers are significantly more likely to have a profile although the proportions in all the audiences are quite sizeable.

Table 3-130. Frequency of Use of Social Networking Sites, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	527	384	651	608
	%	%	%	%
Several times a day	20	47	38	23
Once a day	29	24	22	27
Every few days	16	10	14	18
Once a week	15	9	12	12
Less often	21	9	14	20
Don't know/not sure	--	1	1	1

- Interestingly, while low-income audiences are slightly less likely to have a social network media profile, those that do use social networking sites visit them more often.
- Two of the three *Network* audiences were significantly more likely than the higher-income audience to report checking the sites several times a day. Recipients used the sites less often than the other *Network* audiences, but more often than the higher-income moms.

Table 3-131. Most Common Mode of Accessing Social Networking Profile, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	522	368	619	594
	%	%	%	%
Home computer	70	45	47	54
School computer	1	1	1	2
Work Computer	4	4	2	1
Library Computer	--	2	5	4
Mobile Device	25	47	45	39
Don't know/not sure	--	2	1	1

- *Network* audiences were significantly more likely than the comparison group to rely on a mobile device to access their profile.

- *Network* audiences were significantly less likely than the higher-income group to use their home computer as the primary method to check the profile.

Table 3-132. Use of Social Networking Sites: Own a Cell Phone with Internet Access for Email and the Web, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	424	381	702	553
	%	%	%	%
Yes, own a phone with Internet access	64	68	66	56
No	36	31	34	44
Don't know	<1	1	<1	1

- In 2010 we added a measure on smart phone access and use. About two thirds of the higher-income mothers report that they own a smart phone. The same is true of the *Network* audiences except for CalFresh recipients, who are significantly less likely to own one.

Table 3-133. Use of Social Networking Sites: Currently Use Phone for Email and the Web, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	424	381	702	533
	%	%	%	%
Yes, use phone for email and the web	88	87	80	74
No	12	13	20	26
Don't know	--	--	--	<1

- A large majority of those who have smart phones use the email and web browsing capabilities. Recipients and eligibles were significantly less likely than higher-income mothers to use these capabilities.

Internet and Social Networking Media: Race/Ethnic Differences

In the 2011 study we looked at race/ethnic differences in Internet and social networking media usage. These data are not presented in tabular form but the findings are summarized below.

Access to Internet

- Compared to Hispanics (68%), Whites (79%) and African Americans (82%) CalFresh eligibles reported significantly higher rates of access to the Internet. Compared to all other race/ethnic groups (92% among Whites, 90% among African Americans, and 97% among all Others), Hispanic (70%) recipients also reported significantly lower rates of access to the Internet.

Social Media Profile Creation

- Compared to Caucasians (63%) and African Americans (59%), Hispanic (46%) CalFresh eligibles reported lower raters of online profile development. Hispanic (28%) recipients also reported lower raters of profile development (69% among Caucasians, 64% among African Americans, and 68% among all the other groups).

Frequency of Use

- There were no differences across the groups in terms of the proportions of each visiting the sites most frequently, i.e., several times a day.

Method of Access

- Among eligibles, compared to African Americans (48%) and Hispanics (54%) significantly more mothers in the Other race/ethnic category (75%) reported using their home computer to access their social networking profile.
- Compared to African Americans (55%), White (73%) CalFresh recipients were significantly more likely to use a home computer to check their social networking profile.
- Compared to Whites (19%) and Others (18%), African American (39%) CalFresh eligibles were more likely to use their mobile device to access their social networking profile.

Chapter 4: Calorie Labeling and Restaurant Ordering

This chapter presents data on attitudes toward calorie labeling and restaurant ordering. These measures were added in 2011.

Table 4-1.
Menu Labeling, 2011 Study Populations:
"Do you typically read calorie information for menu items when it is available at fast food or chain restaurants?"

	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	675	556	1046	1000
	%	%	%	%
Yes	69	40	39	53
No	27	53	57	38
Not applicable	4	6	4	9
Don't know	–	2	<1	<1

- *Network* audiences were significantly less likely than higher-income mothers to read calorie information for menu items.

Table 4-2. Menu Labeling, 2011 Study Populations: "How often does the amount of calories on the menu help you decide what to order at fast food or chain restaurants?"				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	485	217	401	552
	%	%	%	%
Always	40	34	36	27
Most of the time	32	41	31	27
About half of the time	10	9	12	14
Sometimes	16	16	20	26
Never	1	<1	1	7
Don't know	--	<1	__	<1

- The vast majority of sampled mothers reported making use of the information in their ordering decisions, at least *most* of the time. Among recipients, the majority was smallest, 54%.
- CalFresh recipients were generally less likely than higher-income mothers to say that the calorie information contributed to their decision making.

Table 4-3. Restaurant Ordering, 2011 Study Populations: "When eating out at fast food or chain restaurants, how often do you look for fresh fruit or vegetables as a main part of the meal?"				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	647	546	1033	916
	%	%	%	%
Always	19	16	19	21
Most of the time	21	22	16	22
About half of the time	20	13	13	12
Sometimes	25	25	27	25
Never	15	24	25	20
Don't know	<1	1	1	1

- The majority of mothers do not look for fresh produce when dining in these restaurants, at least most of the time.

- *Network* audiences were significantly less likely than higher-income mothers to say they look for fresh fruit or vegetables as a main part of the meal.

Table 4-4.
Restaurant Ordering, 2011 Study Populations:
"How often does the price keep you from ordering the fresh fruit and vegetables when they are available at fast food or chain restaurants?"

	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	544	302	548	731
	%	%	%	%
Always	2	7	7	9
Most of the time	6	32	30	17
About half of the time	10	11	13	16
Sometimes	26	34	32	30
Never	55	16	17	28
Don't know	<1	1	2	1

- *Network* audiences were significantly more likely than higher-income mothers to say that price both *always* and *most of the time* keeps them from ordering fruit and vegetables.

- *Network* audiences were significantly less likely than higher-income mothers to say that price never keeps them from ordering fruit and vegetables.

Chapter 5: Public Policy Reforms

This chapter presents data on attitudes toward public policy reforms. These measures were added in 2011.

Table 5-1.
Requiring All Stores that accept CalFresh to Sell Fresh Fruits and Vegetables,
2011 Study Populations

	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	673	558	1050	997
	%	%	%	%
Favor (net)	82	92	92	92
Strongly Favor	64	68	70	80
Somewhat Favor	18	24	22	13
Strongly Oppose/ Somewhat Oppose (net)	16	4	6	6
Don't know	2	4	2	2

- There is overwhelming support among all the audiences for requiring any store that accepts CalFresh to offer fruits and vegetables.
- Support among *Network* audiences is significantly higher than among the higher-income comparison group.

Table 5-2. Requiring All Stores that Accept CalFresh to Sell Lower-priced Healthy Foods to Cal Fresh Customers, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	673	556	1051	999
	%	%	%	%
Favor (net)	87	84	88	93
Strongly Favor	65	59	63	82
Somewhat Favor	22	26	25	11
Strongly Oppose/ Somewhat Oppose (net)	11	12	9	6
Don't know	3	4	3	1

- There is also strong support for requiring stares that accept CalFresh to offer healthy foods at a discount to CalFresh customers.
- Recipients are significantly more likely to support this than are higher-income mothers.

Table 5-3. Requiring Schools to Open their Recreational Facilities After Hours and on Weekends, 2011 Study Populations				
	Mothers >185% FPL	LIM 130%-185%	CalFresh Eligible Mothers	CalFresh Recipients
N Unweighted	672	557	1050	999
	%	%	%	%
Favor (net)	75	80	82	84
Strongly Favor	48	61	63	68
Somewhat Favor	26	19	19	16
Strongly Oppose/ Somewhat Oppose (net)	23	16	15	14
Don't know	2	4	3	2

- The higher-income group is less likely to support having school recreational facilities stay open longer than they were to support the other two policy reforms included in the survey.
- Support levels are significantly higher among the CalFresh eligible and recipient mothers.

Chapter 6: Conclusions and Recommendations

The conclusions and recommendations flowing from the study are discussed below.

- **Increased media attention and awareness, along with steady progress in achieving campaign objectives, suggest that we may be at an important turning point on the issue of obesity prevention. It is an opportune time to question how we can best move forward.**

  The lesson from other health communication campaigns is that what works is not a single intervention but rather the mobilization of multiple sectors over time on a health issue – academia/science, the professions, philanthropy, government and media.[9] In recent years we have seen this mobilization take place on childhood obesity. We have seen presidential leadership, Michele Obama's *Let's Move* and the Communities Putting Prevention to Work (CPPW) initiative with its prevention emphasis and resources. In addition, in California there has been more than a decade of work by the *Network* along with many others including Kaiser Permanente, The California Endowment and the Kellogg Foundation.

  Recent outcome trends suggest we may be at a moment when we can accelerate progress. In addition, new USDA guidance frees up some options for the *Network*. There is, however, a new factor we must take into account: increased media attention and online activity on the issue mean that the *Network* share of voice will be smaller than before.

- **Health behavior change should remain an important *Network* focus along with the new emphasis on policy, systems and environmental (PSE) change.**

  Health behavior change is, of course, the *Network*'s ultimate goal. It is something that the audience is very interested in given the high level of concern about obesity and weight-related chronic diseases. There is also evidence in the scientific literature that nutrition education works to bring about health behavior change. Others engaged in obesity prevention work

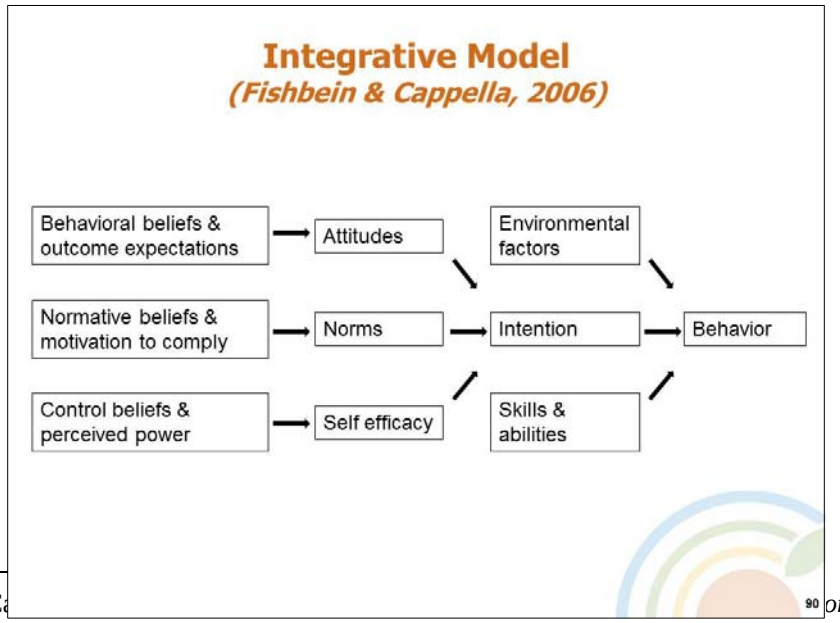
[9] *Public Health Communication: Evidence for Behavior Change*. Honrik, R.C., editor; Erlbaum, Mahwah, N.J., 2002.

are largely focused elsewhere. Because of this, and the *Network's* success in reaching low-income audiences, it should continue to play a role in this area.

- **Media is likely to have an important, continuing role to play in the effort to change health behaviors.**

  It's what allows us to reach large numbers cost-effectively. The secondary analysis of Benchmark data currently in progress will yield an understanding of what media efforts are actually accomplishing. Our assumption, however, is that ads/media can impact norms and contribute to the development of self efficacy, known predictors of fruit and vegetable consumption.

  A key challenge is that we now are moving toward an expanded repertoire of behaviors; for example, reduced consumption of fast food and sugary beverages. We need to understand what drives these new behaviors and further refine our understanding of fruit and vegetable consumption behaviors. From the large scale formative study currently in progress we will get data including on how behavioral beliefs and outcome expectations impact behavioral choices. We have likely paid insufficient attention to these beliefs and expectations, which are generally viewed as important determinants of behavior.[10] Their role in an integral model of health behavior change is summarized below based on the work of Fishbein and Cappella. In the formative study we will be comparing those individuals receptive to our behavioral recommendations with their counterparts in an effort to see what behavioral beliefs and outcome expectations drive those who are most receptive. This understanding will provide important guidance to future message development efforts.



[10] Fishbein, Martin Ca ... ons. Journal of Communication 56 (2006) S1-S17.

- **We need to pay yet more attention to what is going on "on the ground."**

  The problem is one of reach, getting to scale – reaching enough people to have a population level impact. The *Network* should convene a working group to compile best practices and make recommendations on how to extend our reach. One way would be to augment traditional nutrition education interventions with less time intensive ones. The easier we can make participation, the more participation will increase.

- **The *Network* should invest in the development of "barefoot educators/ change agents" indigenous to the target audience, a non-traditional form of nutrition education that has the potential to accelerate healthy change.**

  Change has been characterized by students of social diffusion as "a role-modeling process among near-peers." If we can amplify this role modeling within low-income communities, we can likely accelerate the rate of change. Finding ways for low-income mothers to interact with one another has the potential to increase this role modeling. Both face-to-face and web-based approaches have great potential.

  The involvement of a leadership group of the target audience as educators complements the Champions for Change media strategy. It broadens the concept of a Champion Mom to include outreach to peers. It can yield a trained cadre of indigenous leaders who can also help champion PSE change efforts. A critical component must be linking participating mothers to resources that boost the development of actual abilities and skills. Another critical component is the development of informational materials that demystify obesity prevention and simply answer the question, "What can I do to prevent obesity in my family"?

- **The movement to affect PSE changes should be built around the CX3 process.**

  The *Network* plans to make use of its CX3 process to identify possible PSE change targets across the state. Efforts should be undertaken to broaden involvement in these efforts. We need coalitions that go beyond the usual public health stakeholders in order to build political will. The *Network* should undertake efforts to infuse a strategic focus on this work, a narrowing of agendas and the selection of winnable battles and policies to promote.

- **The *Network* and its partners should think carefully about resident engagement in PSE change efforts.**

  Communities have existing leadership structures that may be ready to embrace the public health agenda. This may be all that is needed in order to be successful. Low-income mothers who are trained to take on leadership roles in non-traditional nutrition education efforts can certainly be encouraged to play a role in PSE change efforts. However, large-scale

involvement on the part of rank-and-file members of low-income communities may not be necessary.

- **Media can play a number of potential roles in PSE change efforts.**

  One role would be to increase the saliency of PSE change issues, not only within our target audience but in spillover audiences as well, especially those audiences with influence in the policy making process. Media-based approaches can contribute powerfully to the effort to re-contextualize obesity as multi-level, not only an individual-level problem. They can also educate about how the levels are linked and highlight the moral imperative of healthy environments. Media-based approaches can also contribute to movement development and the promotion of participation within in it. Another potential role: promotion of the idea that PSE changes enjoy broad support.

  In addition to advertising, consideration should be given to the use of media advocacy methods to advance on-the-ground policy change efforts.

- **Public health system capacity challenges complicate the task.**

  We have to find a way to do this work at the county level in an era of unprecedented resource challenges impacting the public health infrastructure. Training and technical assistance will be critical, especially in the areas of non-traditional nutrition education and PSE change methods.

Appendix

Screeners

- Low-Income Mothers Screener – English
- Low Income Mothers Screener – Spanish
- CalFresh Recipient Mothers Screener – English
- CalFresh Recipient Mothers Screener – Spanish
- General Population Mothers Screener – English
- General Population Mothers Screener – Spanish

Questionnaires

- Benchmark Questionnaire – English
- Benchmark Questionnaire – Spanish

Interviewer # _____ Respondent # _____ Date: _____

Field Research Corporation 533-035
San Francisco, CA 10/18/2011

2011 Benchmark Survey
~ Screener – Low-Income Moms ~

INTRODUCTION

Hello, my name is _____. We're conducting a survey today on behalf of the California Department of Public Health and the Public Health Institute to help improve programs and services throughout the State. Will you answer a few questions to see if you qualify for the survey?

- All your responses will be kept completely confidential, and used only for statistical purposes.
- I think you will find the survey interesting.
- We will give you $15 for completing the interview.

S1. **RECORD GENDER OF ADULT**

MALE ..... 1 (**THANK AND TERMINATE**)
FEMALE ..... 2 (**CONTINUE TO S2**)

S2. We don't need to know exactly, but which of the following age categories are you in? (**READ CATEGORIES**)

Less than 18 ..... 1 (**THANK AND TERMINATE**)
18 – 24 ..... 2 (**CONTINUE TO S3**)
25 – 29 ..... 3 (**CONTINUE TO S3**)
30 – 39 ..... 4 (**CONTINUE TO S3**)
40 – 49 ..... 5 (**CONTINUE TO S3**)
50 – 54 ..... 6 (**CONTINUE TO S3**)
55 or older ..... 7 (**THANK AND TERMINATE**)
REFUSED ..... 8 (**THANK AND TERMINATE**)

S3. Would you feel more comfortable doing the interview in English or Spanish?

ENGLISH ..... 1 (**CONTINUE IN ENGLISH**)
SPANISH ..... 2 (**SWITCH TO SPANISH INTERVIEW, IF AVAILABLE**)
OTHER ..... 3 (**THANK AND TERMINATE**)

In order to determine if you are eligible to participate, I need to ask you a few questions about your family size and income.

S4. Do you have any children living at home with you who are under age 18?

YES	1	(**CONTINUE TO S5**)
NO	2	(**THANK AND TERMINATE**)
REFUSED	3	(**THANK AND TERMINATE**)

S5. Are you the parent or involved in raising any of the children under age 18 living in your home?

YES, PARENT	1	(**CONTINUE TO S6**)
YES, INVOLVED IN RAISING	2	
NO	3	(**THANK AND TERMINATE**)
REFUSED	4	(**THANK AND TERMINATE**)

S6. To make sure we are interviewing a balanced group of Californians, I need to find out whether you are of Latino or Hispanic origin? (**IF NEEDED:**) such as Mexican- American, Latin American, South American, or Spanish-American?

YES, HISPANIC	1	(**CONTINUE TO S7**)
NO, NON-HISPANIC	2	
DON'T KNOW/NOT SURE	8	
REFUSED	9	

S7. For classification purposes, we'd like to know what your racial background is. Are you White, Black or African American, Asian, Pacific-Islander, American Indian or an Alaskan Native, a member of another race or a combination of races? (**ALLOW MULTIPLE ANSWERS**)

WHITE	1	(**CHECK QUOTA**)
BLACK/AFRICAN-AMERICAN	2	
ASIAN	3	
PACIFIC ISLANDER	4	
AMERICAN INDIAN/ALASKAN NATIVE	5	
HISPANIC/LATINO (VOLUNTEER ONLY)	6	
OTHER RACE/ETHNICITY (_____) (*SPECIFY*)	7	
DON'T KNOW	DK	(**THANK AND TERMINATE**)
REFUSED	REF	

INTERVIEWER: CHECK QUOTA SHEET, CONTINUE IF ETHNICITY QUOTA IS NOT FILLED

S8. What is the total number of people, including yourself, living in your household?

_____ (**RECORD NUMBER OF PEOPLE**) (**MUST BE > 1**).....1 (**CONTINUE TO S9**)

REFUSED ..... REF (**THANK AND TERMINATE**)

S9. What is your household's total annual income before taxes are taken out? This includes income from wages, cash aid, unemployment, social security, and any other source. (**PROBE FOR ANNUAL INCOME BEFORE TAXES**)

$_____

DON'T KNOW/NOT SURE 888888

REFUSED 999999

(**CONTINUE TO INSTRUCTIONS**)

INSTRUCTIONS:

1) Find number of people in household from S8 and circle that number in column **A** for Family Size.
2) Is respondent's income **less than or equal to the 130%** income cutoff from column **B**?
   → **IF YES, CONTINUE INTERVIEW / QUALIFIES FOR 130% QUOTA**.
   → **IF NO, GO TO INSTRUCTION #3**.
3) Is respondent's income **less than or equal to the 185%** income cutoff from column **C**?
   → **IF YES, CONTINUE INTERVIEW / QUALIFIES FOR 185% QUOTA**.
   → **IF NO, THANK AND TERMINATE**
   → **IF NOT SURE/REFUSED, ENCOURAGE THEM TO GIVE A FIGURE;**
   IF THEY CONTINUE TO SAY NOT SURE/REFUSED, GO TO S10b.

A	B		C	
CIRCLE FAMILY SIZE	*CIRCLE IF INCOME FROM S9 IS ≤ 130% CUTOFF…*		*CIRCLE IF INCOME FROM S9 IS ≤ 185% CUTOFF…*	
FAMILY SIZE	**130% FPL INCOME CUTOFF**		**185% FPL INCOME CUTOFF**	
2	$19,123	YES → QUALIFIES 130% QUOTA NO → GO TO COLUMN C	$27,214	YES → QUALIFIES 185% QUOTA NO → THANK AND TERMINATE
3	$24,089	YES → QUALIFIES 130% QUOTA NO → GO TO COLUMN C	$34,281	YES → QUALIFIES 185% QUOTA NO → THANK AND TERMINATE
4	$29,055	YES → QUALIFIES 130% QUOTA NO → GO TO COLUMN C	$41,348	YES → QUALIFIES 185% QUOTA NO → THANK AND TERMINATE
5	$34,021	YES → QUALIFIES 130% QUOTA NO → GO TO COLUMN C	$48,415	YES → QUALIFIES 185% QUOTA NO → THANK AND TERMINATE
6	$38,987	YES → QUALIFIES 130% QUOTA NO → GO TO COLUMN C	$55,482	YES → QUALIFIES 185% QUOTA NO → THANK AND TERMINATE
7	$43,953	YES → QUALIFIES 130% QUOTA NO → GO TO COLUMN C	$62,549	YES → QUALIFIES 185% QUOTA NO → THANK AND TERMINATE
8	$48,919	YES → QUALIFIES 130% QUOTA NO → GO TO COLUMN C	$69,616	YES → QUALIFIES 185% QUOTA NO → THANK AND TERMINATE
For each additional person, add	$4,966	YES → QUALIFIES 130% QUOTA NO → GO TO COLUMN C	$7,067	YES → QUALIFIES 185% QUOTA NO → THANK AND TERMINATE

S10a. **RESPONDENT'S HOUSEHOLD INCOME IS:** (**CIRCLE ONE**)

LESS THAN / EQUAL TO 130% INCOME CUTOFF..... 1 (**130% INCOME QUOTA; GO TO S11**)

MORE THAN 130% / LESS THAN <185% INCOME CUTOFF..... 2 (**185% INCOME QUOTA; GO TO S12**)

MORE THAN 185% INCOME CUTOFF..... 3 (**THANK AND TERMINATE**)

(IF **S10a = "DON'T KNOW" OR "REFUSED" ANNUAL INCOME -- USE SPARINGLY!! – ASK:**)

S10b. Even though you don't have an exact number, can you tell me if your income is less than $_____ (**USE COLUMN B (130% INCOME CUTOFF) FOR RESPONDENT'S FAMILY SIZE**)?

YES	1	(**CONTINUE INTERVIEW**)
NO	2	(**THANK AND TERMINATE**)
DON'T KNOW/NOT SURE	DK	(**THANK AND TERMINATE**)
REFUSED	REF	(**THANK AND TERMINATE**)

(IF **130% INCOME QUOTA, ASK:**)

S11. Have you used CalFresh benefits, Food Stamps, or EBT in the last 12 months?

YES	1	(**THANK AND TERMINATE**)
NO	2	(**CONTINUE TO S12**)
DON'T KNOW/NOT SURE	DK	(**CONTINUE TO S12**)
REFUSED	REF	(**THANK AND TERMINATE**)

S12. Are you a California resident?

YES	1	(**CONTINUE TO S13**)
NO	2	(**THANK AND TERMINATE**)
DON'T KNOW	DK	(**THANK AND TERMINATE**)
REFUSED	REF	(**THANK AND TERMINATE**)

S13. Do you live in the area (20 to 25 miles) or are you visiting from somewhere else?

YES, I LIVE WITHIN 20 TO 25 MILES	1	(**CONTINUE TO S14**)
NO, I DON'T LIVE WITHIN 20 TO 25 MILES	2	(**THANK AND TERMINATE**)
DON'T KNOW	DK	(**THANK AND TERMINATE**)
REFUSED	REF	(**THANK AND TERMINATE**)

INFORMED CONSENT SCRIPT

(**SAY TO ALL**:)

S14. Before I continue, I would like to remind you that everything you say is completely confidential. Your participation is totally voluntary. There will be no harmful effect on any public benefits you may receive if you decide not to participate or answer any of the questions. This is a research study being sponsored by the California Department of Public Health and the Public Health Institute. The purpose of the study is to improve programs and services for children and adults in California. If you have any questions about the survey, you may contact our survey supervisor, Kevin Howard, for additional information on our research. (1-800-234-0340).

S15. Would you like to participate in an interview?

YES	1	(**VERBAL CONSENT GIVEN, CONTINUE**)
NO	2	(**THANK AND TERMINATE**)
DON'T KNOW	DK	(**THANK AND TERMINATE**)
REFUSED	REF	(**THANK AND TERMINATE**)

Interviewer # _____ Respondent # _____ Date: _____

Field Research Corporation
San Francisco, CA

533-035
10/25/2011
Spanish

2011 Benchmark Survey
~ Questionnaire – Low-Income Mothers ~

A1. Le voy a describir algunos anuncios de televisión. Estos anuncios muestran a padres e hijos realizando actividades saludables, como por ejemplo jugando activamente en la sala, pasando tiempo juntos en la cocina, preparando frutas y verduras o compartiendo una comida saludable alrededor de una mesa en el patio. Dígame si se acuerda haberlos visto alguna vez. (**READ ITEM, THEN ASK:**) ¿Ha visto o no ha visto estos anuncios? (**ROTATE LIST**)

	YES	NO	DK	REF	(VOL. ONLY) DON'T WATCH TV
( ) a. En un anuncio en la televisión, las mamás y los papás están hablando sobre lo duro que es hacer que sus niños coman más frutas y verduras, pero que sería mucho más duro enterarse que uno de ellos tiene diabetes tipo 2. Dicen que es duro decirles que no a los niños cuando quieren dulces por la tarde, pero que sería mucho más duro ver al niño luchar contra la obesidad. El anuncio termina cuando una mamá y un papá dicen: "Bueno, darnos cuenta que había llegado el momento de cambiar no fue tan duro." ¿Ha visto o no ha visto este anuncio en la televisión?	1	2	8	9	10
( ) b. En otro anuncio en la televisión, las mamás y los papás están hablando sobre lo duro que es decirles que no a los niños cuando quieren comer mucha comida grasosa, pero que sería mucho más duro ver que se burlaran de sus niños por estar gorditos. Dicen que puede ser duro pedirle a la tienda que ofrezca más frutas y verduras, pero que sería mucho más duro enterarse que un niño tiene diabetes tipo 2. El anuncio termina cuando dos mamás dicen: "Bueno, darnos cuenta que había llegado el momento de cambiar no fue tan duro." ¿Ha visto o no ha visto este anuncio en la televisión?	1	2	8	9	10
( ) c. ¿Y ha visto un anuncio en la televisión que muestra a varios padres y madres hablando sobre el problema de las máquinas expendedoras en las escuelas de sus niños? Un papá menciona que trabajó con un grupo de padres y consiguió que se prohibieran estas máquinas en la escuela de su hija. Al final, uno de los papás pregunta: "¿Qué están haciendo ustedes en sus escuelas locales?" ¿Ha visto o no ha visto este anuncio en la televisión?	1	2	8	9	10

(**A2 – SPANISH VERSION ONLY**)

A2. Enseguida le voy a describir algunos anuncios de radio. Dígame si se acuerda haberlos oído alguna vez. (**READ ITEMS IN RANDOM ORDER**) ¿Ha oído o no este anuncio?

	YES	NO	DK	REF	(VOL. ONLY) DON'T LISTEN TO RADIO
( ) a. ¿Oyó un anuncio en la radio donde aparece un mariachi femenino que canta acerca de las ventajas nutritivas y saludables de las frutas y verduras para los niños? La música viene de la famosa canción ranchera, *El Rey*. Cantan de ser las reinas de la cocina, donde ellas son las que mandan. Al final, la locutora dice que la *Red para una California Saludable* recomienda comer más frutas y verduras y hacer actividad física todos los días	1	2	8	9	10
( ) b. ¿Oyó un anuncio en la radio donde aparece un mariachi femenino que canta que las madres protectoras son un ejemplo para California, esas mujeres dedicadas y queridas que son las campeonas de sus hijos adorados? La música viene de la famosa canción ranchera, *Ay, Jalisco no te rajes*. Cantan que nunca se darán por vencidas. Al final, la locutora dice que la *Red para una California Saludable* recomienda comer más frutas y verduras y hacer actividad física todos los días	1	2	8	9	10
( ) c. ¿Oyó un anuncio en la radio donde aparece un mariachi femenino? Cantan que son campeonas con sus niños, que les gustan todos los tipos de frutas y verduras y que mantienen activos a sus hijos. La música viene de una canción de guapango, *Yo el aventurero.* La locutora dice que la *Red para una California Saludable* recomienda comer más frutas y verduras y hacer actividad física todos los días	1	2	8	9	10
( ) d. ¿Oyó un anuncio en la radio donde aparece un mariachi? Cantan de ser jefes de familia y que necesitan encargarse de cumplir con sus deberes. Cantan que les gusta la comida rápida y los bocadillos poco saludables, pero uno dice que es papá y tuvo que dejarlos cuando notó que su hija se estaba poniendo gordita. Dice que los papás deben poner el ejemplo a sus hijos. La música viene de una famosa canción ranchera	1	2	8	9	10

B1. Ahora le voy a describir algunos anuncios que quizás haya visto afuera en carteles, loncheras u otros pósteres. Por favor dígame si se acuerda haberlos visto alguna vez. (**READ ITEM**) ¿Ha visto o no estos anuncios? (**ROTATE LIST**)

( ) a. [Por ejemplo] ¿ha visto un cartel que dice: "A palabras necias, oídos sordos"? "Regla #7: Si piden dulces, les doy fruta". Aparece una foto de una mujer con un niño que sonríen y miran directamente hacia usted.

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

( ) b. [Por ejemplo] ¿ha visto un cartel que dice: "Madre prevenida vale por dos"? "Regla #8: Sirvo más frutas y verduras". Aparece una foto de una mujer cruzada de brazos, que sonríe y mira directamente hacia usted.

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

( ) c. [Por ejemplo] ¿ha visto un cartel que dice: "Comer a medida alarga la vida?" "Regla #9: Sirvo menos comida grasosa". Aparece una foto de una mujer que sonríe y mira directamente hacia usted.

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

B2a. ¿Ha visto algún volante, cartel u otro material que le sugiere beber menos bebidas azucaradas y más agua?

ASK B2b

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO B3

B2b. ¿Ha visto algún volante, cartel u otro material que dice "Piensa bien lo que tomas"?

ASK B2c

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO B3

B2c. Por favor describa dónde oyó o vio este mensaje. (**RECORD RESPONDENT'S EXACT WORDS**) (**PROBE FOR SPECIFICS & DETAILS AND ALLOW MULTIPLE RESPONSES**)

B3. ¿Ha oído o leído algo acerca de un grupo llamado *Red para una California Saludable,* Campeones del Cambio?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

B4. ¿Alguna vez ha visitado el sitio en la Web de Campeones del Cambio, o el sitio de la *Red para una California Saludable?*

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

C1. Por favor dígame si está de acuerdo o en desacuerdo con las siguientes declaraciones. (**READ LIST**) ¿Está de acuerdo o en desacuerdo? (**THEN ASK:**) ¿Mucho o algo?

( ) a. Comer frutas y verduras no reduce el riesgo de contraer enfermedades tales como la diabetes tipo 2, el cáncer o enfermedades del corazón.

STRONGLY AGREE 1
SOMEWHAT AGREE 2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE 5
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. Realizar actividades físicas ayuda a reducir su riesgo de contraer enfermedades tales como la diabetes tipo 2, el cáncer o enfermedades del corazón.

STRONGLY AGREE 1
SOMEWHAT AGREE 2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE 5
DON'T KNOW/NOT SURE.....8
REFUSED.....9

C2. De acuerdo con las guías nacionales, ¿cuánto de su plato debería estar lleno con frutas y verduras en cada comida? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS RESPONSE IS ONE HALF OR DON'T KNOW.**)

_____
(**RECORD AMOUNT OF PLATE FILLED**)
ONE-HALF..... 5
DON'T KNOW/NOT SURE 89
REFUSED..... 99

C3a. ¿Está enterada de algún sitio Web del gobierno donde puede obtener información sobre cuánta fruta y verdura debería comer?

YES 1
NO..... 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

IF YES, ASK:

C3b. ¿Cuál es el nombre de ese sitio/esos sitios en la Web? (**RECORD EXACT WORDS**) (**PROBE FOR SPECIFIC NAME**) (**PROBE FOR MULTIPLE RESPONSES; ACCEPT UP TO THREE**)

C3c. ¿Ha oído o leído algo sobre un sitio Web llamado "choosemyplate.gov"?

YES 1
NO..... 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

Las siguientes preguntas tienen que ver con alimentos que usted generalmente come o bebe. Dígame con qué frecuencia come o bebe estos productos, por ejemplo, tres veces al día, dos veces por semana, tres veces al mes, etc. Recuerde, sólo me interesan los alimentos que usted come o bebe. Incluya todos los alimentos que usted come o bebe, tanto en su casa como fuera de casa.

(**FILL IN ONE BLANK OR CIRCLE ONE NUMBER**)

D1. ¿Con qué frecuencia bebe jugos de fruta 100% puro? No incluir bebidas con sabor a fruta que contienen azúcar, o jugo de fruta que usted hace en casa y que le agrega azúcar. Solamente incluya 100% jugo. (**100% JUICE BLENDS SUCH AS ORANGE-PINEAPPLE OR CRANBERRY-GRAPE ARE OKAY, AS ARE FRUIT-VEGETABLE 100% BLENDS. 100% PURE JUICE FROM CONCENTRATE IS ALSO OKAY.**) (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D2. Sin contar los jugos, ¿con qué frecuencia usted come fruta? Contar fruta fresca, congelada, enlatada o seca. (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D3. ¿Con qué frecuencia come ensaladas verdes? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D4. ¿Con qué frecuencia come papas, sin incluir las papas fritas, papas sofritas o papitas fritas de paquete? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D5. ¿Con qué frecuencia come zanahorias? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D6.	Sin contar las zanahorias, papas, ó ensaladas verdes, ¿Con qué frecuencia come otros vegetales? Por ejemplo: tomates, jugo de tomate o V8, maíz, berenjenas, chicharos (alverjas), lechuga y repollo. (**DO NOT COUNT VEGETABLES ALREADY COUNTED**) (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)	(**RECORD NUMBER**) _____ TIMES PER DAY _____ TIMES PER WEEK _____ TIMES PER MONTH _____ TIMES PER YEAR NEVER ..... 5 DON'T KNOW/NOT SURE ..... 89 REFUSED 99
D7.	En comparación con un año atrás, ¿está comiendo más, menos, o más o menos la misma cantidad de fruta?	MORE ..... 1 LESS ..... 2 ABOUT SAME ..... 3 DON'T KNOW/NOT SURE ..... 8 REFUSED 9
D8.	En comparación con un año atrás, ¿está comiendo más, menos, o más o menos la misma cantidad de verdura?	MORE ..... 1 LESS ..... 2 ABOUT SAME ..... 3 DON'T KNOW/NOT SURE ..... 8 REFUSED 9
D9.	¿Con qué frecuencia llena la mitad de su plato con frutas y verduras en las comidas? (**READ CATEGORIES**)	Cada comida ..... 1 La mayoría de las comidas ..... 2 Algunas comidas ..... 3 Casi ningúna de las comidas ..... 4 Nunca ..... 5 **DO NOT READ** { DON'T KNOW/NOT SURE ..... 89 REFUSED 99
D10.	En comparación con un año atrás, ¿está comiendo más, menos, o más o menos la misma cantidad de alimentos en las comidas o en otro momento durante el día?	MORE ..... 1 LESS ..... 2 ABOUT SAME ..... 3 DON'T KNOW/NOT SURE ..... 8 REFUSED 9

Las siguientes preguntas son sobre comer fuera de casa en cadenas de restaurantes o de comidas rápidas.

D11a.	¿Por lo general lee la información sobre calorías en el menú cuando está disponible en las cadenas de restaurantes o de comidas rápidas?	YES ..... 1 NO ..... 2 (VOLUNTEERED ONLY:) NEVER NOTICED/NEVER LOOKED FOR IT ..... 3 USUALLY CANNOT FIND IT ..... 4 NEVER GO TO FAST FOOD OR CHAIN RESTAURANTS ..... 5 → **Skip to D13** DON'T KNOW/NOT SURE ..... 8 REFUSED 9

IF YES, ASK:

D11b.	¿Con qué frecuencia la cantidad de calorías del menú le ayuda a decidir qué pedir en las cadenas de restaurantes o de comidas rápidas? (**READ CATEGORIES**)	Siempre ..... 1 La mayoría de las veces ..... 2 La mitad de las veces ..... 3 Algunas veces ..... 4 Nunca ..... 5 **DO NOT READ** { DON'T KNOW/NOT SURE ..... 8 REFUSED 9

D12a. Cuando come fuera de casa en una cadena de restaurantes o de comidas rápidas, ¿con qué frecuencia busca frutas y verduras frescas como parte principal de la comida? (**READ CATEGORIES**)

Siempre	1
La mayoría de las veces	2
La mitad de las veces	3
Algunas veces	4
Nunca	5
DO NOT READ DON'T KNOW/NOT SURE	89
DO NOT READ REFUSED	99

IF D12a ≠ NEVER, ASK:

D12b. ¿Con qué frecuencia el precio le impide pedir frutas y verduras frescas cuando están disponibles en una cadena de restaurantes o de comidas rápidas? (**READ CATEGORIES**)

Siempre	1
La mayoría de las veces	2
La mitad de las veces	3
Algunas veces	4
Nunca	5
DO NOT READ DON'T KNOW/NOT SURE	8
DO NOT READ REFUSED	9

Fruit and Vegetable Consumption – Self Efficacy

D13. Las siguientes declaraciones hablan de comer frutas y verduras, inclusive cuando existen circunstancias que lo hagan difícil. Para cada una, dígame en qué medida se siente segura que lo puede lograr, usando una escala de 1 a 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura. Si está en una posición intermedia, elija el 2, 3 o 4. (**READ LIST THEN SAY, IF NECESSARY:**) Usando una escala del 1 al 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura, (**ROTATE LIST**).

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. ¿En qué medida se siente segura que podría comer frutas o verduras cuando anda de prisa?	1	2	3	4	5	8
( ) b. ¿En qué medida se siente segura que podría comer frutas o verduras casi todos los días como parte de su comida del mediodía?	1	2	3	4	5	8
( ) c. ¿En qué medida se siente segura que podría comer frutas o verduras cuando se siente cansada?	1	2	3	4	5	8
( ) d. ¿En qué medida se siente segura que podría comer frutas o verduras cuando come fuera de su casa?	1	2	3	4	5	8
( ) e. ¿En qué medida se siente segura que podría comer frutas o verduras casi todos los días durante la cena?	1	2	3	4	5	8
( ) f. ¿En qué medida se siente segura que se podría servir una porción extra de verduras durante la cena?	1	2	3	4	5	8
( ) g. ¿En qué medida se siente segura que podría comer una comida con la mitad de su plato lleno de frutas y verduras casi todos los días?	1	2	3	4	5	8
( ) h. ¿En qué medida se siente segura que en un restaurante podría pedir por lo menos un plato de verduras?	1	2	3	4	5	8
( ) i. ¿En qué medida se siente segura que podría comer otras frutas o verduras cuando no estén disponibles sus frutas o verduras favoritas?	1	2	3	4	5	8

Las siguientes preguntas son sobre sus horas de trabajo, incluyendo el trabajo que hace en la casa.

E1. Tomando en consideración lo que hace usted normalmente durante un día típico de trabajo, y sin contar su tiempo libre, ¿qué es lo que mejor describe sus actividades? ¿Diría que pasa la mayor parte del día sentada, parada o que camina bastante? (**GET ONE RESPONSE ONLY**) (**IF NECESSARY, ASK:** ¿Qué es lo que usted más frecuentemente hace durante un día típico? (**IF RESPONDENT INSISTS ON MULTIPLE RESPONSES, CIRCLE MULTIPLE RESPONSES**).

SIT 1
STAND 2
WALK AROUND 3
LAYS DOWN MOST OF THE TIME ***(VOL ONLY)***.....4
DON'T KNOW.....8
REFUSED.....9

E2. Nuevamente, sin contar lo que hace durante su tiempo libre, durante un día típico de trabajo, ¿normalmente acarrea o levanta cargas de peso liviano, moderado o pesado, o normalmente no levanta ni acarrea objetos? (**IF NECESSARY, ASK:** ¿Qué es lo que hace más frecuentemente?)

LIGHT 1
MODERATE 2
HEAVY 3
DO NOT LIFT OR CARRY 4
DON'T KNOW/NOT SURE 8
REFUSED.....9

Las siguientes preguntas tienen que ver con las actividades físicas. Por esto quiero decir actividades que la hacen respirar fuerte o hacen que su corazón lata con rapidez, como por ejemplo caminar enérgicamente, jardinear, hacer trabajos pesados en el jardín o bailar rápidamente.

E3. De acuerdo con las guías nacionales, ¿cuánto tiempo por día o por semana debería hacer actividades físicas para mantenerse saludable? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS ONE OF THE ANSWERS AT RIGHT APPLIES.**)

_____
(**RECORD TIME**)
150 MINUTES (2 AND ½ HOURS) A WEEK..... 1
30 MINUTES A DAY, 5 DAYS A WEEK 2
20 MINUTES A DAY, 7 DAYS A WEEK 3
DON'T KNOW/NOT SURE 89
REFUSED..... 99

E4. De acuerdo con las guías nacionales, ¿cuánto tiempo por día o por semana debería(n) (su hijo) (sus hijos) hacer actividades físicas para mantenerse saludable(s)? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS ONE OF THE ANSWERS AT RIGHT APPLIES.**)

_____
(**RECORD TIME**)
60 MINUTES PER DAY 1
DON'T KNOW/NOT SURE 89
REFUSED..... 99

E5. Durante una semana normal, ¿hay días en que realiza actividades físicas por lo menos 10 minutos cada vez? Tome en cuenta solamente su tiempo libre, sin incluir el tiempo en el trabajo o los trabajos domésticos.

ASK E6a	YES 1	
	NO 2	**SKIP TO E7**
	NO, PHYSICALLY DISABLED *(VOL. ONLY)* 3	
	DON'T KNOW/NOT SURE 8	
	REFUSED 9	

IF YES, ASK:

E6a. ¿Durante cuántos días por semana realiza estas actividades por lo menos 10 minutos cada vez?

ASK E6b	**(RECORD NUMBER)**: _____ DAYS PER WEEK 1	
	DID NOT DO ANY PHYSICAL ACTIVITY FOR AT LEAST 10 MINUTES AT A TIME . 2	**SKIP TO E7**
ASK E6b	DON'T KNOW/NOT SURE 8	
	REFUSED 9	

IF AT LEAST ONE DAY A WEEK OR DK OR REF, ASK:

E6b. En los días en que realiza actividades físicas por lo menos 10 minutos durante su tiempo libre, ¿cuánto tiempo total por día dedica normalmente a estas actividades?

(**RECORD # OF HOURS/MINUTES**)

_____ HOURS PER DAY 1

_____ MINUTES PER DAY 2

DON'T KNOW/NOT SURE 899

REFUSED 999

Physical Activity – Self Efficacy

E7. Le voy a leer una lista de cosas que la gente puede hacer para aumentar o continuar con sus actividades físicas regulares. Nuevamente, por actividades físicas quiero decir caminar enérgicamente, andar en bicicleta, trabajar en el jardín o bailar rápido. Independientemente de que usted realice actividades físicas o no, por favor indique en qué medida siente confianza que realmente se podría motivar para hacer las siguientes cosas durante la mayoría de los días de una semana laboral, por lo menos seis meses. ¿En qué medida se siente segura que pueda... (**READ LIST**)? ¿Diría "Yo sé que sí puedo", o bien "A lo mejor puedo" o bien "Yo sé que no puedo"?

(**ROTATE LIST**)

( ) a. Dedicar tiempo para las actividades físicas mientras pasa por un cambio de vida estresante (por ejemplo, un divorcio, una muerte en la familia, una mudanza).

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) b. Dedicar tiempo para las actividades físicas después de un día largo y cansado en el trabajo.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) c. Dedicar tiempo para las actividades físicas, es decir, caminar, correr, nadar, andar en bicicleta u otras actividades continuas por lo menos 2 horas y media por semana.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) d. Dedicar tiempo para las actividades físicas cuando la familia reclama que le dedique más tiempo.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) e. Dedicar tiempo para las actividades físicas inclusive cuando le exigen demasiado en el trabajo.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) f. Dedicar tiempo para las actividades físicas cuando tiene quehaceres domésticos que hacer.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

F1.	Dígame de nuevo, incluyéndose a sí misma, ¿cuántas personas viven actualmente en su hogar?	**# OF PEOPLE: _____** DON'T KNOW/NOT SURE ..... 89 REFUSED..... 99
F2.	¿Cuántas de estas personas son menores de 18 años?	# **OF CHILDREN UNDER AGE 18: _____** DON'T KNOW/NOT SURE ..... 89 REFUSED..... 99
F3.	¿Con qué frecuencia le(s) hace fácil (al niño) (a los niños) que vive(n) en su hogar el comer frutas y verduras, teniéndoselas lavadas, cortadas y listas para comer? ¿Diría usted que nunca, menos que cada mes, cada mes, cada semana o cada día?	NOT AT ALL.....1 LESS THAN EVERY MONTH.....2 EVERY MONTH .....3 EVERY WEEK .....4 EVERY DAY .....5 DON'T KNOW/NOT SURE .....8 REFUSED.....9 NOT APPLICABLE.....10
F4.	¿Con qué frecuencia le(s) hace fácil (al niño) (a los niños) que vive(n) en su hogar hacer actividades físicas, por ejemplo llevándolos a las prácticas deportivas, jugando con ellos a la pelota, o motivándolos para que jueguen afuera o anden en bicicleta? ¿Diría usted que nunca, menos que cada mes, cada mes, cada semana o cada día?	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F5.	¿Más o menos con qué frecuencia hacen actividades físicas usted y sus niños, como por ejemplo jugar a la pelota, andar en bicicleta o salir a caminar? ¿Diría usted que nunca, menos que cada mes, cada mes, cada semana o cada día? (**GET BEST ANSWER**)	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F6.	¿Con qué frecuencia le(s) hace fácil (al niño) (a los niños) que vive(n) en su hogar beber agua, por ejemplo teniendo preparada una jarra llena de agua o botellas de agua? ¿Diría usted que nunca, menos que cada mes, cada mes, cada semana o cada día? (**GET BEST ANSWER**)	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F7.	¿Ha fijado límites con respecto al tiempo que su/s hijo/s mira(n) televisión todos los días?	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9
F8.	¿Ha fijado usted límites a la cantidad de "comida no saludable" que tiene en casa para servir como bocadillo a sus niños? (**IF NEEDED, SAY:**) Por comida no saludable quiero decir cosas como papitas fritas, dulces, refrescos y otros bocadillos y bebidas azucaradas.	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9
F9.	¿Ha fijado límites a la cantidad de bebidas azucaradas que tiene en casa para los niños? Por bebidas azucaradas quiero decir refrescos, bebidas deportivas y jugos de fruta endulzados.	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9

F10. ¿Ha reemplazado las bebidas azucaradas por agua para su familia en las comidas o bocadillos?

YES 1
NO..... 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

G1. Para las siguientes declaraciones, dígame en qué medida se siente segura que pueda hacer cada cosa, usando una escala de 1 a 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura. Si está en una posición intermedia, elija el 2, 3 o 4. Indique en qué medida se siente segura que podría: (**READ LIST**). (**IF NECESSARY, SAY:**) usando una escala de 1 a 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura?

(**ROTATE LIST**)

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. ¿Comprar más frutas y verduras, inclusive si no tiene mucho dinero?	1	2	3	4	5	8
( ) b ¿Comprar frutas y verduras inclusive si tiene que viajar más distancia para conseguirlas?	1	2	3	4	5	8
( ) c. ¿Conseguir que su familia coma frutas y verduras en las comidas?	1	2	3	4	5	8
( ) d. ¿Servir frutas y verduras inclusive cuando se siente cansada?	1	2	3	4	5	8
( ) e. ¿Fijar límites a la cantidad de comida chatarra, como por ejemplo papitas fritas, dulces y refrescos, que tiene en casa como bocadillos para los niños?	1	2	3	4	5	8
( ) f ¿Tener fruta y verdura lavada, cortada y lista para servir a su familia como bocadillos?	1	2	3	4	5	8
( ) n. ¿Decir "no" a sus hijos cuando piden algo dulce por la tarde?	1	2	3	4	5	8
( ) g. ¿Conseguir que su familia cene junta por lo menos 5 veces a la semana?	1	2	3	4	5	8
( ) h. ¿Llevar a sus niños al parque, a la alberca o a otros lugares donde puedan realizar actividades físicas inclusive cuando usted esté ocupada con otras responsabilidades?	1	2	3	4	5	8
( ) i. ¿Motivar a sus hijos a que anden en bicicleta o jueguen afuera inclusive cuando ellos tienen otras cosas que quieren hacer?	1	2	3	4	5	8
( ) j. ¿Realizar actividades físicas con su familia inclusive cuando está cansada después de un largo día de trabajo?	1	2	3	4	5	8
( ) k. ¿Fijar límites a la cantidad de tiempo que sus niños miran televisión todos los días, inclusive cuando esto les molesta?	1	2	3	4	5	8

(**ASK NON-CALFRESH USERS ONLY**)

( ) l. ¿Solicitar CalFresh o estampillas de comida para su familia inclusive si es algo que nunca antes consideró?	1	2	3	4	5	8

(**ASK CALFRESH USERS ONLY**)

( ) m. ¿Seguir recibiendo CalFresh o estampillas de comida todo el tiempo que su familia las necesite?	1	2	3	4	5	8

G2. Para las siguientes declaraciones, nos interesa saber qué piensa que realmente están haciendo otras personas que usted conoce... (**READ LIST**). Diría que pocas o ninguna de las personas que usted conoce, algunas de las personas que conoce, o la mayoría de las personas que conoce… (**ROTATE LIST**)

( ) a. ¿Comen suficientes frutas y verduras todos los días?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. ¿Realizan actividades físicas por lo menos dos horas y media por semana?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

G3. Para las siguientes declaraciones, nos interesa saber qué piensa que realmente están haciendo otras madres que usted conoce. Para cada una, dígame cuántas madres que usted conoce... (**READ LIST**). Diría que pocas, ningunas, algunas, o la mayoría de las madres que conoce… (**ROTATE LIST**)

( ) a. ¿Facilitan que sus niños coman frutas y verduras todos los días?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. ¿Facilitan que sus niños realicen actividades físicas todos los días?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) c. ¿Fijan límites a la cantidad de tiempo que sus hijos miran televisión todos los días?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) d. ¿Fijan límites a la cantidad de comida no saludable que tienen en casa como bocadillos para los niños? (**IF NEEDED, SAY:**) Por comida no saludable me refiero a cosas como papitas fritas, dulces y otros bocadillos y bebidas azucaradas.

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) e. ¿Fijan límites a la cantidad de bebidas azucaradas que tienen en casa para los niños, bebidas tales como refrescos, bebidas deportivas y jugos de fruta endulzados?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

G4. Las siguientes declaraciones tienen que ver con las actividades físicas. Me refiero a actividades que le hacen respirar fuerte o que hagan latir el corazón con rapidez, como por ejemplo caminar enérgicamente, trabajar en el jardín o bailar rápido. Dígame en qué medida se siente segura que pueda realizar actividades físicas de manera regular en cada situación, empleando una escala del 1 al 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura. Si está en una posición intermedia, elija el 2, 3 o 4. Indique en qué medida se siente segura que podría realizar actividades físicas regulares: (**READ LIST**). (**IF NECESSARY, SAY:**) usando una escala de 1 a 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura...

(**ROTATE LIST**)

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. ¿Cuando está cansada?	1	2	3	4	5	8
( ) b ¿Cuando está de mal humor?	1	2	3	4	5	8
( ) c. ¿Cuando siente que no tiene tiempo?	1	2	3	4	5	8
( ) d. ¿Cuando está de vacaciones?	1	2	3	4	5	8
( ) e. ¿Cuando está lloviendo o hace frío?	1	2	3	4	5	8

G5. Le voy a leer algunas declaraciones acerca de comer frutas y verduras. En cada caso, dígame si está de acuerdo o en desacuerdo. (**READ LIST**) ¿Está de acuerdo o en desacuerdo? (**THEN ASK:**) ¿Mucho o algo? (**ROTATE LIST**)

( ) a. Pienso que la fruta es demasiado cara.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) b. Pienso que la verdura es demasiado cara.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) c. Pienso que a mi familia no le gusta la fruta.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) d. Pienso que a mi familia no le gusta la verdura.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) e. No tengo tiempo para preparar frutas y verduras porque dedico mi tiempo a la televisión, el trabajo y los niños.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) f. No puedo encontrar frutas y verduras buenas y frescas en mi vecindario.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

G6. Ahora le voy a leer algunas declaraciones acerca de las actividades físicas. En cada caso, dígame si está de acuerdo o en desacuerdo. (**READ LIST**) ¿Está de acuerdo o en desacuerdo? (**THEN ASK:**) ¿Mucho o algo? (**ROTATE LIST**)

( ) a. No encuentro lugares donde pueda realizar actividades físicas.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) b. Estoy demasiado ocupada o no encuentro el tiempo para realizar actividades físicas.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) c. Tendría menos tiempo para mis amistades y familia si realizara actividades físicas.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) d. Nuestra familia muchas veces maneja en vez de caminar, ir en bicicleta o usar el transporte público.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) e. Nuestra familia no tiene los medios económicos para programas que nos permitan hacer actividades físicas.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

Ahora quisiera hacerle algunas preguntas sobre las actividades en que podría haber participado en los últimos 3 meses.

H1.	En los últimos 3 meses, ¿ha participado en una clase, taller u otra actividad en grupo sobre el tema de comer frutas y verduras y realizar actividades físicas?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H2.	En los últimos 3 meses, ¿ha visto a alguien hacer una presentación en vivo de alimentos, donde se preparó una receta empleando frutas o verduras?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H3.	En los últimos 3 meses, ¿su hijo/alguno de sus hijos trajo a casa información sobre comer frutas o verduras o realizar actividades físicas?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H4.	En los últimos 3 meses, ¿ha visto alguna otra información escrita que recomiende comer frutas y verduras o realizar actividades físicas, cosas como carteles, pósteres o folletos?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H5a.	En los últimos 3 meses, ¿ha ido a algún festival, celebración o feria de la salud en su comunidad?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

H5b.	En ese festival, celebración o feria de la salud, ¿usted tomó parte en alguna actividad acerca de las ventajas de comer frutas y verduras y realizar actividades físicas?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Las siguientes preguntas tienen que ver con el lugar donde trabaja y los tipos de actividades que realiza en su trabajo. Para cada pregunta, tome en cuenta el trabajo que hace fuera del hogar.

I1a.	Su empleador, ¿le ofrece beneficios que tienen que ver con la nutrición? Me refiero a cosas tales como clases de nutrición, bocadillos de frutas y verduras, comidas saludables durante las juntas, comida saludable en las máquinas expendedoras, o descuentos para las opciones de comidas saludables en el comedor del lugar de trabajo.	YES .....1 NO .....2 NOT APPLICABLE, NOT EMPLOYED .....7 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

I1b.	En los últimos 12 meses, ¿hizo uso de algunos de estos beneficios que tienen que ver con la nutrición?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

I2a.	Su empleador, ¿le ofrece beneficios que tienen que ver con las actividades físicas? Me refiero a cosas tales como clases de ejercicio, tiempo libre para actividades físicas, grupos de caminar, concursos para subir escaleras o descuentos de membresías en clubes atléticos.	YES .....1 NO .....2 NOT APPLICABLE, NOT EMPLOYED .....7 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

I2b.	En los últimos 12 meses, ¿hizo uso de algunos de estos beneficios que tienen que ver con las actividades físicas?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Dígame si está a favor o en contra de los siguientes cambios que algunas personas han propuesto.

I3.	A todas las tiendas que aceptan CalFresh o estampillas de comida, aún las tiendas pequeñas del vecindario, las farmacias, tiendas de conveniencia, se les debería exigir que ofrezcan una variedad de frutas y verduras. ¿Estaría usted a favor o en contra de esto? ¿Mucho o algo?	STRONGLY FAVOR .....1 SOMEWHAT FAVOR .....2 SOMEWHAT OPPOSE .....3 STRONGLY OPPOSE .....4 DON'T KNOW/NOT SURE .....8 REFUSED.....9
I4.	Se debería permitir a todas las tiendas que aceptan CalFresh o estampillas de comida que ofrezcan a sus clientes de CalFresh especiales a precios más bajos específicamente para alimentos saludables como frutas y verduras. ¿Estaría usted a favor o en contra de esto? ¿Mucho o algo?	STRONGLY FAVOR .....1 SOMEWHAT FAVOR .....2 SOMEWHAT OPPOSE .....3 STRONGLY OPPOSE .....4 DON'T KNOW/NOT SURE .....8 REFUSED.....9
I5.	Se debería exigir a las escuelas que abran al público los gimnasios, campos de juego, pistas y otras instalaciones recreativas después del horario escolar y los fines de semana. ¿Estaría usted a favor o en contra de esto? ¿Mucho o algo?	STRONGLY FAVOR .....1 SOMEWHAT FAVOR .....2 SOMEWHAT OPPOSE .....3 STRONGLY OPPOSE .....4 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Por último, algunas preguntas acerca de usted….

J1a. ¿Cuántos años tiene?

RECORD AGE: _____ **SKIP TO J2**

ASK J1b REFUSED 9

IF REFUSED, ASK:

J1b.	No necesitamos saber exactamente, pero se encuentra usted entre las edades de… (**READ CATEGORIES**)?	18–24 ..... 1 25–29 ..... 2 30–39 ..... 3 40–49 ..... 4 50–55 ..... 5 REFUSED 9

J2. ¿Cuál es el último año de escuela que ha completado o para el cual recibió crédito? (**IF 4 YEARS OF COLLEGE, ASK:**) ¿Se graduó y recibió su título de la universidad?

LESS THAN HIGH SCHOOL 1
HIGH SCHOOL GRADUATE/GED 2
SOME COLLEGE 3
COLLEGE GRADUATE (BA/BS/MASTER'S/PH.D.) ... 4
DON'T KNOW 8
REFUSED 9

J3a. Aparte del español, ¿habla bien algún otro idioma?

ASK J3b YES, ENGLISH 1
YES, OTHER LANGUAGE 2
NO 3
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO J4

IF YES, ASK:

J3b.	¿Cuál/es idioma/s normalmente se habla/n en su casa? (**READ LIST**) (**SELECT ONE ANSWER**)	Inglés solamente ..... 1 Más inglés que español ..... 2 Ambos idiomas de manera igual ..... 3 Más español que inglés ..... 4 Español solamente ..... 5 **DO NOT READ →** REFUSED 9

J4. ¿Tiene acceso a la Internet, ya sea en su casa o en otro lugar, por lo menos una vez a la semana?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

J5a. ¿Tiene un celular con acceso a la Internet para sus correos electrónicos y acceso a la Web?

ASK J5b YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO J6

IF J5a = YES, ASK:

J5b.	¿Actualmente usa el teléfono para sus correos electrónicos y acceso a la Web?	YES ..... 1 NO ..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED 9

J6. ¿En algún momento ha creado su propio perfil en línea que otras personas puedan ver, como por ejemplo en un sitio de enlace social como MySpace, Facebook o LinkedIn.com?

ASK J7

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

SKIP TO J9

IF J6 = YES, ASK:

J7.	¿Con qué frecuencia visita el sitio donde tiene un perfil? (**READ LIST**) (**IF THEY HAVE A PROFILE ON MULTIPLE SITES, ASK THEM TO ANSWER IN TERMS OF SITE THEY VISIT MOST OFTEN**)	Varias veces al día.....1 una vez al día.....2 cada pocos días.....3 una vez por semana .....4 con menos frecuencia.....5 **DO NOT READ** { DON'T KNOW/NOT SURE .....8 REFUSED.....9
J8.	¿De qué manera se conecta normalmente con su perfil en el sitio de enlace social? (**READ LIST**) (**SELECT ONE ANSWER**)	Computadora en casa .....1 Computadora en la escuela .....2 Computadora en el trabajo.....3 Computadora en la biblioteca.....4 Teléfono celular o dispositivo móvil.....5 Otro *(SPECIFY)* _____ .....6 **DO NOT READ** { DON'T KNOW/NOT SURE .....8 REFUSED.....9

J9.	¿Más o menos cuánto pesa sin zapatos? (**ENTER WEIGHT IN WHOLE POUNDS OR KILOGRAMS; ROUND FRACTIONS UP**) (**VERIFY IF LESS THAN 80 POUNDS/36 KILOGRAMS OR MORE THAN 350 POUNDS/159 KILOGRAMS**)	_____ POUNDS _____ KILOGRAMS DON'T KNOW/NOT SURE ..... 899 REFUSED..... 999
J10.	¿Más o menos cuál es su estatura sin zapatos? (**ENTER HEIGHT IN FEET/INCHES OR CENTIMETERS; EXAMPLE: 5 FEET 11 INCHES = 511**) (**ROUND FRACTIONS DOWN**) (**VERIFY IF LESS THAN 4'08"/142CM OR GREATER THAN 6'08"/203CM**)	_____ FEET/INCHES _____ CENTIMETERS DON'T KNOW/NOT SURE ..... 899 REFUSED..... 999
J11.	¿Cuál es su actual código postal?	[ ][ ][ ][ ][ ] ZIP CODE DON'T KNOW..... 89999 REFUSED..... 99999
J12.	¿Alguno de sus hijos de edad escolar recibe comidas escolares gratuitas o a precio reducido?	YES.....1 NO .....2 NO, CHILDREN ARE NOT IN SCHOOL .....3 DON'T KNOW/NOT SURE .....8 REFUSED.....9
J13.	¿Tiene algún hijo menor de 5 años?	YES.....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

J14.	¿Ha usado el programa WIC en los últimos 12 meses? (**IF NECESSARY, SAY:** WIC es un programa de nutrición suplementaria para mujeres, bebés y niños.)	YES.....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Ésas son todas mis preguntas. Muchísimas gracias por ayudar en esta importante encuesta.

Verification Information (**Ask Respondent**)

MALL ID: _____

V1. [V1] ¿Me podría decir por favor cuál es su número de teléfono? Un supervisor la llamará en unos dos días para verificar que usted participó en esta entrevista y que recibió los $15. Aparte de esto, nadie se comunicará con usted.

[a] a. ¿Su número de teléfono? *HOME* (*NO PAGERS*) (_____) _____
AREA CODE

CELL (_____) _____
AREA CODE

[b] b. ¿Y su nombre por favor? (*RESPONDENT'S NAME*) _____
FIRST NAME *LAST NAME*

[c] c. ¿Y la ciudad y el estado donde vive? _____
CITY *STATE*

[d] d. Firma de la persona que responde: _____
(*RESPONDENT'S SIGNATURE*)

[e] e. Esas son todas las preguntas. Muchísimas gracias.

REVIEW SCREENER AND QUESTIONNAIRE FOR COMPLETENESS ..... ❑

GIVE RESPONDENT $15 COOPERATION FEE AND ASK RESPONDENT TO SIGN RECEIPT ..... ❑

V2. [V2] *RECORD DATE OF INTERVIEW:* *DATE* _____

V3. [V3] *ATTACH SCREENER TO* ***BACK*** *OF QUESTIONNAIRE* ..... ❑

V4. [V4] *INTERVIEWER ID #*_____

V5. [V5] Por la presente certifico que la información que contiene este cuestionario es un reflejo fiel y exacto de los comentarios de la persona que respondió, tal como recibí la contestación.

_____ _____
INTERVIEWER SIGNATURE *DATE*

V6. [V7]
_____ _____
SUPERVISOR SIGNATURE *DATE*

Field Research Corporation 533-035
San Francisco, CA 10/18/2011

2011 Benchmark Survey
~ Screener – CalFresh/Food Stamp Moms ~

[**INSERT GEO CODE FROM SAMPLE**]

INTRODUCTION

Hello, my name is _____and I'm calling on behalf of the California Department of Public Health and the Public Health Institute. We are conducting an important survey among parents to help the Department of Public Health improve programs and services for families with children throughout the State.
(**PROGRAMMER: IF REPEATING INTRO, ALSO SHOW:** For this survey, we are interested in speaking to mothers or female guardians ages 18 to 54 who have children under the age of 18.)

All your responses will be kept completely confidential, and used only for statistical purposes.

CONTINUE 1
LANGUAGE BARRIER 2
RETURN TO CONTACT SCREEN 3
HANG UP DURING INTRO..... 4

S1. We are trying to get a balanced group of parents throughout the State. For this survey, we are interested in speaking to mothers or female guardians of children under the age of 18. Are there any children under 18 living in this household?

YES..... 1 (**CONTINUE TO S2**)
NO ..... 2 (**TERMINATE**)
DON'T KNOW ..... DK (**ASK TO SPEAK TO SOMEONE WHO MAY KNOW THE ANSWER, ARRANGE CALLBACK IF NECESSARY**)
REFUSED ..... REF (**TERMINATE**)

S2. May I speak to (the)(another) 18 to 54-year old mother or female guardian of children under 18?
(**IF NEEDED:** Would that be you or someone else?)

SPEAKING TO MOTHER/GUARDIAN AGE 18-54..... 1 (**CONTINUE TO S3**)
MOTHER/GUARDIAN AGE 18-54 COMES TO PHONE..... 2 (**REPEAT INTRO, THEN CONTINUE TO S3**)
MOTHER/GUARDIAN 18-54 IS NOT AVAILABLE..... 3 (**ARRANGE CALLBACK**)
NO (OTHER) MOTHERS/GUARDIANS 18-54 IN HOUSEHOLD ..... 4 (**TERMINATE**)
NO ADULTS 18 OR OLDER IN HOUSEHOLD ..... 5 (**TERMINATE**)
LANUAGE BARRIER 6
DON'T KNOW ..... DK (**ASK TO SPEAK TO SOMEONE WHO MAY KNOW THE ANSWER, ARRANGE CALLBACK IF NECESSARY**)
REFUSED ..... REF (**TERMINATE**)

S3. Just to verify, you are age 18 to 54?

YES..... 1 (**CONTINUE TO S4**)
NO .....2 (**GO TO S2 IF MORE THAN ONE FEMALE IN HH)**

S4. Have you received CalFresh benefits, Food Stamps, or EBT at any time during the last 6 months?

YES ..... 1 (**CONTINUE TO S5**)
NO ..... 2 (**GO TO S2 IF MORE THAN ONE FEMALE IN HH, OTHERWISE TERMINATE**)
DON'T KNOW ..... DK (**GO TO S2 IF MORE THAN ONE FEMALE IN HH, OTHERWISE TERMINATE**)
REFUSED ..... REF (**TERMINATE**)

S5. Would you feel more comfortable doing the interview in English or Spanish?

ENGLISH ..... 1 (**CONTINUE**)
SPANISH ..... 2 (**SCHEDULE SPANISH CALLBACK**)
OTHER ..... 2 (**CODE AS LANGUAGE BARRIER**)

S6. To make sure we are interviewing a balanced group of Californians, I need to find out whether you are of Latino or Hispanic origin? (**IF NEEDED:**) such as Mexican- American, Latin American, South American, or Spanish-American?

YES, HISPANIC 1
NO, NON-HISPANIC 2
DON'T KNOW/NOT SURE 8
REFUSED 9

S7. For classification purposes, we'd like to know what your racial background is. Are you White, Black or African American, Asian, Pacific-Islander, American Indian or an Alaskan Native, a member of another race or a combination of races? (**ALLOW MULTIPLE ANSWERS**)

WHITE 1
BLACK/AFRICAN-AMERICAN 2
ASIAN 3
PACIFIC ISLANDER 4
AMERICAN INDIAN/ALASKAN NATIVE 5
HISPANIC/LATINO (VOLUNTEER ONLY) 6
OTHER RACE/ETHNICITY (_____) 7
(*SPECIFY*)
DON'T KNOW ..... DK
REFUSED ..... REF

INFORMED CONSENT SCRIPT

S8. Before I continue, I would like to remind you that everything you say is completely confidential. Your participation is totally voluntary. There will be no harmful effect on any public benefits you may receive if you decide not to participate or answer any of the questions. This is a research study being sponsored by the California Department of Public Health and the Public Health Institute. The purpose of the study is to improve programs and services for children and adults in California. If you have any questions about the survey, you may contact our survey supervisor, Kevin Howard, for additional information on our research. (1-800-234-0340).

This call may be monitored by my supervisor to ensure quality and courtesy.

S9. Would you like to participate in an interview?

YES ..... 1 (**VERBAL CONSENT GIVEN**)
NO, CALLBACK ..... 2 (**CALLBACK**)
NO ..... 3 (**THANK AND TERMINATE**)
DON'T KNOW ..... DK (**CALLBACK**)
REFUSED ..... REF (**CODE AS SOFT OR HARD REFUSAL**)

Field Research Corporation
San Francisco, CA

533-035
10/21/2011
Spanish

2011 Benchmark Survey
~ Screener – CalFresh/Food Stamp Moms ~

[**INSERT GEO CODE FROM SAMPLE**]

INTRODUCTION

Hola, mi nombre es _____ y llamo en representación del Departamento de Salud Pública de California y el Instituto de Salud Pública. Estamos realizando una importante encuesta entre los padres para ayudar al Departamento de Salud Pública de California a mejorar los programas y servicios para las familias que tienen hijos, en todo el estado.
(**PROGRAMMER: IF REPEATING INTRO, ALSO SHOW:** Para esta encuesta, nos interesa hablar con las madres o tutoras legales, entre los 18 y 54 años de edad, que tengan hijos menores de 18 años.)

Todas sus respuestas serán totalmente confidenciales y se usarán sólo con fines estadísticos.

CONTINUE 1
LANGUAGE BARRIER 2
RETURN TO CONTACT SCREEN 3
HANG UP DURING INTRO..... 4

S1. Estamos tratando de obtener un muestreo balanceado de padres en todo el estado. Para esta encuesta, nos interesa hablar con las madres o tutoras legales que tengan hijos menores de 18 años. ¿Hay algún niño menor de 18 años que viva en esta casa?

YES..... 1 (**CONTINUE TO S2**)
NO ..... 2 (**TERMINATE**)
DON'T KNOW ..... DK (**ASK TO SPEAK TO SOMEONE WHO MAY KNOW THE ANSWER, ARRANGE CALLBACK IF NECESSARY**)
REFUSED ..... REF (**TERMINATE**)

S2. ¿Puedo hablar con (la) (la otra) madre o tutora legal, entre los 18 y 54 años de edad, de niños menores de 18 años? (**IF NEEDED:** ¿Es usted u otra persona?)

SPEAKING TO MOTHER/GUARDIAN AGE 18-54..... 1 (**CONTINUE TO S3**)
MOTHER/GUARDIAN AGE 18-54 COMES TO PHONE..... 2 (**REPEAT INTRO, THEN CONTINUE TO S3**)
MOTHER/GUARDIAN 18-54 IS NOT AVAILABLE..... 3 (**ARRANGE CALLBACK**)
NO (OTHER) MOTHERS/GUARDIANS 18-54 IN HOUSEHOLD ..... 4 (**TERMINATE**)
NO ADULTS 18 OR OLDER IN HOUSEHOLD ..... 5 (**TERMINATE**)
LANUAGE BARRIER 6
DON'T KNOW ..... DK (**ASK TO SPEAK TO SOMEONE WHO MAY KNOW THE ANSWER, ARRANGE CALLBACK IF NECESSARY**)
REFUSED ..... REF (**TERMINATE**)

S3. ¿Simplemente para verificar, ¿usted tiene entre 18 y 54 años de edad?

YES..... 1 (**CONTINUE TO S4**)
NO .....2 (**GO TO S2 IF MORE THAN ONE FEMALE IN HH)**

S4. ¿Ha recibido beneficios de CalFresh, Estampillas de alimentos o EBT en algún momento durante los últimos 6 meses?

YES ..... 1 (**CONTINUE TO S5**)
NO ..... 2 (**GO TO S2 IF MORE THAN ONE FEMALE IN HH, OTHERWISE TERMINATE**)
DON'T KNOW ..... DK (**GO TO S2 IF MORE THAN ONE FEMALE IN HH, OTHERWISE TERMINATE**)
REFUSED ..... REF (**TERMINATE**)

S5. ¿Se sentiría más cómoda haciendo la entrevista en inglés o en español?

ENGLISH ..... 1 (**CONTINUE**)
SPANISH ..... 2 (**SCHEDULE SPANISH CALLBACK**)
OTHER ..... 2 (**CODE AS LANGUAGE BARRIER**)

S6. Para asegurarnos de estar entrevistando a una sección representativa de californianos, necesito averiguar si ¿es usted de origen latino o hispano? (**IF NEEDED:**) como méxico-americano, latinoamericano, sudamericano o hispano-americano?

YES, HISPANIC 1
NO, NON-HISPANIC 2
DON'T KNOW/NOT SURE 8
REFUSED 9

S7. Con fines de clasificación, nos gustaría saber cuál es su antecedente racial. ¿Es usted de raza blanca, negra o afro-americana, asiática, nativo de las islas del Pacífico, indio americano, nativo de Alaska, pertenece a otra raza o a una combinación de éstas? (**ALLOW MULTIPLE ANSWERS**)

WHITE 1
BLACK/AFRICAN-AMERICAN 2
ASIAN 3
PACIFIC ISLANDER 4
AMERICAN INDIAN/ALASKAN NATIVE 5
HISPANIC/LATINO (VOLUNTEER ONLY) 6
OTHER RACE/ETHNICITY (_____) 7
(*SPECIFY*)
DON'T KNOW ..... DK
REFUSED ..... REF

INFORMED CONSENT SCRIPT

S8. Antes de continuar, quisiera recordarle que todo lo que diga será completamente confidencial. Su participación es totalmente voluntaria. No habrá consecuencias negativas sobre los beneficios públicos que usted recibe si decide no participar o no contestar alguna de las preguntas. Éste es un estudio de investigación patrocinado por el Departamento de Salud Pública de California y el Instituto de Salud Pública. El propósito del estudio es mejorar los programas y servicios para los niños y adultos de California. Si tiene alguna pregunta acerca de la encuesta, puede contactar a Kevin Howard para obtener más información acerca de nuestra investigación al número (1-800-234-0340).

Antes de comenzar, debo decirle que esta llamada puede ser controlada por mi supervisor con fines de asegurar la calidad y cortesía.

S9. ¿Desea participar en la encuesta?

YES ..... 1 (**VERBAL CONSENT GIVEN**)
NO, CALLBACK ..... 2 (**CALLBACK**)
NO ..... 3 (**THANK AND TERMINATE**)
DON'T KNOW ..... DK (**CALLBACK**)
REFUSED ..... REF (**CODE AS SOFT OR HARD REFUSAL**)

Field Research Corporation 533-035
San Francisco, CA 10/18/2011

2011 Benchmark Survey
~ Screener – General Population/Higher Income Moms ~

[**INSERT GEO CODE FROM SAMPLE**]

INTRODUCTION

Hello, my name is _____and I'm calling on behalf of the California Department of Public Health and the Public Health Institute. We are conducting an important survey among parents to help the Department of Public Health improve programs and services for families with children throughout the State.
(**PROGRAMMER: IF REPEATING INTRO, ALSO SHOW:** For this survey, we are interested in speaking to mothers or female guardians ages 18 to 54 who have children under the age of 18.)

All your responses will be kept completely confidential, and used only for statistical purposes.

CONTINUE 1
LANGUAGE BARRIER 2
RETURN TO CONTACT SCREEN 3
HANG UP DURING INTRO..... 4

S1. We are trying to get a balanced group of parents throughout the State. For this survey, we are interested in speaking to mothers or female guardians of children under the age of 18. Are there any children under 18 living in this household?

YES..... 1 (**CONTINUE TO S2**)
NO ..... 2 (**TERMINATE**)
DON'T KNOW ..... DK (**ASK TO SPEAK TO SOMEONE WHO MAY KNOW THE ANSWER, ARRANGE CALLBACK IF NECESSARY**)
REFUSED ..... REF (**TERMINATE**)

S2. May I speak to (the)(another) 18 to 54-year old mother or female guardian of children under 18?
(**IF NEEDED:** Would that be you or someone else?)

SPEAKING TO MOTHER/GUARDIAN AGE 18-54 ..... 1 (**CONTINUE TO S3**)
MOTHER/GUARDIAN AGE 18-54 COMES TO PHONE..... 2 (**REPEAT INTRO, THEN CONTINUE TO S3**)
MOTHER/GUARDIAN 18-54 IS NOT AVAILABLE..... 3 (**ARRANGE CALLBACK**)
NO MOTHERS/GUARDIANS 18-54 IN HOUSEHOLD ..... 4 (**TERMINATE**)
NO ADULTS 18 OR OLDER IN HOUSEHOLD ..... 5 (**TERMINATE**)
LANUAGE BARRIER 6
DON'T KNOW ..... DK (**ASK TO SPEAK TO SOMEONE WHO MAY KNOW THE ANSWER, ARRANGE CALLBACK IF NECESSARY**)
REFUSED ..... REF (**TERMINATE**)

S3. How many members are there in your household, including both adults and children?

MEMBERS IN HH: _____ (**RECORD NUMBER**)

S4. Because we are interviewing a balanced group, we are also interested in knowing if your total annual household income is above or below a certain amount. We do not need to know the exact amount. Is your household income greater than or less than (**INSERT 185% FPL CUTOFF**)?

GREATER THAN 185% FPL..... 1 (**CONTINUE TO S5**)
LESS THAN 185% FPL ..... 2 (**THANK AND TERMINATE**)
DON'T KNOW ..... 3 (**THANK AND TERMINATE**)
REFUSED ..... 4 (**THANK AND TERMINATE**)

S5. Just to verify, you are age 18 to 54?

YES ..... 1 (**CONTINUE TO S6**)
NO ..... 2 (**GO TO S2**)

S6. Would you feel more comfortable doing the interview in English or Spanish?

ENGLISH ..... 1 (**CONTINUE**)
SPANISH ..... 2 (**SCHEDULE SPANISH CALLBACK**)
OTHER ..... 3 (**CODE AS LANGUAGE BARRIER**)

S7. To make sure we are interviewing a balanced group of Californians, I need to find out whether you are of Latino or Hispanic origin? (**IF NEEDED:**) such as Mexican- American, Latin American, South American, or Spanish-American?

YES, HISPANIC 1
NO, NON-HISPANIC 2
DON'T KNOW/NOT SURE 8
REFUSED 9

S8. For classification purposes, we'd like to know what your racial background is. Are you White, Black or African American, Asian, Pacific-Islander, American Indian or an Alaskan Native, a member of another race or a combination of races? (**ALLOW MULTIPLE ANSWERS**)

WHITE 1
BLACK/AFRICAN-AMERICAN 2
ASIAN 3
PACIFIC ISLANDER 4
AMERICAN INDIAN/ALASKAN NATIVE 5
HISPANIC/LATINO (VOLUNTEER ONLY) 6
OTHER RACE/ETHNICITY (_____) 7
(*SPECIFY*)

INFORMED CONSENT SCRIPT

S9. Before I continue, I would like to remind you that everything you say is completely confidential. Your participation is totally voluntary. There will be no harmful effect on any public benefits you may receive if you decide not to participate or answer any of the questions. This is a research study being sponsored by the California Department of Public Health and the Public Health Institute. The purpose of the study is to improve programs and services for children and adults in California. If you have any questions about the survey, you may contact our survey supervisor, Kevin Howard, for additional information on our research. (1-800-234-0340).

This call may be monitored by my supervisor to ensure quality and courtesy.

S10. Would you like to participate in an interview?

YES ..... 1 (**VERBAL CONSENT GIVEN**)
NO, CALLBACK ..... 2 (**CALLBACK**)
NO ..... 3 (**THANK AND TERMINATE**)
DON'T KNOW ..... DK (**CALLBACK**)
REFUSED ..... REF (**CODE AS SOFT OR HARD REFUSAL**)

Field Research Corporation
San Francisco, CA

533-035
10/21/2011
Spanish

2011 Benchmark Survey
~ Screener – General Population/Higher Income Moms ~

[**INSERT GEO CODE FROM SAMPLE**]

INTRODUCTION

Hola, mi nombre es _____ y llamo en representación del Departamento de Salud Pública de California y el Instituto de Salud Pública. Estamos realizando una importante encuesta entre los padres para ayudar al Departamento de Salud Pública de California a mejorar los programas y servicios para las familias que tienen hijos en todo el estado.
(**PROGRAMMER: IF REPEATING INTRO, ALSO SHOW:** Para esta encuesta, nos interesa hablar con las madres o tutoras legales, entre los 18 y 54 años de edad, que tengan hijos menores de 18 años.)

Todas sus respuestas serán totalmente confidenciales y se usarán sólo con fines estadísticos.

CONTINUE 1
LANGUAGE BARRIER 2
RETURN TO CONTACT SCREEN 3
HANG UP DURING INTRO..... 4

S1. Estamos tratando de obtener un muestreo balanceado de padres en todo el estado. Para esta encuesta, nos interesa hablar con las madres o tutoras legales que tengan hijos menores de 18 años. ¿Hay algún niño menor de 18 años que viva en esta casa?

YES..... 1 (**CONTINUE TO S2**)
NO ..... 2 (**TERMINATE**)
DON'T KNOW ..... DK (**ASK TO SPEAK TO SOMEONE WHO MAY KNOW THE ANSWER, ARRANGE CALLBACK IF NECESSARY**)
REFUSED ..... REF (**TERMINATE**)

S2. ¿Puedo hablar con (la) (la otra) madre o tutora legal, entre los 18 y 54 años de edad, de niños menores de 18 años? (**IF NEEDED:** ¿Es usted u otra persona?)

SPEAKING TO MOTHER/GUARDIAN AGE 18-54..... 1 (**CONTINUE TO S3**)
MOTHER/GUARDIAN AGE 18-54 COMES TO PHONE..... 2 (**REPEAT INTRO, THEN CONTINUE TO S3**)
MOTHER/GUARDIAN 18-54 IS NOT AVAILABLE..... 3 (**ARRANGE CALLBACK**)
NO (OTHER) MOTHERS/GUARDIANS 18-54 IN HOUSEHOLD ..... 4 (**TERMINATE**)
NO ADULTS 18 OR OLDER IN HOUSEHOLD ..... 5 (**TERMINATE**)
LANUAGE BARRIER 6
DON'T KNOW ..... DK (**ASK TO SPEAK TO SOMEONE WHO MAY KNOW THE ANSWER, ARRANGE CALLBACK IF NECESSARY**)
REFUSED ..... REF (**TERMINATE**)

S3. ¿Cuántas personas forman su núcleo familiar, incluidos los adultos y los niños?

MEMBERS IN HH: _____ (**RECORD NUMBER**)

S4. Puesto que estamos entrevistando a un grupo homogéneo, también nos interesa saber si los ingresos totales de su núcleo familiar están por encima o por debajo de una cierta cantidad. No necesitamos saber la cantidad exacta. ¿Son sus ingresos familiares superiores o inferiores a (**INSERT 185% FPL CUTOFF**)?

GREATER THAN 185% FPL..... 1 (**CONTINUE TO S5**)
LESS THAN 185% FPL ..... 2 (**THANK AND TERMINATE**)
DON'T KNOW ..... 3 (**THANK AND TERMINATE**)
REFUSED ..... 4 (**THANK AND TERMINATE**)

S5. ¿Simplemente para verificar, ¿usted tiene entre 18 y 54 años de edad?

YES ..... 1 (**CONTINUE TO S6**)
NO ..... 2 (**GO TO S2**)

S6. ¿Se sentiría más cómoda haciendo la entrevista en inglés o en español?

ENGLISH ..... 1 (**CONTINUE**)
SPANISH ..... 2 (**SCHEDULE SPANISH CALLBACK**)
OTHER ..... 3 (**CODE AS LANGUAGE BARRIER**)

S7. Para asegurarnos de estar entrevistando a una sección representativa de californianos, necesito averiguar si ¿es usted de origen latino o hispano? (**IF NEEDED:**) como méxico-americano, latinoamericano, sudamericano o hispano-americano?

YES, HISPANIC 1
NO, NON-HISPANIC 2
DON'T KNOW/NOT SURE 8
REFUSED 9

S8. Con fines de clasificación, nos gustaría saber cuál es su antecedente racial. ¿Es usted de raza blanca, negra o afro-americana, asiática, nativo de las islas del Pacífico, indio americano, nativo de Alaska, pertenece a otra raza o a una combinación de éstas? (**ALLOW MULTIPLE ANSWERS**)

WHITE 1
BLACK/AFRICAN-AMERICAN 2
ASIAN 3
PACIFIC ISLANDER 4
AMERICAN INDIAN/ALASKAN NATIVE 5
HISPANIC/LATINO (VOLUNTEER ONLY) 6
OTHER RACE/ETHNICITY (_____) 7
(*SPECIFY*)

INFORMED CONSENT SCRIPT

S9. Antes de continuar, quisiera recordarle que todo lo que diga será completamente confidencial. Su participación es totalmente voluntaria. No habrá consecuencias negativas sobre los beneficios públicos que usted recibe si decide no participar o no contestar alguna de las preguntas. Éste es un estudio de investigación patrocinado por el Departamento de Salud Pública de California y el Instituto de Salud Pública. El propósito del estudio es mejorar los programas y servicios para los niños y adultos de California. Si tiene alguna pregunta acerca de la encuesta, puede contactar a Kevin Howard para obtener más información acerca de nuestra investigación al número (1-800-234-0340).

Antes de comenzar, debo decirle que esta llamada puede ser controlada por mi supervisor con fines de asegurar la calidad y cortesía.

S10. ¿Desea participar en la encuesta?

YES ..... 1 (**VERBAL CONSENT GIVEN**)
NO, CALLBACK ..... 2 (**CALLBACK**)
NO ..... 3 (**THANK AND TERMINATE**)
DON'T KNOW ..... DK (**CALLBACK**)
REFUSED ..... REF (**CODE AS SOFT OR HARD REFUSAL**)

Interviewer # _____ Respondent # _____ Date: _____

Field Research Corporation 533-035
San Francisco, CA 10/18/2011

2011 Benchmark Survey
~ Questionnaire – Low-Income Mothers ~

A1. I'm going to describe some TV ads to you. These TV ads show parents and children doing healthy things together, like playing actively in their living room, spending time together in the kitchen, preparing fruits and vegetables or sharing a healthy meal at a table in the backyard. Please tell me if you remember ever seeing them. (**READ ITEM, THEN ASK:**) Have you seen or not seen these ads? (**ROTATE LIST**)

	YES	NO	DK	REF	(VOL. ONLY) DON'T WATCH TV
( ) a. [How about] A TV ad where moms and dads are talking about how getting their kids to eat more fruits and vegetables is hard, but finding out that one of them has type 2 diabetes would be a lot harder; and how saying no to their kids when they want afternoon sweets is hard, but watching their child struggle with obesity would be a lot harder. The spot ends with a mom and a dad who say, "Realizing it was time for a change, now that wasn't very hard at all." Have you seen or not seen this TV ad?	1	2	8	9	10
( ) b. [How about] A TV ad where moms and dads are talking about how saying no to their kids when they want to load up on greasy foods is hard, but seeing their kids get teased about their weight would be even harder; and how asking the local store to carry more fruits and vegetables can be hard, but finding out one of her kids has type 2 diabetes would be a lot harder. The spot ends with two moms who say, "Realizing it was time for a change, now that wasn't very hard at all." Have you seen or not seen this TV ad?	1	2	8	9	10
( ) c. [How about] A TV ad that shows several parents talking about the problem of vending machines in their children's schools. One dad mentions that he worked with his parents' group and got vending machines banned from his daughter's school. At the end, one of the dads asks, "What are you doing in your local schools?" Have you seen or not seen this TV ad?	1	2	8	9	10

B1. Now, I'm going to describe some ads you may have seen outside on billboards, lunch trucks or other posters. Please tell me if you remember ever seeing them. (**READ ITEM**) Have you seen or not seen these ads? (**ROTATE LIST**)

( ) a. [How about] a sign that says "Our Community. Our Rules. Rule #4 Stand up for healthy changes" with a picture of two women smiling looking directly at you, one with her arms crossed?

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

( ) b. [How about] a sign that says "My Shopping Cart. My Rules. Rule #5 Buy more fruits and vegetables" with a picture of a woman smiling looking directly at you.

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

( ) c. [How about] a sign that says "My Budget. My Rules. Rule #6 Eat right when money's tight" with a picture of a smiling woman with her arms crossed looking directly at you.

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

B2a. Have you seen any flyers, billboards or other materials encouraging you to drink less sugary drinks and more water?

ASK B2b

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO B3

B2b. Have you seen any flyers, billboards or other materials asking you to "ReThink Your Drink"?

ASK B2c

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO B3

B2c. Please describe where you saw or heard this message. (**RECORD RESPONDENT'S EXACT WORDS**) (**PROBE FOR SPECIFICS & DETAILS AND ALLOW MULTIPLE RESPONSES**)

B3. Have you ever heard or read anything about a group called the *Network for a Healthy California*, the Champions for Change?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

B4. Have you ever visited the Champions for Change website, the website for the *Network for a Healthy California*?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

C1. Next, please tell me if you agree or disagree with the following statements. (**READ LIST**) Do you agree or disagree? (**THEN ASK:**) Is this strongly or somewhat?

( ) a. Eating fruit and vegetables does not reduce your risk of getting diseases like type 2 diabetes, cancer or heart disease.

STRONGLY AGREE 1
SOMEWHAT AGREE 2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE 5
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. Being physically active will help reduce your risk of getting diseases like diabetes, cancer or heart disease.

STRONGLY AGREE 1
SOMEWHAT AGREE 2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE 5
DON'T KNOW/NOT SURE.....8
REFUSED.....9

C2. According to national guidelines, how much of your plate should be filled with fruit and vegetables at meals? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS RESPONSE IS ONE HALF OR DON'T KNOW.**)

_____
(**RECORD AMOUNT OF PLATE FILLED**)
ONE-HALF..... 5
DON'T KNOW/NOT SURE 89
REFUSED..... 99

C3a. Are you aware of any government websites where you can get information on how much fruit and vegetables to eat?

YES 1
NO..... 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

IF YES, ASK:

C3b. What is the name of that website or websites? (**RECORD EXACT WORDS**) (**PROBE FOR SPECIFIC NAME**) (**PROBE FOR MULTIPLE RESPONSES; ACCEPT UP TO THREE**)

C3c. Have you ever heard or read anything about a website called "choosemyplate.gov?"

YES 1
NO..... 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

These next questions are about the foods you usually eat or drink. Please tell me how often you eat or drink these items, for example, three times a day, twice a week, three times a month, and so forth. Remember, I am only interested in the foods you eat. Include all foods you eat, both at home and away from home.

(**FILL IN ONE BLANK OR CIRCLE ONE NUMBER**)

D1. How often do you drink 100% pure fruit juices? Do not include fruit flavored drinks with added sugar or fruit juice you make at home and add sugar to. Only include 100% juice. (**100% JUICE BLENDS SUCH AS ORANGE-PINEAPPLE OR CRANBERRY-GRAPE ARE OK AS ARE FRUIT-VEGETABLE 100% BLENDS. 100% PURE JUICE FROM CONCENTRATE IS ALSO OK.**) (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D2. Not counting juice, how often do you eat fruit? Count fresh, frozen, canned and dried fruit. (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D3. How often do you eat green salad? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D4. How often do you eat potatoes not including French fries, fried potatoes, or potato chips? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D5. How often do you eat carrots? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D6. Not counting carrots, potatoes, or green salad, how often to you eat other vegetables? Examples include tomatoes, tomato or V8 juice, corn, eggplant, peas, lettuce and cabbage.
(**DO NOT COUNT VEGETABLES ALREADY COUNTED**)
(**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D7. Compared to one year ago, are you eating more fruit, less, or about the same?

MORE 1
LESS 2
ABOUT SAME 3
DON'T KNOW/NOT SURE 8
REFUSED 9

D8. Compared to one year ago, are you eating more vegetables, less, or about the same?

MORE 1
LESS 2
ABOUT SAME 3
DON'T KNOW/NOT SURE 8
REFUSED 9

D9. How often is one-half of your plate filled with fruit and vegetables at meals? (**READ CATEGORIES**)

EVERY MEAL 1
MOST MEALS 2
SOME MEALS 3
HARDLY ANY MEALS 4
NEVER 5
DO NOT READ { DON'T KNOW/NOT SURE 89
REFUSED 99

D10. Compared to one year ago, are you eating more, less, or about the same amount of food at meals or other times during the day?

MORE 1
LESS 2
ABOUT SAME 3
DON'T KNOW/NOT SURE 8
REFUSED 9

The next questions are about eating out at fast food or chain restaurants.

D11a. Do you typically read calorie information for menu items when it is available at fast food or chain restaurants?

YES 1
NO 2
(VOLUNTEERED ONLY:)
NEVER NOTICED/NEVER LOOKED FOR IT 3
USUALLY CANNOT FIND IT 4
NEVER GO TO FAST FOOD OR CHAIN RESTAURANTS ..... 5 → **Skip to D13**
DON'T KNOW/NOT SURE 8
REFUSED 9

IF YES, ASK:

D11b. How often do the amount of calories on the menu help you decide what to order at fast food or chain restaurants? (**READ CATEGORIES**)

ALWAYS 1
MOST OF THE TIME 2
ABOUT HALF THE TIME 3
SOMETIMES 4
NEVER 2
DO NOT READ { DON'T KNOW/NOT SURE 8
REFUSED 9

D12a. When eating out at fast food or chain restaurants, how often do you look for fresh fruit or vegetables as a main part of the meal? (**READ CATEGORIES**)

ALWAYS	1
MOST OF THE TIME	2
ABOUT HALF THE TIME	3
SOMETIMES	4
NEVER	5
DO NOT READ DON'T KNOW/NOT SURE	89
DO NOT READ REFUSED	99

IF D12a ≠ NEVER, ASK:

D12b. How often does the price keep you from ordering the fresh fruit and vegetables when they are available at fast food or chain restaurants? (**READ CATEGORIES**)

ALWAYS	1
MOST OF THE TIME	2
ABOUT HALF THE TIME	3
SOMETIMES	4
NEVER	2
DO NOT READ DON'T KNOW/NOT SURE	8
DO NOT READ REFUSED	9

Fruit and Vegetable Consumption – Self Efficacy

D13. These next statements are about eating fruit and vegetables, even when things may make it hard to. For each, please tell me how sure you are that you can do it, on a scale of 1 to 5, with 1 being not at all sure and 5 being extremely sure. If you fall somewhere in between, pick 2, 3, or 4. (**READ LIST THEN SAY, IF NECESSARY:**) On a scale of 1 to 5. 1 being not at all sure and 5 being extremely sure, (**ROTATE LIST**).

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. How sure are you that you could eat fruit or vegetables when in a hurry?	1	2	3	4	5	8
( ) b. How sure are you that you could eat fruit or vegetables as part of your lunch on most days?	1	2	3	4	5	8
( ) c. How sure are you that you could eat fruit or vegetables when feeling tired?	1	2	3	4	5	8
( ) d. How sure are you that you could eat fruit or vegetables when eating away from home?	1	2	3	4	5	8
( ) e. How sure are you that you could eat fruit or vegetables for dinner on most days?	1	2	3	4	5	8
( ) f. How sure are you that you could have an extra serving of vegetables at dinner?	1	2	3	4	5	8
( ) g. How sure are you that you could eat a meal with half your plate full of fruit and vegetables most days?	1	2	3	4	5	8
( ) h. How sure are you that you could order at least one vegetable dish at a restaurant?	1	2	3	4	5	8
( ) i. How sure are you that you could eat other fruit or vegetables when your favorites are not available?	1	2	3	4	5	8

The next few questions are about your work time, including work you do around the house.

E1. Thinking about what you normally do during a typical work day, not counting your free time, which best describes your activity: Would you say that you sit most of the day, stand most of the day, or walk around a lot? (**GET ONE RESPONSE ONLY**) (**IF NECESSARY, ASK:** What do you do most often during a typical day? (**IF RESPONDENT INSISTS ON MULTIPLE RESPONSES, CIRCLE MULTIPLE RESPONSES**).

SIT 1
STAND 2
WALK AROUND 3
LAYS DOWN MOST OF THE TIME ***(VOL ONLY)***.....4
DON'T KNOW.....8
REFUSED.....9

E2. Again, not counting what you do in your free time, in a typical work day do you usually lift or carry light loads, moderate loads or heavy loads, or do you usually not lift or carry things? (**IF NECESSARY, ASK:** Which do you do most often?)

LIGHT 1
MODERATE 2
HEAVY 3
DO NOT LIFT OR CARRY 4
DON'T KNOW/NOT SURE 8
REFUSED.....9

These next questions are about physical activity. By physical activity I mean activities that cause you to breathe harder or make your heart beat faster such as brisk walking, gardening, heavy yard work or fast dancing.

E3. According to national guidelines, how much time each day or each week should you be physically active to stay healthy? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS ONE OF THE ANSWERS AT RIGHT APPLIES.**)

_____
(**RECORD TIME**)
150 MINUTES (2 AND ½ HOURS) A WEEK..... 1
30 MINUTES A DAY, 5 DAYS A WEEK 2
20 MINUTES A DAY, 7 DAYS A WEEK 3
DON'T KNOW/NOT SURE 89
REFUSED..... 99

E4. According to national guidelines, how much time each day should your (child) (children) be physically active to stay healthy? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS ONE OF THE ANSWERS AT RIGHT APPLIES.**)

_____
(**RECORD TIME**)
60 MINUTES PER DAY 1
DON'T KNOW/NOT SURE 89
REFUSED..... 99

E5. In a usual week are there any days when you are physically active for at least 10 minutes at a time? Think of your free time only, not work time or work around the house.

ASK E6a	YES 1	
	NO 2	**SKIP TO E7**
	NO, PHYSICALLY DISABLED *(VOL. ONLY)* 3	
	DON'T KNOW/NOT SURE 8	
	REFUSED 9	

IF YES, ASK:

E6a. How many days per week do you do these activities for at least 10 minutes at a time?

ASK E6b	**(RECORD NUMBER)**: _____ DAYS PER WEEK 1	
	DID NOT DO ANY PHYSICAL ACTIVITY FOR AT LEAST 10 MINUTES AT A TIME . 2	**SKIP TO E7**
ASK E6b	DON'T KNOW/NOT SURE 8	
	REFUSED 9	

IF AT LEAST ONE DAY A WEEK OR DK OR REF, ASK:

E6b. On days when you are physically active for at least 10 minutes in your free time, how much total time per day do you usually spend doing these activities?

(RECORD # OF HOURS/MINUTES)

_____ HOURS PER DAY 1

_____ MINUTES PER DAY 2

DON'T KNOW/NOT SURE 899

REFUSED 999

Physical Activity – Self Efficacy

E7. I'm going to read you a list of things people might do to increase or continue regular physical activity. Again, by physical activity I mean activities like brisk walking, bike riding, gardening, or fast dancing. Whether you are physically active or not, please rate how confident you are that you could really motivate yourself to do things like these most days in the work week, for at least six months. How sure are you that you can… (**READ LIST**)? Would you say "I know I can", "maybe I can," or "I know I cannot?"

(**ROTATE LIST**)

( ) a. Set aside time for physical activity when undergoing a stressful life change (e.g. a divorce, death in family or moving).

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) b. Set aside time for physical activity after a long, tiring day at work.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) c. Set aside time for physical activity; that is, walking, jogging, swimming, biking, or other continuous activities for at least 2 and a half hours per week.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) d. Set aside time for physical activity when your family is demanding more time from you.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) e. Set aside time for physical activity even when you have excessive demands at work.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) f. Set aside time for physical activity when you have chores to attend to.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

F1.	Tell me again, including yourself, how many people currently live in your home?	**# OF PEOPLE: _____** DON'T KNOW/NOT SURE ..... 89 REFUSED..... 99
F2.	How many of these are children under age 18?	# **OF CHILDREN UNDER AGE 18: _____** DON'T KNOW/NOT SURE ..... 89 REFUSED..... 99
F3.	How often do you make it easy for (any of) (your) (child) (children) living in your home to eat fruit and vegetables, such as by having them washed, cut and ready to eat? Would you say not at all, less than every month, every month, every week, or every day?	NOT AT ALL.....1 LESS THAN EVERY MONTH.....2 EVERY MONTH .....3 EVERY WEEK .....4 EVERY DAY .....5 DON'T KNOW/NOT SURE .....8 REFUSED.....9 NOT APPLICABLE.....10
F4.	How often do you make it easy for (any of) (your) (child) (children) living in your home to be physically active, such as by taking them to sports practice, playing ball with them, or encouraging them to play outside or ride a bike? Would you say not at all, less than every month, every month, every week, or every day?	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F5.	About how often do you and your children do a physical activity together, such as playing ball, riding bikes, or taking a walk? Would you say not at all, less than every month, every month, every week, or every day? (**GET BEST ANSWER**)	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F6.	How often do you make it easy for (any of) (your) (child) (children) living in your home to drink water, such as by having a filled pitcher or bottles of water available? Would you say not at all, less than every month, every month, every week, or every day? (**GET BEST ANSWER**)	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F7.	Have you set limits on the amount of time that your child(ren) watch(es) television each day?	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9
F8.	Have you set limits on the amount of "unhealthy food" you have in the home for your child(ren) to snack on? (**IF NEEDED, SAY:**) By unhealthy food, I mean things like chips, candy, soda and other sugary snacks and drinks.	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9
F9.	Have you set limits on the amount of sweetened beverages you have in the home for children to drink? By sweetened beverages, I mean soda, sports drinks and sugar sweetened juice drinks.	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9

F10. Have you replaced sugary drinks with water for your family at meals or snacks?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

G1. For the next statements, please tell me how sure you are that you can do each one, on a scale of 1 to 5 where 1 is not at all sure and 5 is extremely sure. If you fall somewhere in between, pick 2, 3, or 4. How sure are you that you could: (**READ LIST**). (**IF NECESSARY, SAY:**) on a scale of 1 to 5 with 1 being not at all sure and 5 being extremely sure?

(**ROTATE LIST**)

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. Buy more fruits and vegetables even when you don't have much money?	1	2	3	4	5	8
( ) b Buy fruits and vegetables even if you have to travel further to get them?	1	2	3	4	5	8
( ) c. Get your family to eat fruits and vegetables at meals?	1	2	3	4	5	8
( ) d. Serve fruits and vegetables at meals even when feeling tired?	1	2	3	4	5	8
( ) e. Set limits on the amount of junk foods like chips, candy, and soda you have at home for the kids to snack on?	1	2	3	4	5	8
( ) f Have fruits or vegetables washed, cut and ready to eat for your family to snack on?	1	2	3	4	5	8
( ) n. Say "no" to your kids when they ask for afternoon sweets?	1	2	3	4	5	8
( ) g. Get your family to eat a dinner together at least 5 times a week?	1	2	3	4	5	8
( ) h. Take your children to the park, pool, or other places where they can be physically active even when you are busy with other responsibilities?	1	2	3	4	5	8
( ) i. Encourage your children to ride a bike or play outside even when they have other things they want to do?	1	2	3	4	5	8
( ) j. Do physical activity with your family even when you are tired after a long day at work?	1	2	3	4	5	8
( ) k. Set limits on the amount of time that your children watch TV each day even if it makes them unhappy?	1	2	3	4	5	8

(**ASK NON-CALFRESH USERS ONLY**)

( ) l. Apply for CalFresh or Food Stamps for your family even if it is something you have never considered before?	1	2	3	4	5	8

(**ASK CALFRESH USERS ONLY**)

( ) m. Remain on CalFresh or Food Stamps as long as your family needs them?	1	2	3	4	5	8

G2. For the next statements, we are interested in what you think other people you know are actually doing. For each, please tell me how many people you know… (**READ LIST**). Would you say few or none of the people you know, some people you know, most or all people you know? (**ROTATE LIST**)

( ) a. Eat enough fruit and vegetables every day ?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. Are physically active at least two and a half hours per week?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

G3. For the next statements, we are interested in what you think other mothers you know are actually doing. For each, please tell me how many mothers you know… (**READ LIST**). Would you say few or none of the mothers you know, some mothers you know, most or all mothers you know? (**ROTATE LIST**)

( ) a. Make it easy for their children to eat fruit and vegetables every day?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. Make it easy for their children to be physically active everyday?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) c. Set limits on the amount of time their children watch television each day?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) d. Set limits on the amount of "unhealthy food" they have in the home for children to snack on? (**IF NEEDED, SAY:**) By unhealthy food, I mean things like chips, candy and other sugary snacks and drinks.

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) e. Set limits on the amount of sweetened beverages they have in the home for children to drink, beverages like soda, sports drinks and sugar sweetened juice drinks.

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

G4. These next statements are about physical activity. By physical activity I mean activities that cause you to breathe harder or make your heart beat faster such as brisk walking, gardening, heavy yard work or fast dancing. Please tell me how sure you are that you can get regular physical activity in each situation, on a scale of 1 to 5 where 1 is not at all sure and 5 is extremely sure. If you fall somewhere in between, pick 2, 3, or 4. How sure are you that you can get regular physical activity: (**READ LIST**). (**IF NECESSARY, SAY:**) on a scale of 1 to 5 with 1 being not at all sure and 5 being extremely sure?

(**ROTATE LIST**)

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. When you are tired?	1	2	3	4	5	8
( ) b When you are in a bad mood?	1	2	3	4	5	8
( ) c. When you feel you don't have the time?	1	2	3	4	5	8
( ) d. When you are on vacation?	1	2	3	4	5	8
( ) e. When its raining or cold?	1	2	3	4	5	8

G5. I am going to read you a few statements about eating fruit and vegetables. For each, please tell me if you agree or disagree. (**READ LIST**) Do you agree or disagree? (**THEN ASK:**) Is this strongly or somewhat? (**ROTATE LIST**)

( ) a. I feel that fruit is too expensive.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) b. I feel that vegetables are too expensive.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) c. I feel that fruit is not liked by my family.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) d. I feel that vegetables are not liked by my family.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) e. I don't have time to prepare fruits and vegetables because my time is used up by other things like TV, work and children.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) f. I can't find good, fresh fruit and vegetables in my neighborhood.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

G6. Now I am going to read you a few statements about being physically active. For each, please tell me if you agree or disagree. (**READ LIST**) Do you agree or disagree? (**THEN ASK:**) Is this strongly or somewhat? (**ROTATE LIST**)

( ) a. I can't find places to be physically active.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) b. I am too busy or can't find the time to be physically active.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) c. I would have less time for my friends and family if I do physical activities.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) d. Our family drives often, instead of walking, biking or using public transit.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) e. Our family can't afford activities and programs to be active.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

Now I would like to ask you a few questions about activities you may have taken part in the last 3 months.

H1.	In the last 3 months, have you taken part in a class, workshop or other group activity about eating fruit and vegetables or being physically active?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H2.	In the last 3 months, have you seen someone doing a live food demonstration, one where they prepared a recipe with fruits or vegetables?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H3.	In the last 3 months, (have any of your children) (has your child) brought home information about eating fruit and vegetables or being physically active?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H4.	In the last 3 months, have you seen any other written information recommending fruit and vegetables or being physically active, things like signs, posters or brochures?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H5a.	In the last 3 months, have you attended a festival, celebration or health fair in your community?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

H5b.	At that festival, celebration or health fair, did you take part in any activities that were about eating fruit and vegetables or being physically active?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

The next questions are about where you work and what types of activities you do on the job. For each question, please consider work done outside of the home.

I1a.	Does your employer provide any nutrition-related benefits? I mean things like nutrition classes, fruit and vegetable snacks, healthy foods during meetings, health foods in vending machines, or discounts on healthy food choices in the worksite cafeteria?	YES ....1 NO ....2 NOT APPLICABLE, NOT EMPLOYED ....7 DON'T KNOW/NOT SURE ....8 REFUSED 9

IF YES, ASK:

I1b.	In the last 12 months, did you use any of these nutrition related benefits?	YES ....1 NO ....2 DON'T KNOW/NOT SURE ....8 REFUSED 9

I2a.	Does your employer provide any physical fitness benefits? I mean things like exercise classes, release time for physical activity, walking clubs, stairwell promotions, or discount health club memberships?	YES ....1 NO ....2 NOT APPLICABLE, NOT EMPLOYED ....7 DON'T KNOW/NOT SURE ....8 REFUSED 9

IF YES, ASK:

I2b.	In the last 12 months, did you use any of these physical fitness benefits?	YES ....1 NO ....2 DON'T KNOW/NOT SURE ....8 REFUSED 9

Tell me whether you favor or oppose the following changes that some people have proposed.

I3.	Any store that accepts CalFresh or Food Stamps, even small neighborhood stores, drug stores, and convenience stores, should be required to offer a variety of fresh fruits and vegetables. Would you favor or oppose this? Is that strongly or somewhat?	STRONGLY FAVOR ....1 SOMEWHAT FAVOR ....2 SOMEWHAT OPPOSE ....3 STRONGLY OPPOSE ....4 DON'T KNOW/NOT SURE ....8 REFUSED 9
I4.	Any store that accepts CalFresh or Food Stamps should be allowed to offer their CalFresh customers lower-priced specials <u>specifically for</u> healthy foods like fruit and vegetables. Would you favor or oppose this? Is that strongly or somewhat?	STRONGLY FAVOR ....1 SOMEWHAT FAVOR ....2 SOMEWHAT OPPOSE ....3 STRONGLY OPPOSE ....4 DON'T KNOW/NOT SURE ....8 REFUSED 9
I5.	Schools should be required to open their gyms, playing fields, tracks, and other recreational facilities to the public after regular hours and on weekends. Would you favor or oppose this? Is that strongly or somewhat?	STRONGLY FAVOR ....1 SOMEWHAT FAVOR ....2 SOMEWHAT OPPOSE ....3 STRONGLY OPPOSE ....4 DON'T KNOW/NOT SURE ....8 REFUSED 9

Finally, some background questions about yourself….

J1a. How old are you?

RECORD AGE: _____ **SKIP TO J2**

ASK J1b REFUSED 9

IF REFUSED, ASK:

J1b. We don't need to know exactly, but generally speaking are you between ages… (**READ CATEGORIES**)?

18–24 1
25–29 2
30–39 3
40–49 4
50–55 5
REFUSED 9

J2. What is the highest year of school that you have finished or gotten credit for? (**IF 4 YEARS OF COLLEGE, ASK:**) Did you graduate and receive a bachelor's degree?

LESS THAN HIGH SCHOOL 1
HIGH SCHOOL GRADUATE/GED 2
SOME COLLEGE 3
COLLEGE GRADUATE (BA/BS/MASTER'S/PH.D.) ... 4
DON'T KNOW 8
REFUSED 9

J3a. Do you speak any languages fluently other than English?

ASK J3b YES, SPANISH 1
YES, OTHER LANGUAGE 2
NO 3
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO J4

IF YES, ASK:

J3b. What language(s) do you usually speak at home? (**READ LIST**) (**SELECT ONE ANSWER**)

English only 1
More English than Spanish 2
Both equally 3
More Spanish than English 4
Spanish only 5
DO NOT READ → REFUSED 9

J4. Do you have access to the internet, either at home or another location, at least once a week?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

J5a. Do you have a cell phone with internet access for email and the web?

ASK J5b YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO J6

IF J5a = YES, ASK:

J5b. Do you currently use the phone for email and the web?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

J6. Have you ever created your own profile online that others can see, like on a social networking site such as MySpace, Facebook or LinkedIn.com?

ASK J7	YES 1
	NO 2
	DON'T KNOW/NOT SURE 8
	REFUSED..... 9

SKIP TO J9

IF J6 = YES, ASK:

J7.	How often do you visit the site where you have a profile? (**READ LIST**) (**IF THEY HAVE A PROFILE ON MULTIPLE SITES, ASK THEM TO ANSWER IN TERMS OF SITE THEY VISIT MOST OFTEN**)	Several times a day .....1 About once a day .....2 Every few days.....3 Once a week .....4 Less often.....5 **DO NOT READ** { DON'T KNOW/NOT SURE .....8 REFUSED.....9
J8.	How do you most often access your social networking profile? (**READ LIST**) (**SELECT ONE ANSWER**)	Home computer .....1 School computer .....2 Work computer.....3 Library computer .....4 Cell phone or mobile device .....5 Other *(SPECIFY)* _____ ....6 **DO NOT READ** { DON'T KNOW/NOT SURE .....8 REFUSED.....9

J9.	About how much do you weigh without shoes? (**ENTER WEIGHT IN WHOLE POUNDS; ROUND FRACTIONS UP**) (**VERIFY IF LESS THAN 80 OR MORE THAN 350**)	_____ POUNDS DON'T KNOW/NOT SURE ..... 899 REFUSED..... 999
J10.	About how tall are you without shoes? (**ENTER HEIGHT IN FEET AND INCHES; EXAMPLE: 5 FEET 11 INCHES = 511**) (**ROUND FRACTIONS DOWN**) (**VERIFY IF LESS THAN 408 OR GREATER THAN 608**)	_____ FEET/INCHES DON'T KNOW/NOT SURE ..... 899 REFUSED..... 999
J11.	What is your current ZIP code?	[ ][ ][ ][ ][ ] ZIP CODE DON'T KNOW..... 89999 REFUSED..... 99999
J12.	Do any of your school-age children receive free or reduced price school meals?	YES .....1 NO .....2 NO, CHILDREN ARE NOT IN SCHOOL .....3 DON'T KNOW/NOT SURE .....8 REFUSED.....9
J13.	Do you have a child age 5 or under?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

J14.	Have you used the WIC program in the last 12 months? (**IF NECESSARY, SAY:** WIC is a supplemental nutrition program for women, infants and children.)	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Those are all of my questions. Thank you very much for your help with this important survey.

Verification Information (**Ask Respondent**)

MALL ID: _____

V1. [V1] Would you please tell me what your telephone number is? A supervisor will call you in the next couple of days to verify that you participated in this interview and that you received $15. Other than that, nobody will contact you.

[a] a. Telephone number? *(NO PAGERS)*

HOME (_____) _____
AREA CODE

CELL (_____) _____
AREA CODE

[b] b. And your name please? *(RESPONDENT'S NAME)*

_____
FIRST NAME *LAST NAME*

[c] c. And the city and state where you live?

_____
CITY *STATE*

[d] d. Respondent's signature:

_____
(RESPONDENT'S SIGNATURE)

[e] e. Those are all my questions. Thank you very much.

REVIEW SCREENER AND QUESTIONNAIRE FOR COMPLETENESS ..... ❑

GIVE RESPONDENT $15 COOPERATION FEE AND ASK RESPONDENT TO SIGN RECEIPT ..... ❑

V2. [V2] *RECORD DATE OF INTERVIEW:* *DATE* _____

V3. [V3] *ATTACH SCREENER TO **BACK** OF QUESTIONNAIRE* ..... ❑

V4. [V4] *INTERVIEWER ID #*_____

V5. [V5] I hereby certify that the information contained in this questionnaire is a true and accurate record of this respondent's comments as they were given to me.

_____ _____
INTERVIEWER SIGNATURE *DATE*

V6. [V7]

_____ _____
SUPERVISOR SIGNATURE *DATE*

Interviewer # _____ Respondent # _____ Date: _____

Field Research Corporation
San Francisco, CA

533-035
10/25/2011
Spanish

2011 Benchmark Survey
~ Questionnaire – Low-Income Mothers ~

A1. Le voy a describir algunos anuncios de televisión. Estos anuncios muestran a padres e hijos realizando actividades saludables, como por ejemplo jugando activamente en la sala, pasando tiempo juntos en la cocina, preparando frutas y verduras o compartiendo una comida saludable alrededor de una mesa en el patio. Dígame si se acuerda haberlos visto alguna vez. (**READ ITEM, THEN ASK:**) ¿Ha visto o no ha visto estos anuncios? (**ROTATE LIST**)

	YES	NO	DK	REF	(VOL. ONLY) DON'T WATCH TV
( ) a. En un anuncio en la televisión, las mamás y los papás están hablando sobre lo duro que es hacer que sus niños coman más frutas y verduras, pero que sería mucho más duro enterarse que uno de ellos tiene diabetes tipo 2. Dicen que es duro decirles que no a los niños cuando quieren dulces por la tarde, pero que sería mucho más duro ver al niño luchar contra la obesidad. El anuncio termina cuando una mamá y un papá dicen: "Bueno, darnos cuenta que había llegado el momento de cambiar no fue tan duro." ¿Ha visto o no ha visto este anuncio en la televisión?	1	2	8	9	10
( ) b. En otro anuncio en la televisión, las mamás y los papás están hablando sobre lo duro que es decirles que no a los niños cuando quieren comer mucha comida grasosa, pero que sería mucho más duro ver que se burlaran de sus niños por estar gorditos. Dicen que puede ser duro pedirle a la tienda que ofrezca más frutas y verduras, pero que sería mucho más duro enterarse que un niño tiene diabetes tipo 2. El anuncio termina cuando dos mamás dicen: "Bueno, darnos cuenta que había llegado el momento de cambiar no fue tan duro." ¿Ha visto o no ha visto este anuncio en la televisión?	1	2	8	9	10
( ) c. ¿Y ha visto un anuncio en la televisión que muestra a varios padres y madres hablando sobre el problema de las máquinas expendedoras en las escuelas de sus niños? Un papá menciona que trabajó con un grupo de padres y consiguió que se prohibieran estas máquinas en la escuela de su hija. Al final, uno de los papás pregunta: "¿Qué están haciendo ustedes en sus escuelas locales?" ¿Ha visto o no ha visto este anuncio en la televisión?	1	2	8	9	10

(**A2 – SPANISH VERSION ONLY**)

A2. Enseguida le voy a describir algunos anuncios de radio. Dígame si se acuerda haberlos oído alguna vez. (**READ ITEMS IN RANDOM ORDER**) ¿Ha oído o no este anuncio?

	YES	NO	DK	REF	(VOL. ONLY) DON'T LISTEN TO RADIO
( ) a. ¿Oyó un anuncio en la radio donde aparece un mariachi femenino que canta acerca de las ventajas nutritivas y saludables de las frutas y verduras para los niños? La música viene de la famosa canción ranchera, *El Rey*. Cantan de ser las reinas de la cocina, donde ellas son las que mandan. Al final, la locutora dice que la *Red para una California Saludable* recomienda comer más frutas y verduras y hacer actividad física todos los días	1	2	8	9	10
( ) b. ¿Oyó un anuncio en la radio donde aparece un mariachi femenino que canta que las madres protectoras son un ejemplo para California, esas mujeres dedicadas y queridas que son las campeonas de sus hijos adorados? La música viene de la famosa canción ranchera, *Ay, Jalisco no te rajes*. Cantan que nunca se darán por vencidas. Al final, la locutora dice que la *Red para una California Saludable* recomienda comer más frutas y verduras y hacer actividad física todos los días	1	2	8	9	10
( ) c. ¿Oyó un anuncio en la radio donde aparece un mariachi femenino? Cantan que son campeonas con sus niños, que les gustan todos los tipos de frutas y verduras y que mantienen activos a sus hijos. La música viene de una canción de guapango, *Yo el aventurero.* La locutora dice que la *Red para una California Saludable* recomienda comer más frutas y verduras y hacer actividad física todos los días	1	2	8	9	10
( ) d. ¿Oyó un anuncio en la radio donde aparece un mariachi? Cantan de ser jefes de familia y que necesitan encargarse de cumplir con sus deberes. Cantan que les gusta la comida rápida y los bocadillos poco saludables, pero uno dice que es papá y tuvo que dejarlos cuando notó que su hija se estaba poniendo gordita. Dice que los papás deben poner el ejemplo a sus hijos. La música viene de una famosa canción ranchera	1	2	8	9	10

B1. Ahora le voy a describir algunos anuncios que quizás haya visto afuera en carteles, loncheras u otros pósteres. Por favor dígame si se acuerda haberlos visto alguna vez. (**READ ITEM**) ¿Ha visto o no estos anuncios? (**ROTATE LIST**)

( ) a. [Por ejemplo] ¿ha visto un cartel que dice: "A palabras necias, oídos sordos"? "Regla #7: Si piden dulces, les doy fruta". Aparece una foto de una mujer con un niño que sonríen y miran directamente hacia usted.

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

( ) b. [Por ejemplo] ¿ha visto un cartel que dice: "Madre prevenida vale por dos"? "Regla #8: Sirvo más frutas y verduras". Aparece una foto de una mujer cruzada de brazos, que sonríe y mira directamente hacia usted.

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

( ) c. [Por ejemplo] ¿ha visto un cartel que dice: "Comer a medida alarga la vida?" "Regla #9: Sirvo menos comida grasosa". Aparece una foto de una mujer que sonríe y mira directamente hacia usted.

YES 1
NO 2
DON'T KNOW 8
REFUSED 9

B2a. ¿Ha visto algún volante, cartel u otro material que le sugiere beber menos bebidas azucaradas y más agua?

ASK B2b

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO B3

B2b. ¿Ha visto algún volante, cartel u otro material que dice "Piensa bien lo que tomas"?

ASK B2c

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO B3

B2c. Por favor describa dónde oyó o vio este mensaje. (**RECORD RESPONDENT'S EXACT WORDS**) (**PROBE FOR SPECIFICS & DETAILS AND ALLOW MULTIPLE RESPONSES**)

B3. ¿Ha oído o leído algo acerca de un grupo llamado *Red para una California Saludable,* Campeones del Cambio?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

B4. ¿Alguna vez ha visitado el sitio en la Web de Campeones del Cambio, o el sitio de la *Red para una California Saludable?*

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

C1. Por favor dígame si está de acuerdo o en desacuerdo con las siguientes declaraciones. (**READ LIST**) ¿Está de acuerdo o en desacuerdo? (**THEN ASK:**) ¿Mucho o algo?

( ) a. Comer frutas y verduras no reduce el riesgo de contraer enfermedades tales como la diabetes tipo 2, el cáncer o enfermedades del corazón.

STRONGLY AGREE 1
SOMEWHAT AGREE 2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE 5
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. Realizar actividades físicas ayuda a reducir su riesgo de contraer enfermedades tales como la diabetes tipo 2, el cáncer o enfermedades del corazón.

STRONGLY AGREE 1
SOMEWHAT AGREE 2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE 5
DON'T KNOW/NOT SURE.....8
REFUSED.....9

C2. De acuerdo con las guías nacionales, ¿cuánto de su plato debería estar lleno con frutas y verduras en cada comida? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS RESPONSE IS ONE HALF OR DON'T KNOW.**)

_____
(**RECORD AMOUNT OF PLATE FILLED**)
ONE-HALF..... 5
DON'T KNOW/NOT SURE 89
REFUSED..... 99

C3a. ¿Está enterada de algún sitio Web del gobierno donde puede obtener información sobre cuánta fruta y verdura debería comer?

YES 1
NO..... 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

IF YES, ASK:

C3b. ¿Cuál es el nombre de ese sitio/esos sitios en la Web? (**RECORD EXACT WORDS**) (**PROBE FOR SPECIFIC NAME**) (**PROBE FOR MULTIPLE RESPONSES; ACCEPT UP TO THREE**)

C3c. ¿Ha oído o leído algo sobre un sitio Web llamado "choosemyplate.gov"?

YES 1
NO..... 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

Las siguientes preguntas tienen que ver con alimentos que usted generalmente come o bebe. Dígame con qué frecuencia come o bebe estos productos, por ejemplo, tres veces al día, dos veces por semana, tres veces al mes, etc. Recuerde, sólo me interesan los alimentos que usted come o bebe. Incluya todos los alimentos que usted come o bebe, tanto en su casa como fuera de casa.

(**FILL IN ONE BLANK OR CIRCLE ONE NUMBER**)

D1. ¿Con qué frecuencia bebe jugos de fruta 100% puro? No incluir bebidas con sabor a fruta que contienen azúcar, o jugo de fruta que usted hace en casa y que le agrega azúcar. Solamente incluya 100% jugo. (**100% JUICE BLENDS SUCH AS ORANGE-PINEAPPLE OR CRANBERRY-GRAPE ARE OKAY, AS ARE FRUIT-VEGETABLE 100% BLENDS. 100% PURE JUICE FROM CONCENTRATE IS ALSO OKAY.**) (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D2. Sin contar los jugos, ¿con qué frecuencia usted come fruta? Contar fruta fresca, congelada, enlatada o seca. (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D3. ¿Con qué frecuencia come ensaladas verdes? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D4. ¿Con qué frecuencia come papas, sin incluir las papas fritas, papas sofritas o papitas fritas de paquete? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D5. ¿Con qué frecuencia come zanahorias? (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)

(**RECORD NUMBER**)
_____ TIMES PER DAY
_____ TIMES PER WEEK
_____ TIMES PER MONTH
_____ TIMES PER YEAR
NEVER 5
DON'T KNOW/NOT SURE 89
REFUSED 99

D6.	Sin contar las zanahorias, papas, ó ensaladas verdes, ¿Con qué frecuencia come otros vegetales? Por ejemplo: tomates, jugo de tomate o V8, maíz, berenjenas, chicharos (alverjas), lechuga y repollo. (**DO NOT COUNT VEGETABLES ALREADY COUNTED**) (**DO NOT ALLOW RANGES**) (**PROBE FOR A SINGLE NUMBER**)	(**RECORD NUMBER**) _____ TIMES PER DAY _____ TIMES PER WEEK _____ TIMES PER MONTH _____ TIMES PER YEAR NEVER ..... 5 DON'T KNOW/NOT SURE ..... 89 REFUSED 99
D7.	En comparación con un año atrás, ¿está comiendo más, menos, o más o menos la misma cantidad de fruta?	MORE ..... 1 LESS ..... 2 ABOUT SAME ..... 3 DON'T KNOW/NOT SURE ..... 8 REFUSED 9
D8.	En comparación con un año atrás, ¿está comiendo más, menos, o más o menos la misma cantidad de verdura?	MORE ..... 1 LESS ..... 2 ABOUT SAME ..... 3 DON'T KNOW/NOT SURE ..... 8 REFUSED 9
D9.	¿Con qué frecuencia llena la mitad de su plato con frutas y verduras en las comidas? (**READ CATEGORIES**)	Cada comida ..... 1 La mayoría de las comidas ..... 2 Algunas comidas ..... 3 Casi ningúna de las comidas ..... 4 Nunca ..... 5 **DO NOT READ** { DON'T KNOW/NOT SURE ..... 89 REFUSED 99
D10.	En comparación con un año atrás, ¿está comiendo más, menos, o más o menos la misma cantidad de alimentos en las comidas o en otro momento durante el día?	MORE ..... 1 LESS ..... 2 ABOUT SAME ..... 3 DON'T KNOW/NOT SURE ..... 8 REFUSED 9

Las siguientes preguntas son sobre comer fuera de casa en cadenas de restaurantes o de comidas rápidas.

D11a.	¿Por lo general lee la información sobre calorías en el menú cuando está disponible en las cadenas de restaurantes o de comidas rápidas?	YES ..... 1 NO ..... 2 (VOLUNTEERED ONLY:) NEVER NOTICED/NEVER LOOKED FOR IT ..... 3 USUALLY CANNOT FIND IT ..... 4 NEVER GO TO FAST FOOD OR CHAIN RESTAURANTS ..... 5 → **Skip to D13** DON'T KNOW/NOT SURE ..... 8 REFUSED 9

IF YES, ASK:

D11b.	¿Con qué frecuencia la cantidad de calorías del menú le ayuda a decidir qué pedir en las cadenas de restaurantes o de comidas rápidas? (**READ CATEGORIES**)	Siempre ..... 1 La mayoría de las veces ..... 2 La mitad de las veces ..... 3 Algunas veces ..... 4 Nunca ..... 5 **DO NOT READ** { DON'T KNOW/NOT SURE ..... 8 REFUSED 9

D12a. Cuando come fuera de casa en una cadena de restaurantes o de comidas rápidas, ¿con qué frecuencia busca frutas y verduras frescas como parte principal de la comida? (**READ CATEGORIES**)

Siempre	1
La mayoría de las veces	2
La mitad de las veces	3
Algunas veces	4
Nunca	5
DO NOT READ DON'T KNOW/NOT SURE	89
DO NOT READ REFUSED	99

IF D12a ≠ NEVER, ASK:

D12b. ¿Con qué frecuencia el precio le impide pedir frutas y verduras frescas cuando están disponibles en una cadena de restaurantes o de comidas rápidas? (**READ CATEGORIES**)

Siempre	1
La mayoría de las veces	2
La mitad de las veces	3
Algunas veces	4
Nunca	5
DO NOT READ DON'T KNOW/NOT SURE	8
DO NOT READ REFUSED	9

Fruit and Vegetable Consumption – Self Efficacy

D13. Las siguientes declaraciones hablan de comer frutas y verduras, inclusive cuando existen circunstancias que lo hagan difícil. Para cada una, dígame en qué medida se siente segura que lo puede lograr, usando una escala de 1 a 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura. Si está en una posición intermedia, elija el 2, 3 o 4. (**READ LIST THEN SAY, IF NECESSARY:**) Usando una escala del 1 al 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura, (**ROTATE LIST**).

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. ¿En qué medida se siente segura que podría comer frutas o verduras cuando anda de prisa?	1	2	3	4	5	8
( ) b. ¿En qué medida se siente segura que podría comer frutas o verduras casi todos los días como parte de su comida del mediodía?	1	2	3	4	5	8
( ) c. ¿En qué medida se siente segura que podría comer frutas o verduras cuando se siente cansada?	1	2	3	4	5	8
( ) d. ¿En qué medida se siente segura que podría comer frutas o verduras cuando come fuera de su casa?	1	2	3	4	5	8
( ) e. ¿En qué medida se siente segura que podría comer frutas o verduras casi todos los días durante la cena?	1	2	3	4	5	8
( ) f. ¿En qué medida se siente segura que se podría servir una porción extra de verduras durante la cena?	1	2	3	4	5	8
( ) g. ¿En qué medida se siente segura que podría comer una comida con la mitad de su plato lleno de frutas y verduras casi todos los días?	1	2	3	4	5	8
( ) h. ¿En qué medida se siente segura que en un restaurante podría pedir por lo menos un plato de verduras?	1	2	3	4	5	8
( ) i. ¿En qué medida se siente segura que podría comer otras frutas o verduras cuando no estén disponibles sus frutas o verduras favoritas?	1	2	3	4	5	8

Las siguientes preguntas son sobre sus horas de trabajo, incluyendo el trabajo que hace en la casa.

E1. Tomando en consideración lo que hace usted normalmente durante un día típico de trabajo, y sin contar su tiempo libre, ¿qué es lo que mejor describe sus actividades? ¿Diría que pasa la mayor parte del día sentada, parada o que camina bastante? (**GET ONE RESPONSE ONLY**) (**IF NECESSARY, ASK:** ¿Qué es lo que usted más frecuentemente hace durante un día típico? (**IF RESPONDENT INSISTS ON MULTIPLE RESPONSES, CIRCLE MULTIPLE RESPONSES**).

SIT 1
STAND 2
WALK AROUND 3
LAYS DOWN MOST OF THE TIME ***(VOL ONLY)***.....4
DON'T KNOW.....8
REFUSED.....9

E2. Nuevamente, sin contar lo que hace durante su tiempo libre, durante un día típico de trabajo, ¿normalmente acarrea o levanta cargas de peso liviano, moderado o pesado, o normalmente no levanta ni acarrea objetos? (**IF NECESSARY, ASK:** ¿Qué es lo que hace más frecuentemente?)

LIGHT 1
MODERATE 2
HEAVY 3
DO NOT LIFT OR CARRY 4
DON'T KNOW/NOT SURE 8
REFUSED.....9

Las siguientes preguntas tienen que ver con las actividades físicas. Por esto quiero decir actividades que la hacen respirar fuerte o hacen que su corazón lata con rapidez, como por ejemplo caminar enérgicamente, jardinear, hacer trabajos pesados en el jardín o bailar rápidamente.

E3. De acuerdo con las guías nacionales, ¿cuánto tiempo por día o por semana debería hacer actividades físicas para mantenerse saludable? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS ONE OF THE ANSWERS AT RIGHT APPLIES.**)

_____
(**RECORD TIME**)
150 MINUTES (2 AND ½ HOURS) A WEEK..... 1
30 MINUTES A DAY, 5 DAYS A WEEK 2
20 MINUTES A DAY, 7 DAYS A WEEK 3
DON'T KNOW/NOT SURE 89
REFUSED..... 99

E4. De acuerdo con las guías nacionales, ¿cuánto tiempo por día o por semana debería(n) (su hijo) (sus hijos) hacer actividades físicas para mantenerse saludable(s)? (**PROBE FOR CLARITY. ACCEPT ONE ANSWER ONLY. RECORD VERBATIM UNLESS ONE OF THE ANSWERS AT RIGHT APPLIES.**)

_____
(**RECORD TIME**)
60 MINUTES PER DAY 1
DON'T KNOW/NOT SURE 89
REFUSED..... 99

E5. Durante una semana normal, ¿hay días en que realiza actividades físicas por lo menos 10 minutos cada vez? Tome en cuenta solamente su tiempo libre, sin incluir el tiempo en el trabajo o los trabajos domésticos.

ASK E6a	YES 1	
	NO 2	**SKIP TO E7**
	NO, PHYSICALLY DISABLED *(VOL. ONLY)* 3	
	DON'T KNOW/NOT SURE 8	
	REFUSED 9	

IF YES, ASK:

E6a. ¿Durante cuántos días por semana realiza estas actividades por lo menos 10 minutos cada vez?

ASK E6b	**(RECORD NUMBER)**: _____ DAYS PER WEEK 1	
	DID NOT DO ANY PHYSICAL ACTIVITY FOR AT LEAST 10 MINUTES AT A TIME . 2	**SKIP TO E7**
ASK E6b	DON'T KNOW/NOT SURE 8	
	REFUSED 9	

IF AT LEAST ONE DAY A WEEK OR DK OR REF, ASK:

E6b. En los días en que realiza actividades físicas por lo menos 10 minutos durante su tiempo libre, ¿cuánto tiempo total por día dedica normalmente a estas actividades?

(**RECORD # OF HOURS/MINUTES**)

_____ HOURS PER DAY 1

_____ MINUTES PER DAY 2

DON'T KNOW/NOT SURE 899

REFUSED 999

Physical Activity – Self Efficacy

E7. Le voy a leer una lista de cosas que la gente puede hacer para aumentar o continuar con sus actividades físicas regulares. Nuevamente, por actividades físicas quiero decir caminar enérgicamente, andar en bicicleta, trabajar en el jardín o bailar rápido. Independientemente de que usted realice actividades físicas o no, por favor indique en qué medida siente confianza que realmente se podría motivar para hacer las siguientes cosas durante la mayoría de los días de una semana laboral, por lo menos seis meses. ¿En qué medida se siente segura que pueda... (**READ LIST**)? ¿Diría "Yo sé que sí puedo", o bien "A lo mejor puedo" o bien "Yo sé que no puedo"?

(**ROTATE LIST**)

( ) a. Dedicar tiempo para las actividades físicas mientras pasa por un cambio de vida estresante (por ejemplo, un divorcio, una muerte en la familia, una mudanza).

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) b. Dedicar tiempo para las actividades físicas después de un día largo y cansado en el trabajo.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) c. Dedicar tiempo para las actividades físicas, es decir, caminar, correr, nadar, andar en bicicleta u otras actividades continuas por lo menos 2 horas y media por semana.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) d. Dedicar tiempo para las actividades físicas cuando la familia reclama que le dedique más tiempo.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) e. Dedicar tiempo para las actividades físicas inclusive cuando le exigen demasiado en el trabajo.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

( ) f. Dedicar tiempo para las actividades físicas cuando tiene quehaceres domésticos que hacer.

I KNOW I CAN 1
MAYBE I CAN 2
I KNOW I CANNOT 3
NOT APPLICABLE *(VOL. ONLY)* 4
DON'T KNOW 8
REFUSED 9

F1.	Dígame de nuevo, incluyéndose a sí misma, ¿cuántas personas viven actualmente en su hogar?	**# OF PEOPLE: _____** DON'T KNOW/NOT SURE ..... 89 REFUSED..... 99
F2.	¿Cuántas de estas personas son menores de 18 años?	# **OF CHILDREN UNDER AGE 18: _____** DON'T KNOW/NOT SURE ..... 89 REFUSED..... 99
F3.	¿Con qué frecuencia le(s) hace fácil (al niño) (a los niños) que vive(n) en su hogar el comer frutas y verduras, teniéndoselas lavadas, cortadas y listas para comer? ¿Diría usted que nunca, menos que cada mes, cada mes, cada semana o cada día?	NOT AT ALL.....1 LESS THAN EVERY MONTH.....2 EVERY MONTH .....3 EVERY WEEK .....4 EVERY DAY .....5 DON'T KNOW/NOT SURE .....8 REFUSED.....9 NOT APPLICABLE.....10
F4.	¿Con qué frecuencia le(s) hace fácil (al niño) (a los niños) que vive(n) en su hogar hacer actividades físicas, por ejemplo llevándolos a las prácticas deportivas, jugando con ellos a la pelota, o motivándolos para que jueguen afuera o anden en bicicleta? ¿Diría usted que nunca, menos que cada mes, cada mes, cada semana o cada día?	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F5.	¿Más o menos con qué frecuencia hacen actividades físicas usted y sus niños, como por ejemplo jugar a la pelota, andar en bicicleta o salir a caminar? ¿Diría usted que nunca, menos que cada mes, cada mes, cada semana o cada día? (**GET BEST ANSWER**)	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F6.	¿Con qué frecuencia le(s) hace fácil (al niño) (a los niños) que vive(n) en su hogar beber agua, por ejemplo teniendo preparada una jarra llena de agua o botellas de agua? ¿Diría usted que nunca, menos que cada mes, cada mes, cada semana o cada día? (**GET BEST ANSWER**)	NOT AT ALL..... 1 LESS THAN EVERY MONTH..... 2 EVERY MONTH ..... 3 EVERY WEEK ..... 4 EVERY DAY ..... 5 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9 NOT APPLICABLE..... 10
F7.	¿Ha fijado límites con respecto al tiempo que su/s hijo/s mira(n) televisión todos los días?	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9
F8.	¿Ha fijado usted límites a la cantidad de "comida no saludable" que tiene en casa para servir como bocadillo a sus niños? (**IF NEEDED, SAY:**) Por comida no saludable quiero decir cosas como papitas fritas, dulces, refrescos y otros bocadillos y bebidas azucaradas.	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9
F9.	¿Ha fijado límites a la cantidad de bebidas azucaradas que tiene en casa para los niños? Por bebidas azucaradas quiero decir refrescos, bebidas deportivas y jugos de fruta endulzados.	YES ..... 1 NO..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED..... 9

F10. ¿Ha reemplazado las bebidas azucaradas por agua para su familia en las comidas o bocadillos?

YES 1
NO..... 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

G1. Para las siguientes declaraciones, dígame en qué medida se siente segura que pueda hacer cada cosa, usando una escala de 1 a 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura. Si está en una posición intermedia, elija el 2, 3 o 4. Indique en qué medida se siente segura que podría: (**READ LIST**). (**IF NECESSARY, SAY:**) usando una escala de 1 a 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura?

(**ROTATE LIST**)

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. ¿Comprar más frutas y verduras, inclusive si no tiene mucho dinero?	1	2	3	4	5	8
( ) b ¿Comprar frutas y verduras inclusive si tiene que viajar más distancia para conseguirlas?	1	2	3	4	5	8
( ) c. ¿Conseguir que su familia coma frutas y verduras en las comidas?	1	2	3	4	5	8
( ) d. ¿Servir frutas y verduras inclusive cuando se siente cansada?	1	2	3	4	5	8
( ) e. ¿Fijar límites a la cantidad de comida chatarra, como por ejemplo papitas fritas, dulces y refrescos, que tiene en casa como bocadillos para los niños?	1	2	3	4	5	8
( ) f ¿Tener fruta y verdura lavada, cortada y lista para servir a su familia como bocadillos?	1	2	3	4	5	8
( ) n. ¿Decir "no" a sus hijos cuando piden algo dulce por la tarde?	1	2	3	4	5	8
( ) g. ¿Conseguir que su familia cene junta por lo menos 5 veces a la semana?	1	2	3	4	5	8
( ) h. ¿Llevar a sus niños al parque, a la alberca o a otros lugares donde puedan realizar actividades físicas inclusive cuando usted esté ocupada con otras responsabilidades?	1	2	3	4	5	8
( ) i. ¿Motivar a sus hijos a que anden en bicicleta o jueguen afuera inclusive cuando ellos tienen otras cosas que quieren hacer?	1	2	3	4	5	8
( ) j. ¿Realizar actividades físicas con su familia inclusive cuando está cansada después de un largo día de trabajo?	1	2	3	4	5	8
( ) k. ¿Fijar límites a la cantidad de tiempo que sus niños miran televisión todos los días, inclusive cuando esto les molesta?	1	2	3	4	5	8

(**ASK NON-CALFRESH USERS ONLY**)

( ) l. ¿Solicitar CalFresh o estampillas de comida para su familia inclusive si es algo que nunca antes consideró?	1	2	3	4	5	8

(**ASK CALFRESH USERS ONLY**)

( ) m. ¿Seguir recibiendo CalFresh o estampillas de comida todo el tiempo que su familia las necesite?	1	2	3	4	5	8

G2. Para las siguientes declaraciones, nos interesa saber qué piensa que realmente están haciendo otras personas que usted conoce... (**READ LIST**). Diría que pocas o ninguna de las personas que usted conoce, algunas de las personas que conoce, o la mayoría de las personas que conoce… (**ROTATE LIST**)

( ) a. ¿Comen suficientes frutas y verduras todos los días?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. ¿Realizan actividades físicas por lo menos dos horas y media por semana?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

G3. Para las siguientes declaraciones, nos interesa saber qué piensa que realmente están haciendo otras madres que usted conoce. Para cada una, dígame cuántas madres que usted conoce... (**READ LIST**). Diría que pocas, ningunas, algunas, o la mayoría de las madres que conoce… (**ROTATE LIST**)

( ) a. ¿Facilitan que sus niños coman frutas y verduras todos los días?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) b. ¿Facilitan que sus niños realicen actividades físicas todos los días?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) c. ¿Fijan límites a la cantidad de tiempo que sus hijos miran televisión todos los días?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) d. ¿Fijan límites a la cantidad de comida no saludable que tienen en casa como bocadillos para los niños? (**IF NEEDED, SAY:**) Por comida no saludable me refiero a cosas como papitas fritas, dulces y otros bocadillos y bebidas azucaradas.

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

( ) e. ¿Fijan límites a la cantidad de bebidas azucaradas que tienen en casa para los niños, bebidas tales como refrescos, bebidas deportivas y jugos de fruta endulzados?

FEW /NONE.....1
SOME.....2
MOST/ALL.....3
DON'T KNOW/NOT SURE.....8
REFUSED.....9

G4. Las siguientes declaraciones tienen que ver con las actividades físicas. Me refiero a actividades que le hacen respirar fuerte o que hagan latir el corazón con rapidez, como por ejemplo caminar enérgicamente, trabajar en el jardín o bailar rápido. Dígame en qué medida se siente segura que pueda realizar actividades físicas de manera regular en cada situación, empleando una escala del 1 al 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura. Si está en una posición intermedia, elija el 2, 3 o 4. Indique en qué medida se siente segura que podría realizar actividades físicas regulares: (**READ LIST**). (**IF NECESSARY, SAY:**) usando una escala de 1 a 5, donde el 1 indica que no se siente para nada segura y donde el 5 indica que se siente sumamente segura...

(**ROTATE LIST**)

	NOT AT ALL SURE				EXTREMELY SURE	DK
( ) a. ¿Cuando está cansada?	1	2	3	4	5	8
( ) b ¿Cuando está de mal humor?	1	2	3	4	5	8
( ) c. ¿Cuando siente que no tiene tiempo?	1	2	3	4	5	8
( ) d. ¿Cuando está de vacaciones?	1	2	3	4	5	8
( ) e. ¿Cuando está lloviendo o hace frío?	1	2	3	4	5	8

G5. Le voy a leer algunas declaraciones acerca de comer frutas y verduras. En cada caso, dígame si está de acuerdo o en desacuerdo. (**READ LIST**) ¿Está de acuerdo o en desacuerdo? (**THEN ASK:**) ¿Mucho o algo? (**ROTATE LIST**)

( ) a. Pienso que la fruta es demasiado cara.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) b. Pienso que la verdura es demasiado cara.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) c. Pienso que a mi familia no le gusta la fruta.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) d. Pienso que a mi familia no le gusta la verdura.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) e. No tengo tiempo para preparar frutas y verduras porque dedico mi tiempo a la televisión, el trabajo y los niños.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) f. No puedo encontrar frutas y verduras buenas y frescas en mi vecindario.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

G6. Ahora le voy a leer algunas declaraciones acerca de las actividades físicas. En cada caso, dígame si está de acuerdo o en desacuerdo. (**READ LIST**) ¿Está de acuerdo o en desacuerdo? (**THEN ASK:**) ¿Mucho o algo? (**ROTATE LIST**)

( ) a. No encuentro lugares donde pueda realizar actividades físicas.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) b. Estoy demasiado ocupada o no encuentro el tiempo para realizar actividades físicas.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) c. Tendría menos tiempo para mis amistades y familia si realizara actividades físicas.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) d. Nuestra familia muchas veces maneja en vez de caminar, ir en bicicleta o usar el transporte público.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

( ) e. Nuestra familia no tiene los medios económicos para programas que nos permitan hacer actividades físicas.

STRONGLY AGREE.....1
SOMEWHAT AGREE.....2
NEITHER AGREE NOR DISAGREE *(VOL. ONLY)* 3
SOMEWHAT DISAGREE 4
STRONGLY DISAGREE.....5
DON'T KNOW/NOT SURE 8
REFUSED.....9

Ahora quisiera hacerle algunas preguntas sobre las actividades en que podría haber participado en los últimos 3 meses.

H1.	En los últimos 3 meses, ¿ha participado en una clase, taller u otra actividad en grupo sobre el tema de comer frutas y verduras y realizar actividades físicas?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H2.	En los últimos 3 meses, ¿ha visto a alguien hacer una presentación en vivo de alimentos, donde se preparó una receta empleando frutas o verduras?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H3.	En los últimos 3 meses, ¿su hijo/alguno de sus hijos trajo a casa información sobre comer frutas o verduras o realizar actividades físicas?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H4.	En los últimos 3 meses, ¿ha visto alguna otra información escrita que recomiende comer frutas y verduras o realizar actividades físicas, cosas como carteles, pósteres o folletos?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9
H5a.	En los últimos 3 meses, ¿ha ido a algún festival, celebración o feria de la salud en su comunidad?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

H5b.	En ese festival, celebración o feria de la salud, ¿usted tomó parte en alguna actividad acerca de las ventajas de comer frutas y verduras y realizar actividades físicas?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Las siguientes preguntas tienen que ver con el lugar donde trabaja y los tipos de actividades que realiza en su trabajo. Para cada pregunta, tome en cuenta el trabajo que hace fuera del hogar.

I1a.	Su empleador, ¿le ofrece beneficios que tienen que ver con la nutrición? Me refiero a cosas tales como clases de nutrición, bocadillos de frutas y verduras, comidas saludables durante las juntas, comida saludable en las máquinas expendedoras, o descuentos para las opciones de comidas saludables en el comedor del lugar de trabajo.	YES .....1 NO .....2 NOT APPLICABLE, NOT EMPLOYED .....7 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

I1b.	En los últimos 12 meses, ¿hizo uso de algunos de estos beneficios que tienen que ver con la nutrición?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

I2a.	Su empleador, ¿le ofrece beneficios que tienen que ver con las actividades físicas? Me refiero a cosas tales como clases de ejercicio, tiempo libre para actividades físicas, grupos de caminar, concursos para subir escaleras o descuentos de membresías en clubes atléticos.	YES .....1 NO .....2 NOT APPLICABLE, NOT EMPLOYED .....7 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

I2b.	En los últimos 12 meses, ¿hizo uso de algunos de estos beneficios que tienen que ver con las actividades físicas?	YES .....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Dígame si está a favor o en contra de los siguientes cambios que algunas personas han propuesto.

I3.	A todas las tiendas que aceptan CalFresh o estampillas de comida, aún las tiendas pequeñas del vecindario, las farmacias, tiendas de conveniencia, se les debería exigir que ofrezcan una variedad de frutas y verduras. ¿Estaría usted a favor o en contra de esto? ¿Mucho o algo?	STRONGLY FAVOR .....1 SOMEWHAT FAVOR .....2 SOMEWHAT OPPOSE .....3 STRONGLY OPPOSE .....4 DON'T KNOW/NOT SURE .....8 REFUSED.....9
I4.	Se debería permitir a todas las tiendas que aceptan CalFresh o estampillas de comida que ofrezcan a sus clientes de CalFresh especiales a precios más bajos específicamente para alimentos saludables como frutas y verduras. ¿Estaría usted a favor o en contra de esto? ¿Mucho o algo?	STRONGLY FAVOR .....1 SOMEWHAT FAVOR .....2 SOMEWHAT OPPOSE .....3 STRONGLY OPPOSE .....4 DON'T KNOW/NOT SURE .....8 REFUSED.....9
I5.	Se debería exigir a las escuelas que abran al público los gimnasios, campos de juego, pistas y otras instalaciones recreativas después del horario escolar y los fines de semana. ¿Estaría usted a favor o en contra de esto? ¿Mucho o algo?	STRONGLY FAVOR .....1 SOMEWHAT FAVOR .....2 SOMEWHAT OPPOSE .....3 STRONGLY OPPOSE .....4 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Por último, algunas preguntas acerca de usted….

J1a. ¿Cuántos años tiene?

RECORD AGE: _____ **SKIP TO J2**

ASK J1b REFUSED 9

IF REFUSED, ASK:

J1b.	No necesitamos saber exactamente, pero se encuentra usted entre las edades de… (**READ CATEGORIES**)?	18–24 ..... 1 25–29 ..... 2 30–39 ..... 3 40–49 ..... 4 50–55 ..... 5 REFUSED 9

J2. ¿Cuál es el último año de escuela que ha completado o para el cual recibió crédito? (**IF 4 YEARS OF COLLEGE, ASK:**) ¿Se graduó y recibió su título de la universidad?

LESS THAN HIGH SCHOOL 1
HIGH SCHOOL GRADUATE/GED 2
SOME COLLEGE 3
COLLEGE GRADUATE (BA/BS/MASTER'S/PH.D.) ... 4
DON'T KNOW 8
REFUSED 9

J3a. Aparte del español, ¿habla bien algún otro idioma?

ASK J3b YES, ENGLISH 1
YES, OTHER LANGUAGE 2
NO 3
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO J4

IF YES, ASK:

J3b.	¿Cuál/es idioma/s normalmente se habla/n en su casa? (**READ LIST**) (**SELECT ONE ANSWER**)	Inglés solamente ..... 1 Más inglés que español ..... 2 Ambos idiomas de manera igual ..... 3 Más español que inglés ..... 4 Español solamente ..... 5 **DO NOT READ →** REFUSED 9

J4. ¿Tiene acceso a la Internet, ya sea en su casa o en otro lugar, por lo menos una vez a la semana?

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

J5a. ¿Tiene un celular con acceso a la Internet para sus correos electrónicos y acceso a la Web?

ASK J5b YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED 9

SKIP TO J6

IF J5a = YES, ASK:

J5b.	¿Actualmente usa el teléfono para sus correos electrónicos y acceso a la Web?	YES ..... 1 NO ..... 2 DON'T KNOW/NOT SURE ..... 8 REFUSED 9

J6. ¿En algún momento ha creado su propio perfil en línea que otras personas puedan ver, como por ejemplo en un sitio de enlace social como MySpace, Facebook o LinkedIn.com?

ASK J7

YES 1
NO 2
DON'T KNOW/NOT SURE 8
REFUSED..... 9

SKIP TO J9

IF J6 = YES, ASK:

J7.	¿Con qué frecuencia visita el sitio donde tiene un perfil? (**READ LIST**) (**IF THEY HAVE A PROFILE ON MULTIPLE SITES, ASK THEM TO ANSWER IN TERMS OF SITE THEY VISIT MOST OFTEN**)	Varias veces al día.....1 una vez al día.....2 cada pocos días.....3 una vez por semana .....4 con menos frecuencia.....5 **DO NOT READ** { DON'T KNOW/NOT SURE .....8 REFUSED.....9
J8.	¿De qué manera se conecta normalmente con su perfil en el sitio de enlace social? (**READ LIST**) (**SELECT ONE ANSWER**)	Computadora en casa .....1 Computadora en la escuela .....2 Computadora en el trabajo.....3 Computadora en la biblioteca.....4 Teléfono celular o dispositivo móvil.....5 Otro *(SPECIFY)* _____ .....6 **DO NOT READ** { DON'T KNOW/NOT SURE .....8 REFUSED.....9

J9.	¿Más o menos cuánto pesa sin zapatos? (**ENTER WEIGHT IN WHOLE POUNDS OR KILOGRAMS; ROUND FRACTIONS UP**) (**VERIFY IF LESS THAN 80 POUNDS/36 KILOGRAMS OR MORE THAN 350 POUNDS/159 KILOGRAMS**)	_____ POUNDS _____ KILOGRAMS DON'T KNOW/NOT SURE ..... 899 REFUSED..... 999
J10.	¿Más o menos cuál es su estatura sin zapatos? (**ENTER HEIGHT IN FEET/INCHES OR CENTIMETERS; EXAMPLE: 5 FEET 11 INCHES = 511**) (**ROUND FRACTIONS DOWN**) (**VERIFY IF LESS THAN 4'08"/142CM OR GREATER THAN 6'08"/203CM**)	_____ FEET/INCHES _____ CENTIMETERS DON'T KNOW/NOT SURE ..... 899 REFUSED..... 999
J11.	¿Cuál es su actual código postal?	[ ][ ][ ][ ][ ] ZIP CODE DON'T KNOW..... 89999 REFUSED..... 99999
J12.	¿Alguno de sus hijos de edad escolar recibe comidas escolares gratuitas o a precio reducido?	YES.....1 NO .....2 NO, CHILDREN ARE NOT IN SCHOOL .....3 DON'T KNOW/NOT SURE .....8 REFUSED.....9
J13.	¿Tiene algún hijo menor de 5 años?	YES.....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

IF YES, ASK:

J14.	¿Ha usado el programa WIC en los últimos 12 meses? (**IF NECESSARY, SAY:** WIC es un programa de nutrición suplementaria para mujeres, bebés y niños.)	YES.....1 NO .....2 DON'T KNOW/NOT SURE .....8 REFUSED.....9

Ésas son todas mis preguntas. Muchísimas gracias por ayudar en esta importante encuesta.

Verification Information (**Ask Respondent**)

MALL ID: _____

V1. [V1] ¿Me podría decir por favor cuál es su número de teléfono? Un supervisor la llamará en unos dos días para verificar que usted participó en esta entrevista y que recibió los $15. Aparte de esto, nadie se comunicará con usted.

[a] a. ¿Su número de teléfono? *HOME* (*NO PAGERS*) (_____) _____
AREA CODE

CELL (_____) _____
AREA CODE

[b] b. ¿Y su nombre por favor? (*RESPONDENT'S NAME*) _____
FIRST NAME *LAST NAME*

[c] c. ¿Y la ciudad y el estado donde vive? _____
CITY *STATE*

[d] d. Firma de la persona que responde: _____
(*RESPONDENT'S SIGNATURE*)

[e] e. Esas son todas las preguntas. Muchísimas gracias.

REVIEW SCREENER AND QUESTIONNAIRE FOR COMPLETENESS ..... ❑

GIVE RESPONDENT $15 COOPERATION FEE AND ASK RESPONDENT TO SIGN RECEIPT ..... ❑

V2. [V2] *RECORD DATE OF INTERVIEW:* *DATE* _____

V3. [V3] *ATTACH SCREENER TO* ***BACK*** *OF QUESTIONNAIRE* ..... ❑

V4. [V4] *INTERVIEWER ID #*_____

V5. [V5] Por la presente certifico que la información que contiene este cuestionario es un reflejo fiel y exacto de los comentarios de la persona que respondió, tal como recibí la contestación.

_____ _____
INTERVIEWER SIGNATURE *DATE*

V6. [V7]
_____ _____
SUPERVISOR SIGNATURE *DATE*

Network for a Healthy California Large Store Intervention Study: Shopper Intercept Survey

Prepared for the
Public Health Institute
by

Smith&Lehmann
CONSULTING

FINAL 14 October, 2011

This study was conducted through the California Department of Public Health's *Network for a Healthy California* and funded by USDA SNAP, known in California as CalFresh. These institutions are equal opportunity providers and employers.

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ABSTRACT

Objective

To evaluate the impact of the *Network for a Healthy California's (Network) Retail Program* activities on low income shoppers' awareness of the promotional efforts, self-efficacy and adoption of behaviors to increase fruit and vegetable consumption, perceptions of the health benefits of fruits and vegetables and purchase of promoted items.

Design

Stratified randomization was used to assign grocery stores to Cooking Demonstration and Merchandising Materials, Merchandising Materials Only, or Control status. The *Retail Program Intervention* was implemented for three full months, after which a brief shopper intercept survey was used to assess shopper awareness of *Network* materials, beliefs and self-efficacy regarding fresh produce, and specific produce purchases.

Setting

15 FoodMaxx stores in California's Central Valley and Gold Country Regions.

Participants

1000 English- or Spanish-speaking female shoppers purchasing at least six items at the store.

Intervention

Merchandising materials promoting fresh produce consumption included floor stands with posters, monthly newsletters, recipe cards, and shelf magnets. Cooking demonstrations featured fresh produce and provided taste samples to consumers, as well as a goody bag nutrition education materials.

Main outcome measures

Shopper awareness of merchandising materials, self-efficacy related to fresh produce consumption, health beliefs regarding fresh produce, and purchases of specific fruits and vegetables featured in monthly newsletters.

Analysis

Descriptive statistics, t-tests, chi-square analysis, univariate and multivariate logistic regression analysis as appropriate.

Results

Shoppers at stores with both cooking demonstrations and merchandising materials were more likely to purchase one of the promoted fresh produce items than shoppers at control stores. Cooking demonstrations also appeared to be associated with greater shopper awareness of merchandising materials.

Conclusions and Implications

Cooking demonstrations with merchandising materials appear more effective than merchandising materials alone in promoting fresh produce purchases. No consistent relationship was seen between cooking demonstrations or merchandising materials and health beliefs or self-efficacy regarding fresh produce.

INTRODUCTION

Background & Description

The *Network for Healthy California* represents a statewide movement of local, state and national partners collectively working toward improving the health status of low-income Californians through increased fruit and vegetable consumption and daily physical activity. Multiple venues are used to facilitate behavioral changes in the homes, schools, worksites, and communities of low-income Californians to create environments that support fruit and vegetable consumption and physical activity, with the goal of preventing obesity and other diet-related chronic diseases.

The *Network's Retail Program* facilitates partnerships between neighborhood supermarkets and community health agencies to increase the amount of fruit and vegetables purchased and consumed, particularly by Californians who are eligible for food stamps, now known in California as CalFresh. The *Retail Program* provides retailers statewide with a variety of tools, resources, and outreach activities to inspire healthy change among consumers. These resources include: in-store cooking demonstrations, newsletters promoting specific fruits and vegetables, recipe cards with quick and tasty recipes featuring newsletter promoted fruits and vegetables, posters and shelf magnets co-branded with WIC and CalFresh, designed to encourage the addition of fruits and vegetables to specific WIC-provided whole grain products and designed to reach CalFresh participants and Supplemental Nutrition Assistance Program Education-eligible consumers to connect the new brand with purchasing healthy foods, building the expectation that these benefits should be used for healthy foods. This collaboration also provides retailers opportunities to increase overall fresh fruit and vegetable sales. The program's Overall Theory of Change is illustrated in Figure 1. Detailed intervention-level Theory of Change figures are found in Appendix A.

The *Retail Program* intervention involves in-store commercial marketing, which aims to change consumer behavior by delivering the most effective combination of advertising, public relations, and education to consumers where they might be considering or making a "buying" decision. Merchandising materials and cooking demonstrations are designed to draw consumer attention to fruits and vegetables, generate positive attitudes toward fruits and vegetables, and increase fruit and vegetable purchases and consumption. The *Retail Program* operates in various store formats – superstores, supermarkets, smaller grocery stores and independents –

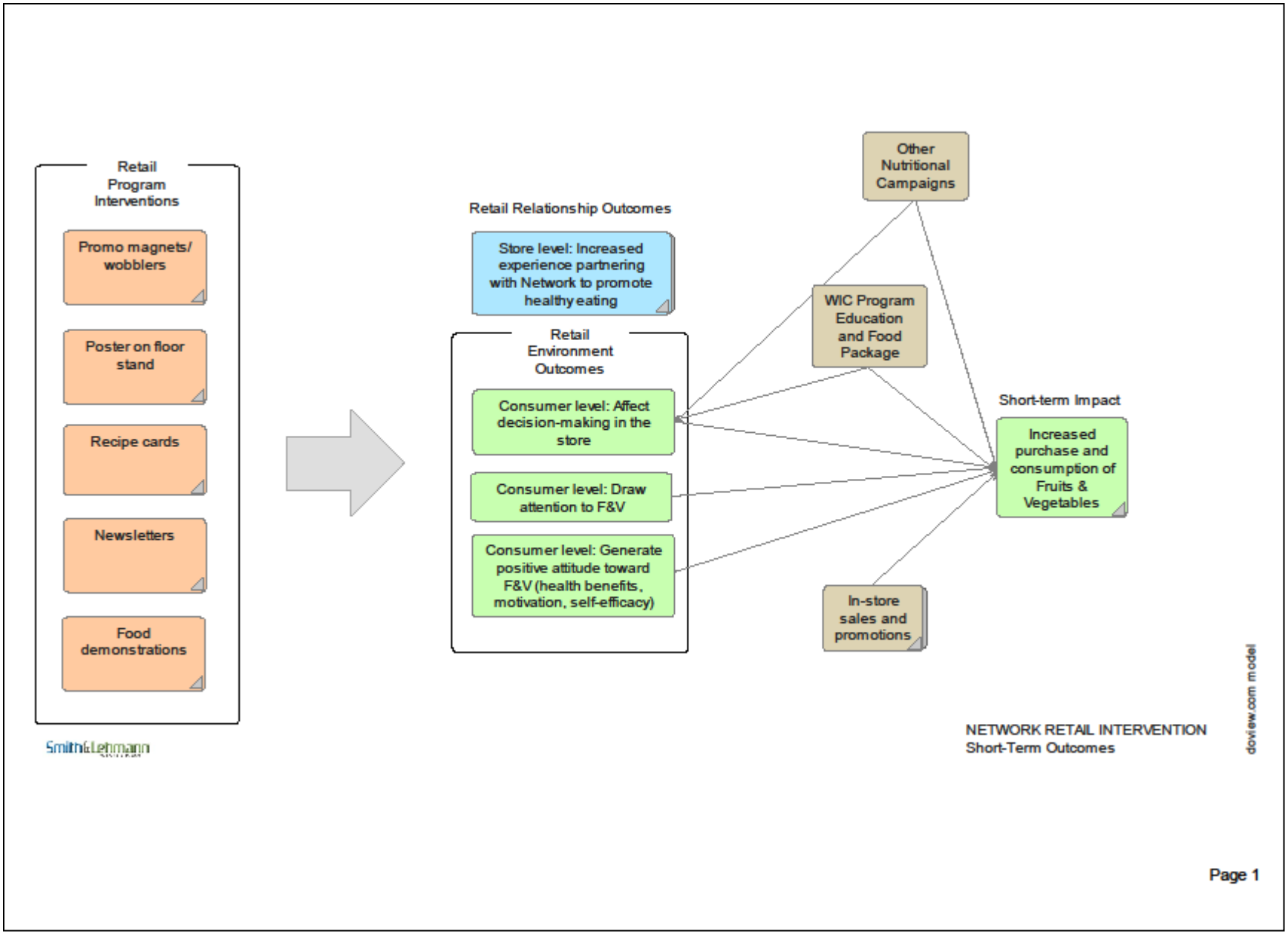


Figure 1 Theory of Change

located in low-income areas or locations identified as redeeming a large volume of CalFresh benefit dollars. Funding for the *Retail Program* is provided by the USDA's Supplementary Nutrition Assistance Program previously known as the Food Stamp Program. The program is led by the California Department of Public Health and administered by the Public Health Institute.

In order to evaluate the efficacy of the *Retail Program* in the large store format, the *Network for a Healthy California* partnered with Save Mart/Food Maxx Corporate to design a comparison study of stores with and without *Retail Program* merchandising materials and cooking demonstrations. In addition to the shopper intercept study, which is the focus of this evaluation report, the evaluation also included an analysis of store sales data, as a means of exploring changes in consumption patterns by type of intervention. That analysis was conducted by Dr. Karen Jetter, a UC-Davis economist.

The Public Health Institute hired Smith & Lehmann Consulting to implement the study. The purpose of this study was to compare the effectiveness of different retail store interventions and to determine whether they had an impact on shopper purchasing behavior and attitudes toward fruits and vegetables. Two additional goals of the evaluation were to assess changes in self-efficacy regarding healthy eating behaviors, and the extent to which shoppers noticed merchandising materials and cooking demonstrations.

DESIGN

The Retail Program Intervention

Figure 2. Timeline for the *Retail* Intervention study.

The *Network for a Healthy California Retail Program* intervention began in March 2011 and continued through June 2011. The timeline for the study is shown in Figure 2. The program consists of two types of interventions - "merchandising only" and "merchandising with a cooking demonstration," which are described in detail below.

<u>Merchandising Only Intervention</u>

Five stores were included in the "merchandizing only" intervention, which consisted of the strategic placement of *Network*-branded promotional materials encouraging consumption of fresh produce throughout the store. Promotional materials included the following:

- Floor stand with poster featuring healthy families and fresh fruits and vegetables, placed in the produce section.

- Harvest of the Month newsletters on a floor stand, refilled weekly, with different fruits and vegetables featured each month. The newsletters for March through June featured the following items: March - Carrots & Dried Fruits; April - Avocados & Spinach; May - Strawberries & Asparagus; June - Peas & Melons.
- Recipe cards in English and Spanish on a floor stand, refilled at the same time, with a different fruit or vegetable featured each month. The following recipes were featured from March to June: March - Chickpea Dip with Fresh Vegetables; April - Black Bean & Corn Pitas; May - Honey Gingered Fruit Salad; June - Watermelon Salsa.
- Shelf magnets co-branded with WIC and CalFresh logos, encouraging specific practices, including: (1) adding fruit to cereal/oatmeal; (2) adding vegetables to sandwiches; (3) adding vegetables to pasta sauce; (4) adding vegetables to rice dishes; and (5) adding vegetables to eggs. The shelf magnets were located throughout the store near relevant items. For example, shelf magnets promoting the addition of fruits and vegetables to sandwiches were placed in the bread aisle, while those promoting the addition of fruit to cereal were placed in the cereal aisle.

For additional description of the specific merchandising materials displayed, see Appendix B.

Merchandising and Cooking Demonstration Intervention

An additional five stores were assigned to the "merchandising and cooking demonstration" intervention. In addition to the promotional materials described above, these stores included a weekly cooking demonstration with recipes incorporating fruits and vegetables featured in the newsletters. The cooking demonstrations also included nutritional information on the featured products, information on selecting produce and taste samples for shoppers and accompanying children. The cooking demonstrations were typically located near the featured item in the produce section, to encourage shopper purchases of those items. They were provided by bilingual English and Spanish-speaking staff at peak shopping hours and typically lasted 4 hours.

Control Stores.

Five supermarkets were assigned to the "Control" condition and offered no merchandising materials or cooking demonstrations.

Store Selection

Fifteen FoodMaxx stores in the Central Valley and Gold Country Regions were chosen for the retail study. These stores were selected due to their location in low-income census tracts with 50% or more of residents reporting incomes below 185% of Federal Poverty Level. The 15 stores were stratified into five groups of three stores each, based on store size and produce sales. Individual stores within each stratum were randomly assigned to one of the three store

types: merchandising, merchandising and cooking demonstration and control. (The name, location, demographic profile, and condition assigned to each store participating in the study are listed in Appendix B.).

Research Methods

Survey. A shopper intercept survey (see Appendix C) was designed to measure key consumer-level outcomes from the theory of change, as shown in Figure 3. Specific survey items included purchase of the promoted fruits and vegetables; adoption of behaviors to increase fruit and vegetable consumption, such as adding vegetables to sandwiches or fruit to cereal; awareness of promotional materials and cooking demonstrations; self-efficacy with respect to behaviors that could result in increased fruit and vegetable consumption; perceptions of the health benefits of fruits and vegetables; and demographic characteristics.

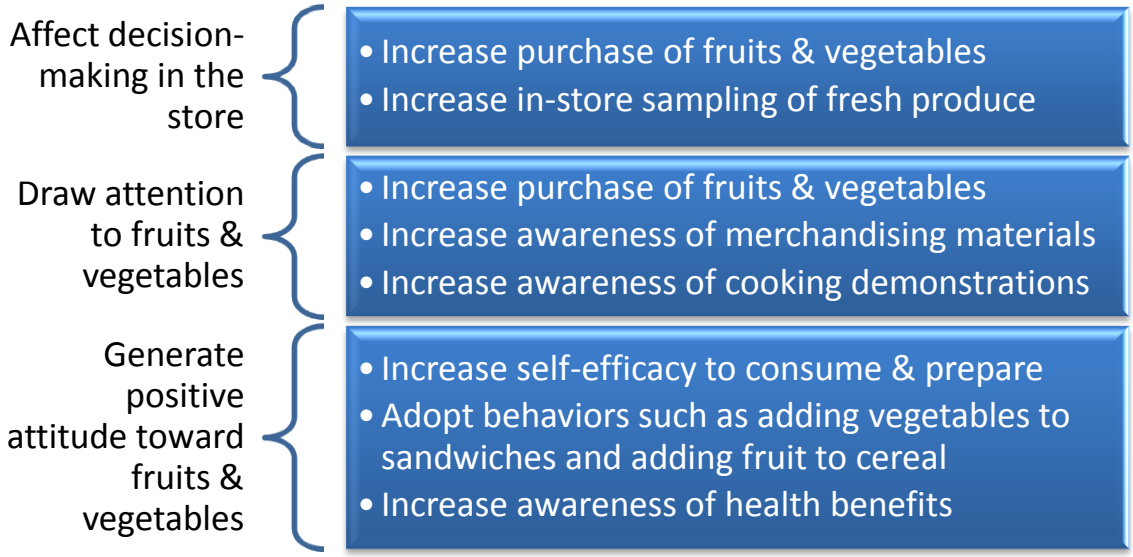


Figure 3. Items used in survey to measure key retail environment outcomes.

Process Evaluation. A process evaluation was conducted to address variations in intervention implementation between sites. Process measures are a type of evaluation intended to determine: 1) if the program was delivered as designed; and 2) the quality of implementation. Process evaluations can be helpful in explaining why an intervention is or is not effective.

The process evaluation was designed to determine the consistency and quality with which the interventions were implemented at each store based on group assignment. Interview teams were asked to record their observations of what occurred at each store and where specific *Retail* merchandising materials were located within each store. This was done to help ensure accurate comparisons between intervention store types. (A list of the specific measures used for the processes assessment can be viewed in Appendix D).

The five Merchandising and Cooking Demonstration and five Merchandising Only stores were evaluated using a list of pre-identified process measures. Process notes were also included for three control stores at which non-*Network* food tasting events occurred at the time of interviews. The *Network* cooking demonstrations were observed hourly during the four-hour survey period in each store.

Participant Selection

Eligibility criteria for participation in the survey included female shoppers with six or more discrete items in their shopping cart who self-identified as the main shopper (or co-shopper) for their household. Shoppers meeting the screening criteria were systematically sampled in order to limit subjective bias. In order to expedite the process and ensure completion of the desired number of surveys, shoppers were approached after checkout or while still in the checkout line. When approaching shoppers *after* checkout, the first female shopper to come through the checkout was invited to participate. When approaching shoppers still in the checkout line, the last female shopper in the line was invited to participate. Interviewers requested respondent consent after a brief explanation of the survey's purpose, screening criteria and length. Interviewees were offered a $5 FoodMaxx gift card and a *Network* cookbook for participating.[1] Shoppers purchasing less than six items or who were not the main shopper for their household were not interviewed.

Data Collection

Survey administration took place during the period June 1-10, 2011. It was conducted by nine enumerators working in three teams. Seven interviewers were bilingual in Spanish and English, while two were monolingual English speakers. At least two bilingual interviewers were present on each team.

The interview teams went to stores at the same time on specific dates to ensure comparability in data collection between intervention store types. On each day, interviews took place at one cooking demonstration store, one merchandising-only store, and one control store. Each interview lasted approximately 10 minutes. Interviewers began recruiting shoppers for interviews at all three stores at the time of the cooking demonstration start, and stopped interviewing shoppers at the time the cooking demonstration ended. Cooking demonstrations were scheduled for typical high-traffic times, in order to reach as wide a sample of shoppers as possible. On Wednesdays and Thursdays, the demonstrations were from 2 p.m. until 6 p.m.; on

[1] An extensive body of research documents the greater effectiveness of cash vs. noncash incentives for survey completion. Due to federal funding unallowability, funding for the incentives was provided by the Public Health Institute. Of note is the fact that many survey non-participants expressed high interest in the Network cookbooks. Resources permitting, this could be an effective item to add to the promotional materials should these continue to be offered.

Fridays from 10 a.m. until 2 p.m.; on Saturdays from noon until 4 p.m.; and on Sundays from 1 p.m. until 5 p.m.

Data Analysis

Data were cleaned and analyzed using PASW Statistics 18 and STATA SE version 10. Univariate analyses were conducted primarily in PASW for categorical data. Bivariate chi-square and logistic regression procedures were conducted primarily with STATA. Multivariate analyses were conducted using STATA's stepwise multivariate logistic regression procedure, with p=.05 criteria for inclusion in the model and p=.10 criteria for model exclusion. Intervention Store Type (Merchandising and Cooking Demonstration, Merchandising Materials Only, and Control) was forced into all multivariate models.

Results

Sample Characteristics

Interviewers approached 1,496 shoppers, and 1,022 agreed to participate, resulting in a survey participation rate of 68%[2]. Of those, 22 were ineligible for the study, leaving a final count of 1000 completed surveys. The average age of participants was 42.6 (Table 1), with 65.7% of respondents between 25 and 54 years old. Respondents at Merchandising Only stores were significantly older on average than shoppers at Control stores (44.0 years vs 41.7 years).

Approximately one-third (32.3%) of the respondents were shopping with a child at the time of the interview. Respondents were asked for how many people in their household they usually shopped. On average, they shopped for four people per household, with an average of two adults and two children. Nearly three-quarters (71.9%) of respondents shopped for at least one child under 18. Of participants with children, 80% had between one and three children under 18 living in the household (85.8%). Thirty-one percent of respondents had a high school degree or GED, and nearly 28% had completed some college. Fifty-seven percent reported that they had not received any food related assistance in the past 12 months, including food stamps (CalFresh) WIC or emergency Food Banks. Of those who had received one of these forms of assistance, the majority (32%) had utilized CalFresh.

As seen in Table 1, significantly more African American shoppers were interviewed at Control Stores than at the other two Store Intervention types, while significantly fewer Spanish-speaking Latinas and more English-speaking Latinas were interviewed at Control Stores than at

[2] Other grocery store intercept surveys have yielded lower response rates. See for example the 50% response rate in Batte et al (200x). Preliminary Results of a Customer Intercept Survey of Ohio Food Consumers: Willingness to Pay for locally produced foods. OSU AED Economics (AEDE-RP-0057005); or the 38% response rate in Yoo et al (2005) Food-purchasing patterns for home: a grocery store-intercept survey. Public Health Nutrition 9(3), 384-393.

Table 1. Sample Characteristics								
	Condition							
	Merchandising + Food Demo			Merchandising Only			Control	Total
	%	OR[3]	Sig	%	OR	Sig	%	%
Age[4]	42.1		NS	44.0		.0449	41.7	42.6
Shopping with children	30.2	0.8	NS	31.3	0.9	NS	35.1	32.2
Household size and composition								
Avg number adults[5]	2.5	---	NS	2.5	---	NS	2.6	2.5
No children	28.5	--	--	35.8	--	--	27.8	30.7
Any children	71.5	1.0	NS	64.2	0.7	.027	72.2	69.2
Avg number children[6]	1.8	---	NS	1.7	---	NS	1.7	1.7
Race/Ethnicity								
White	41.4	--	--	42.2	--	--	30.9	38.2
Latina – English speaking	27.2	0.6	.002	35.0	0.7	.057	36.4	32.9
Latina – Spanish speaking[6]	13.0	2.0	.031	10.2	1.5	NS	4.9	9.35
African-American	12.1	0.6	.024	7.2	0.3	<.001	15.8	11.7
Asian	1.8	0.4	.056	2.4	0.5	NS	3.6	2.6
Other	4.5	0.4	.008	3.0	0.3	.001	8.5	5.3
Education								
Less than high school	19.2	--	--	20.0	--	--	20.1	19.7
High school grad/GED	29.4	0.9	NS	29.6	0.8	NS	34.5	31.1
Some college, less than 4-year degree	33.9	1.1	NS	37.9	1.2	NS	32.9	34.9
College grad (BA/BS/Master's/PhD)	17.4	1.5	NS	12.5	1.0	NS	12.5	14.2
Received assistance in past 12 mo								
WIC (coupons/vouchers)	8.1	0.7	NS	8.1	0.8	NS	10.3	8.8
Food Stamps/SNAP/CalFresh/EBT	32.3	1.1	NS	31.0	1.1	NS	32.9	32.1
Emergency Food Banks	2.7	1.9	NS	2.1	1.6	NS	1.5	2.1
None	56.0	0.9	NS	58.2	1.1	NS	54.7	56.3
Language of Survey								
English	87.1	--	--	89.9	--	--	94.9	90.6
Spanish	12.9	2.7	.001	10.1	2.1	.017	5.1	9.4

[3] Odds ratios in this table are computed using logistic regression to compare Merchandising and Cooking Demonstration Stores vs. Control Stores, and Merchandising Stores vs. Control Stores.
[4] Average age estimated by using interval midpoints for each age category
[5] t-tests used to analyze interval data.
[6] All but 1 Spanish-speaker self-identified as Latina; the remaining shopper self-identified as African American

Merchandising and Cooking Demo Stores. These findings are consistent with the demographic distribution of residents living in the Census tracts surrounding the Control Stores (Appendix B). There were also more Spanish speakers interviewed at both Merchandising and Cooking Demo and Merchandising Only Stores; however, it is not possible to compare this with Census data as Census figures only provided overall proportions of non-English-speakers. There were no significant differences in other respondent characteristics among any of the three intervention store types, as seen in Table 1.

Owing to significant collinearity between language and ethnicity, but also significant differences in these characteristics between Intervention Store Types, a hybrid measure of language of interview and ethnicity was created and forced into all multivariate models. Additionally, age was forced into the models.

PROCESS RESULTS

As can be seen in Table 2, the interventions were not always on display as intended. Three of the five Merchandising Only and four of the five Merchandising and Cooking Demonstration stores did *not* include shelf magnets at the time of surveys. Furthermore, the

Table 2. In-store observations of merchandising materials

	Merchandising and Cooking Demo Store	Merchandising Only Store	Control Store
Shelf Magnets present			
Not present	4/7[7]	3/5	5/5
Present and visible	1/7	1/5	0/5
Present but too high	2/7	1/5	0/5
Floor stand present	5/7	4/5	0/5
Newsletters present	5/7	3/5	0/5
Recipe cards present	6/7	3/5	0/5
Implementation Scale			
No materials	1/7	1/5	5/5
Some merchandising materials	1/7	1/5	0/5
Most merchandising materials	4/7	3/5	0/5
All merchandising materials	1/7	0/5	0/5

cooking demonstrations varied in duration, ranging from the intended four hours to only two hours. The presence or absence of merchandising materials in stores was tabulated by interview teams. A scale was developed to represent the extent to which materials were deployed, ranging from “no merchandising materials” to “all merchandising materials”. To attain a rating of “all”, the store had to have recipe cards, newsletters, floor stands, and shelf magnets, and shelf magnets had to be easily visible (at eye level or lower). “Most materials”

[7] Denominators in the table refer to the number of store observations. Two Merchandising and Cooking Demo stores received two visits apiece, resulting in seven total observations for this Store Type.

implementation indicated that one of the types of materials was missing, or that shelf magnets were present but were located eight feet above the ground. “Some materials” implementation indicated that only one or two of the types of merchandising materials were present in the store, while “no materials” indicates that no materials were present. While the presence of merchandising materials was checked weekly during the 4-month study period, the challenge of keeping merchandising materials well-positioned and restocked is a common problem and is frequently cited in evaluations of programs in retail settings. All control stores fell into the “no materials” category. One of the Merchandising Only (Visalia) and one of the Merchandising and Cooking Demo (Marysville) stores also fell into the “no materials” category because no merchandising materials could be found in the store on the day of interview. The Activity Tracking Summary of *Network* distribution and management of intervention materials can be found in Appendix B.

Interviewer Observations Regarding Cooking Demonstrations

Cooking demonstrations were observed by interviewers in five minute intervals on three to four separate occasions during each four-hour interviewing period. Observers noted that between one and 13 people stopped at the cooking demonstration table during each five-minute observation period. The average number of people stopping at the table ranged from 3.7 to 6.4 per store. Moreover, there was variation between stores in how frequently the Retail Specialist gave a nutritional message to shoppers. A nutritional message was noted if the Retail Specialist mentioned specific health benefits from consuming fresh produce, or nutrient content of produce. Nutritional message frequency ranged from zero times during the five-minute period up to 10 times. The per store averages for nutritional messaging ranged from 2.0 to 4.7 times per five minutes.

The interviewers provided additional feedback regarding the cooking demonstrations. A number of Retail Specialists did an excellent job of engaging customers and delivering a nutrition message. Retail Specialists were amiable and encouraging. Their demonstrations were well-located at the entrance to the produce section and adjacent to watermelons. The floor stand was positioned next to strawberries in at least one store, which were on sale (this may be a reason why strawberry purchases were higher at cooking demonstration stores).

Suggestions for improvement include:

- Retail Specialists could encourage shoppers to stop at the floor stand for free recipes and nutrition information.
- Shelf magnets in some stores were positioned eight feet from the ground[8], which could be one reason people did not notice them. The Retail Specialist told one interviewer

[8] Photographs of shelf magnet placement are available on request.

that shelf magnets and other materials were repeatedly being stolen (which could also explain why interviewers could not find any materials in some stores). The Retail Specialist was also concerned about shelf competition for attention at eye level.

- Many shoppers came in to purchase cakes, meats, beer and sodas for graduation parties, as many youth were at the store in graduation gowns. This could have been an opportunity for direct marketing – Retail Specialists could have specifically mentioned that the watermelon salsa would make a great addition to a graduation party.[9]

OUTCOMES

Shopper Awareness of Intervention

Unaided Recall

Shoppers were asked whether they had seen "any materials [in this FoodMaxx] encouraging shoppers to eat more fruits and vegetables", without the prompting of any visual aids (unaided recall). (Detailed tables are found in Appendix G). Significantly more shoppers (48.5%) at Merchandising and Cooking Demonstration stores reported this, compared with Control (17.5%) and Merchandising Only (15.8%) stores, as seen in Figure 4. There were no significant differences among shoppers in regard to any of the demographic characteristics examined. Shoppers who responded that they had noticed materials throughout the store were asked to specify what they had noticed, again without visual props (Figure 5).

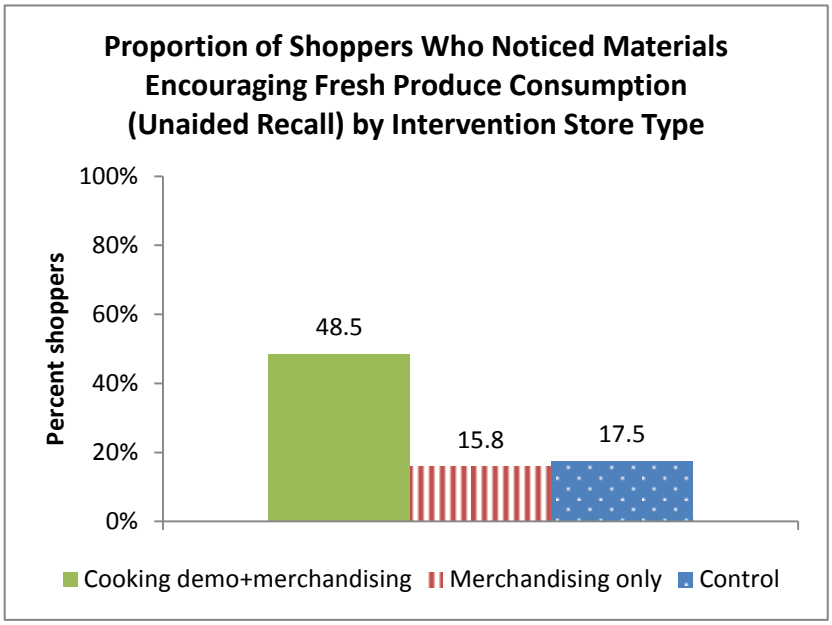


Figure 4. Shopper awareness of *Network* materials (unaided recall) by Intervention Store Type.

[9] The Network suggests possible monthly food demonstrations with the following themes: January- Healthy New Year; February- Black History Month; March- National Nutrition Month; April- Cancer Prevention Month; May- Fruit and Veggie Fest, Cinco De Mayo; June- Juneteenth, Men's Health Month; July- Healthy Summer Feasts; August- Cool Summer Snacks; September- Latino Health Awareness, Fruit and Veggie More Matters Month; October- Fall Harvest; November and December- Healthy Family Feasts.

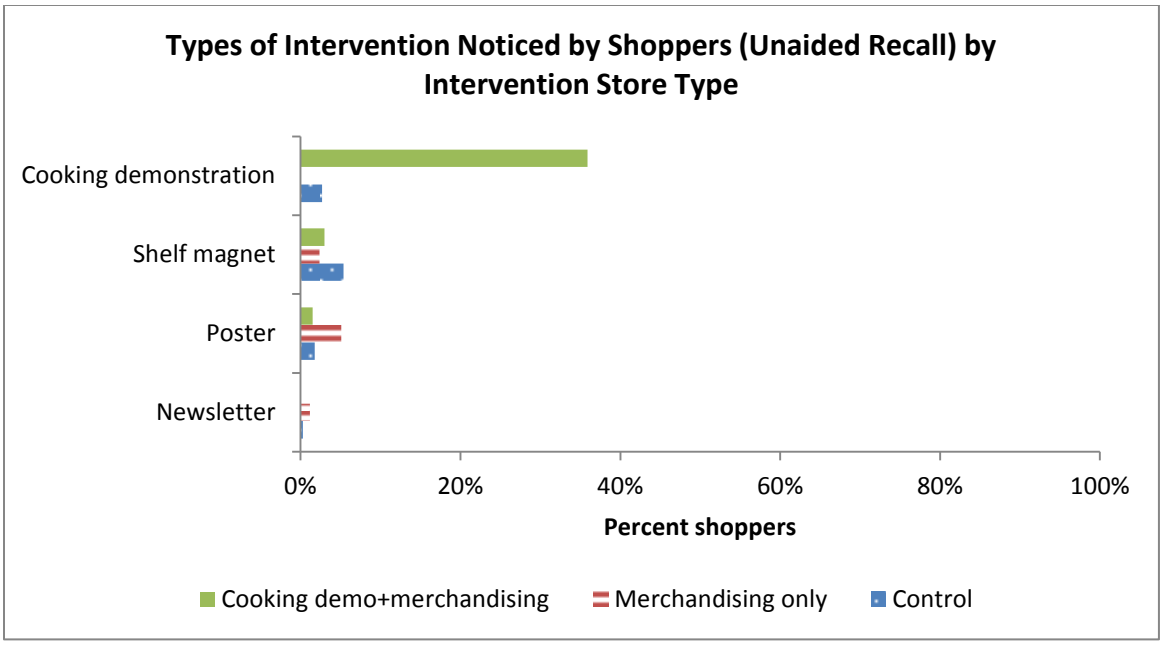


Figure 5. Intervention types noticed by shoppers at each store

Aided Recall

Shoppers were then shown images of *Network* posters, newsletters, recipe cards and WIC/CalFresh co-branded shelf magnets, and asked which they had noticed in the store (aided recall). Shoppers were also asked specifically if they had seen someone preparing food or giving food samples in the store.

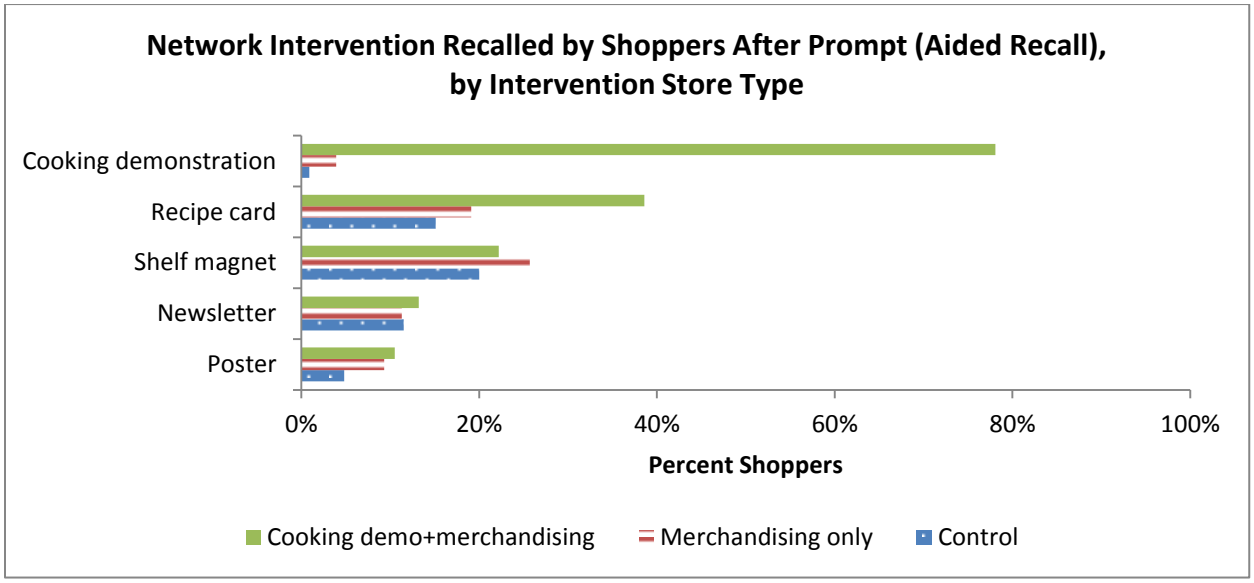


Figure 6. Recall of Network interventions after prompting by researcher, shown in each store type.

As seen in Figure 6, there were significant differences between intervention store types in the *Network* materials observed by shoppers. Shoppers in cooking demonstration stores were significantly more likely to have noticed cooking demonstrations (p<.001) or recipe cards (p<.001).

Owing to variability in merchandising material implementation, aided recall was also analyzed according to whether materials were actually present in the store. This measure included the presence of a non-*Network* food tasting or cooking demonstration. As can be seen in Figure 7, shoppers were much more likely to accurately recall seeing a cooking demonstration than any other intervention item. Almost no shoppers recalled a cooking demonstration when none was present (p<.001). The pattern was less consistent for the other materials. Shoppers were more likely to have reported seeing recipe cards (p<.001) and posters (p<.001) in stores where *Network* recipe cards and posters were present. Shopper self-report of seeing shelf magnets and newsletters was unrelated to the actual presence or absence of the items (i.e., shoppers in stores without these items were just as likely to report having seen them as shoppers in stores with the items present).

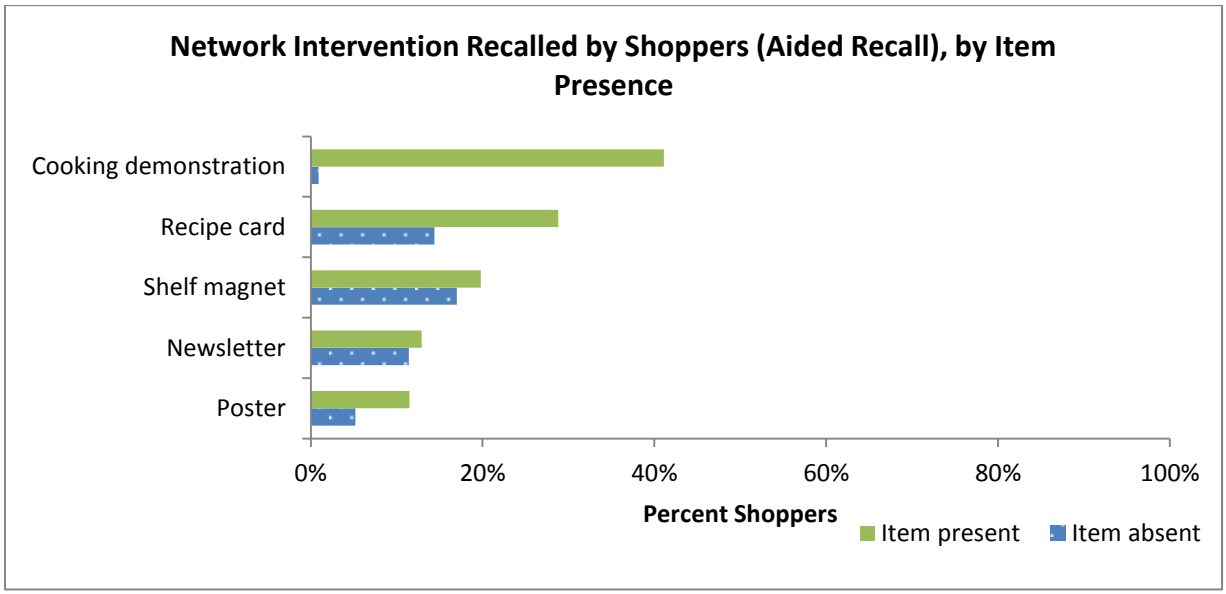


Figure 7. Prompted recall of *Network* intervention items, item as present or absent.

Multivariate analysis of shopper awareness of merchandising materials

Multivariate logistic regression was conducted to identify factors significantly associated with whether shoppers noticed merchandising materials, i.e. *Network*-branded shelf magnets, posters, recipe cards, and newsletters. A stepwise procedure was run using the variables education, number of adults in the household, children in the household, shopping with children, and receipt of WIC, CalFresh or emergency food bank assistance. Intervention store

type, ethnicity/language and age were forced into the model. The final model is shown in Table 3. Women shopping in a cooking demo store were more likely to notice merchandising materials (OR= 3.1, p<.001), presumably because the merchandising materials are prominently displayed with the cooking demo. Women who regularly purchased food for children[10] were also more likely to report noticing merchandising materials (OR=1.5, p=.016), as were Spanish-speaking Latinas (OR=1.8, p=.014).

Table 3. Multivariate analysis of factors associated with shopper awareness of merchandising materials (Aided Recall)

	Odds Ratio of Noticing Merchandising Materials	p-value
Control Store	1.0	----
Merchandising Materials Store	1.5	.017
Cooking demo and Merchandising Materials Store	3.1	<.001
Shopper purchases food for children	1.5	.016
White	1.0	---
Latina – English speaking	1.2	NS
Latina – Spanish speaking	1.8	.014
African American	1.2	NS
Asian	1.3	NS
Other Ethnicity	1.7	.076
Age	1.0	NS

Shopper Implementation of *Network*-Promoted Strategies to Increase Fruit & Vegetable Consumption

Shoppers were asked if they had tried any of the strategies promoted by the shelf magnets co-branded with WIC and CalFresh located throughout the Cooking Demonstration and Merchandising stores and Merchandising Only stores near relevant items. They encouraged the following specific practices:

- Adding fruit to cereal/oatmeal
- Adding vegetables to sandwiches
- Adding vegetables to pasta sauce
- Adding vegetables to rice dishes
- Adding vegetables to eggs

[10] This was ascertained through the household composition questions "How many people in your household do you usually shop for" and "How many are under 18".

Overall, 98.3% of all shoppers reported implementing one or more of the promoted strategies. Adding vegetables to sandwiches was the most commonly reported strategy (87.2%), while adding vegetables to egg dishes was the least frequently cited (65.9%) practice.

Shopper Implementation of *Network*-Promoted Strategies by Intervention Store Type

There were no overall differences in implementation of most *Network*-promoted strategies by intervention store type, as shown in Figure 8. However, univariate logistic regression results did show significantly more shoppers at Merchandising and Cooking Demonstration Stores who reported "adding vegetables to sandwiches" than at Control Stores (p=0.022). Conversely, significantly fewer shoppers at Merchandising Only Stores reported adding vegetables to rice dishes than at Control Stores (p=.026).

Whether or not a shopper had tried any of the *Network-Retail Program's* suggested approaches to increase fruit and vegetable consumption was also assessed based on the presence or absence of shelf magnets in the stores; however, the presence of shelf magnets in the store was unrelated to shopper implementation of strategies they promoted.

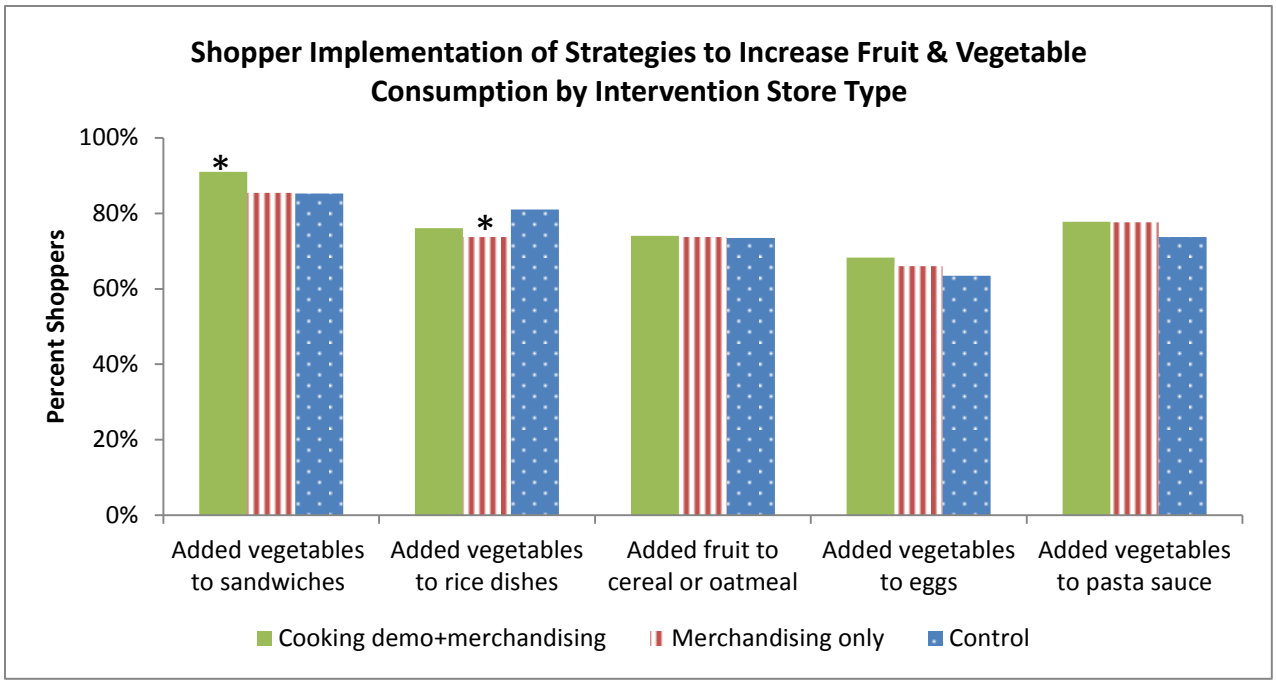


Figure 8. Shopper implementation of strategies to increase fruit and vegetable consumption by store type.

There were no significant differences on any of the *Network*-promoted strategies based on WIC status, although shoppers who received CalFresh assistance had tried adding vegetables to eggs less often than their counterparts (61.6% vs. 68.1%, p=0.04). In addition, only 52.4% of those

who had utilized an Emergency Food Bank had tried "adding fruit to cereal or oatmeal" versus 74.0% of respondents who had not utilized a Food Bank (p=0.03).

Shopper Self-Efficacy to Select, Prepare and Consume Fruits & Vegetables

Self-efficacy is defined as a person's belief in his or her ability to succeed in a particular situation or behavioral change. In this case, participants' self-efficacy in relation to increasing fruit and vegetable consumption was assessed. The specific questions that were asked during the interview included:

- How sure are you that you can select fruits and vegetables that will taste good?
- How sure are you that you can get your family to eat more vegetables at meals during the next month?
- How sure are you that you can eat at least 4 cups of fruits and vegetables most days?
- How sure are you that you can store fresh fruits and vegetables so they will last as long as possible?
- How sure are you that you can buy more fruits and vegetables even when you don't have much money?
- How sure are you that you can plan meals or snacks with more fruit during the next month?
- How sure are you that you can serve fruits and vegetables at meals even when feeling tired?

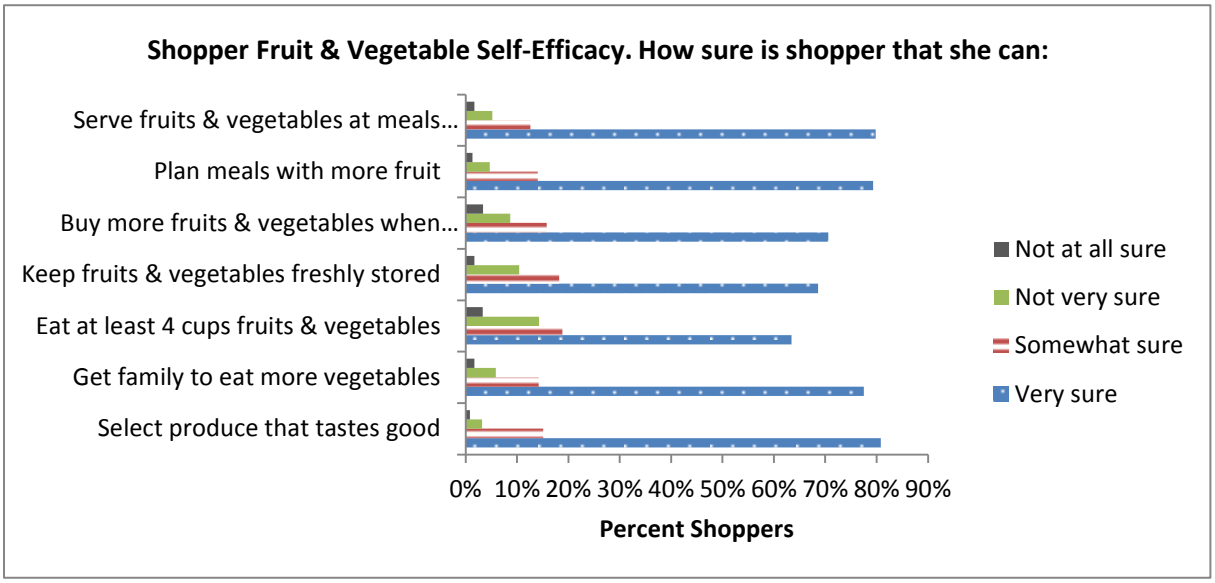


Figure 9. Shopper self efficacy in relation to the purchase, plan, cook, serve, and select fruits and vegetables for her family.

As seen in Figure 9, the majority of shoppers exhibited high self-efficacy on all measures. The measure with the lowest ratings was self-efficacy to consume at least 4 cups of fruits and

vegetables daily. Logistic regression results did not indicate any significant differences in self-efficacy between shoppers at the three different store types. A summary of these results can be found in Table 4.

Table 4. Shopper self-efficacy by intervention store type.								
	Condition							
	Merchandising + Food Demo			Merchandising Only			Control	Total
	%	OR[11]	Sig	%	OR	Sig	%	%
Self-efficacy questions								
Serve fruits & vegetables at meals even when tired	92.5	0.8	NS	92.8	0.8	NS	93.9	93.1
Plan meals with more fruits	94.9	1.7	NS	95.2	1.8	.082	91.8	94.0
Buy more fruits & vegetables when money limited	90.2	1.5	.093	87.0	1.1	NS	85.9	87.7
Keep fruits & vegetables freshly stored	88.8	0.9	NS	85.3	0.7	NS	89.3	87.8
Eat at least 4 cups fruits & vegetables	84.1	1.3	NS	82.6	1.2	NS	80.4	82.4
Get family to eat more vegetables	94.0	1.3	NS	91.0	0.9	NS	92.1	92.4
Select produce that tastes good	96.1	1.3	NS	96.7	1.5	NS	95.2	96.0

Table 5. Shopper self-efficacy by merchandising material implementation.								
	Condition							
	Majority Implementation			Partial Implementation			No Materials	Total
	%	OR[11]	Sig	%	OR	Sig	%	%
Self-efficacy questions								
Serve fruits & vegetables at meals even when tired	91.4	0.6	.048	91.6	0.6	NS	94.8	93.1
Plan meals with more fruits	94.6	1.4	NS	97.5	3.1	.061	92.5	94.0
Buy more fruits & vegetables when money limited	91.1	1.7	.020	83.1	0.8	NS	86.0	87.7
Keep fruits & vegetables freshly stored	86.5	0.8	NS	89.9	1.2	NS	88.3	87.8
Eat at least 4 cups fruits & vegetables	82.4	1.0	NS	84.2	1.2	NS	81.8	82.4
Get family to eat more vegetables	92.4	1.0	NS	93.3	1.2	NS	92.1	92.4
Select produce that tastes good	96.8	1.7	NS	97.5	2.1	NS	94.9	96.0

[11] Odds ratios in this table are computed using logistic regression to compare Merchandising and Cooking Demonstration Stores vs. Control Stores, and Merchandising Stores vs. Control Stores.

Shopper Fruit & Vegetables Self-Efficacy by Merchandising Materials

The relationship between merchandising material implementation and self-efficacy was also analyzed using logistic regression (Table 5). There was a positive relationship between implementation of most merchandising materials and self-efficacy to purchase more fruits and vegetables even with limited funds (OR=1.7 vs. no merchandising materials, p=.020), while a negative relationship was seen between merchandising materials and self-efficacy to serve produce at meals when tired (p=.048). No relationship was seen between merchandising implementation and any of the other self-efficacy measures.

Perceptions of Health Benefits of Fruit & Vegetable Consumption

Health beliefs regarding fruits and vegetables were measured using the following two statements (Figure 10):

- I feel I may develop health problems if I do not eat enough fruits and vegetables.
- Eating fruits and vegetables reduces your risk of getting diseases like Type II diabetes, cancer, or heart disease.

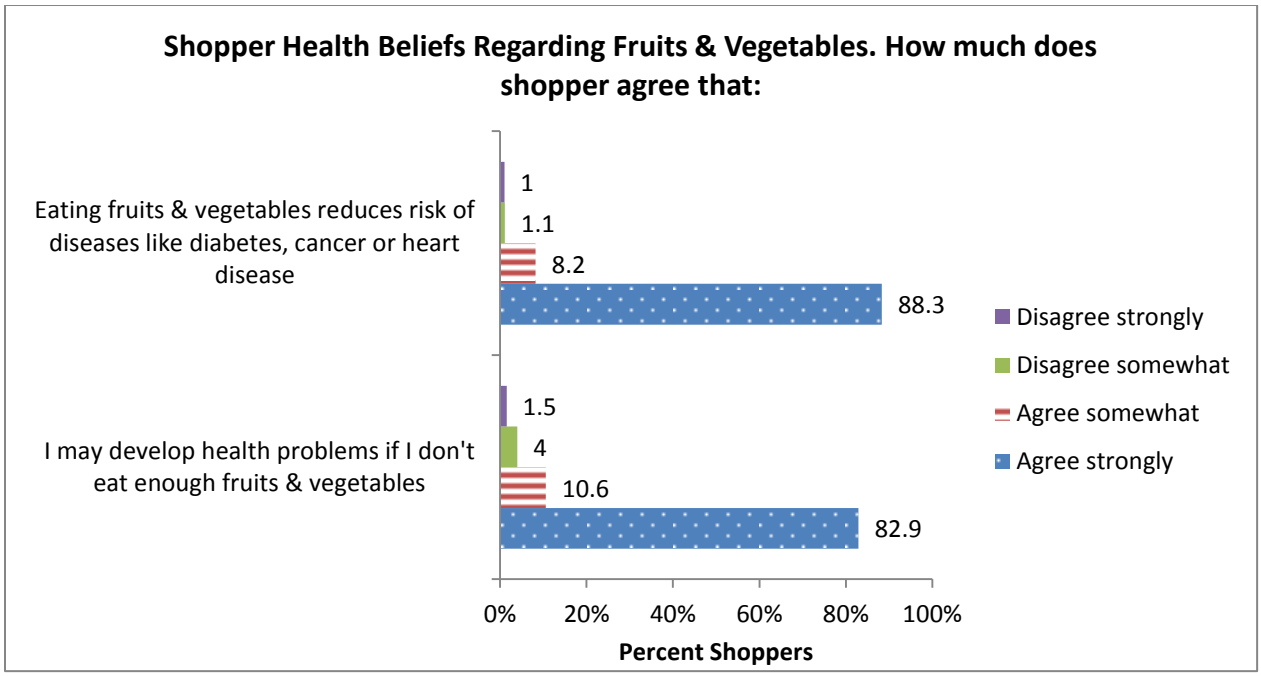


Figure 10. Shopper beliefs in relation to the consumption of fruits and vegetables with future health and disease risks.

No statistical association was seen between intervention store type and health beliefs, nor was any relationship found between merchandising material intervention level and health beliefs (Table 6).

Table 6. Shopper health beliefs by intervention store type.								
	Condition							
	Merchandising + Food Demo			Merchandising Only			Control	Total
	%	OR[12]	Sig	%	OR	Sig	%	%
Health Beliefs								
Eating fruits & vegetables reduces risk of diseases like diabetes, cancer or heart disease	94.3	0.9	NS	94.3	0.9	NS	94.8	94.4
I may develop health problems if I don't eat enough fruits & vegetables	98.2	1.5	NS	98.2	1.5	NS	97.2	97.9

Purchase of Promoted Fruits & Vegetables

This study sought to identify changes in the purchase of items promoted via the May and June "Harvest of the Month" newsletters and the June cooking demonstrations. These items included fresh strawberries, asparagus, snap or snow peas, frozen peas, watermelon and other melons.

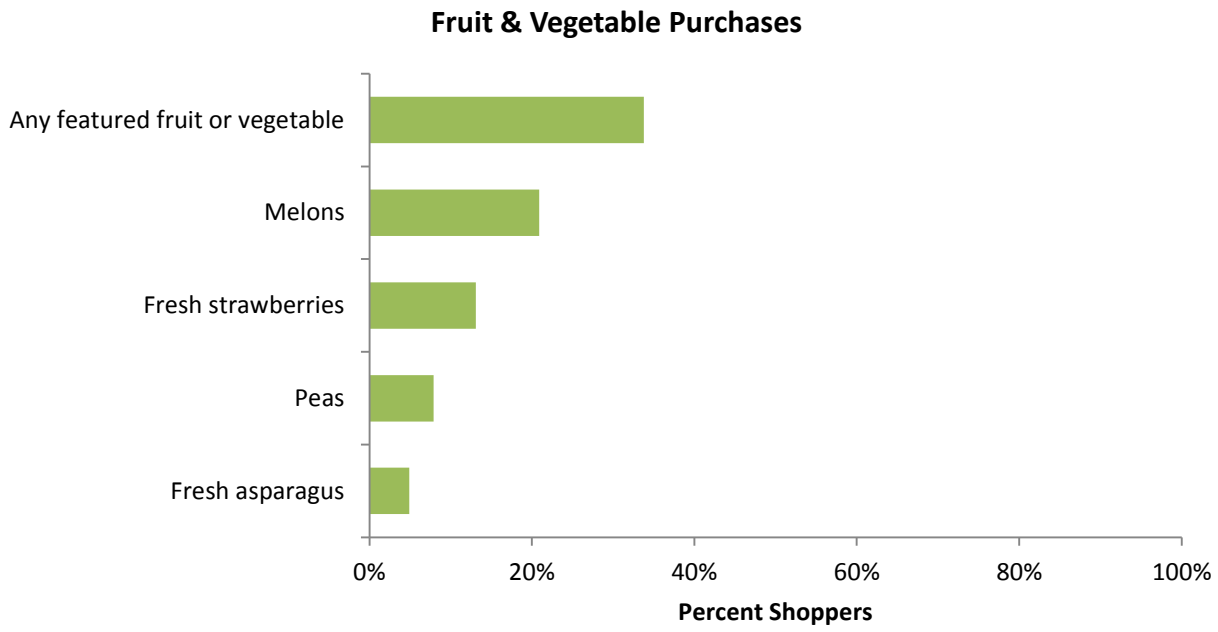


Figure 11. Shopper purchases of *Network* promoted fruits and vegetables.

[12] Odds ratios in this table are computed using logistic regression to compare Merchandising and Cooking Demonstration Stores vs. Control Stores, and Merchandising Stores vs. Control Stores.

As seen in Figure 11, 33.8% of shoppers purchased at least one of the promoted items. Twelve percent of shoppers purchased more than one of the promoted produce items. Melons were the most popular item, while fresh asparagus was the least popular.

Purchasing Behavior by Intervention Store Type

Purchases of most of the specific fruits and vegetables featured in *Network* newsletters did not vary according to intervention store type, with one exception (Table 7). Shoppers at stores with merchandising materials and a cooking demonstration were 1.9 times more likely to purchase fresh strawberries (p=.009) than shoppers at control stores. Similarly, shoppers at merchandising-only stores were 1.7 times more likely than shoppers at control stores to purchase fresh strawberries (p=.036). As mentioned earlier in this report, the floorstand displaying a *Network* poster was adjacent to sale-priced strawberries in at least one Cooking Demonstration store: the poster may have helped draw attention to the strawberries.

Table 7. Produce purchases by intervention store type.

	Condition							
	Merchandising + Food Demo			Merchandising Only			Control	Total
	%	OR[13]	Sig	%	OR	Sig	%	%
Produce Purchases								
Any featured fruit or vegetable	38.0	1.4	.027	33.4	1.2	NS	29.9	33.8
Melons	23.1	1.3	NS	20.6	1.1	NS	19.0	20.9
Fresh strawberries	5.7	1.9	.009	4.8	1.7	.036	4.2	4.9
Peas	7.8	0.8	NS	6.3	0.6	NS	9.7	7.9
Fresh asparagus	15.6	1.4	NS	14.3	1.1	NS	14.2	14.7

In aggregate, there did appear to be an association between the purchase of *at least one* of the featured fruits and vegetables and intervention store type. Shoppers at merchandising and cooking demonstration stores were 1.4 times more likely to purchase at least one of the featured fruits and vegetables than shoppers at control stores (p=.027) (Figure 12).

Notably, the item featured in the June newsletter and cooking demonstration, melon, did not show any significant difference in purchases between intervention store types. This may be owing to the general popularity of watermelon, which accounted for the majority of melon purchases, and was the most frequently purchased item at control stores.

[13] Odds ratios in this table are computed using logistic regression to compare Merchandising and Cooking Demonstration Stores vs. Control Stores, and Merchandising Stores vs. Control Stores.

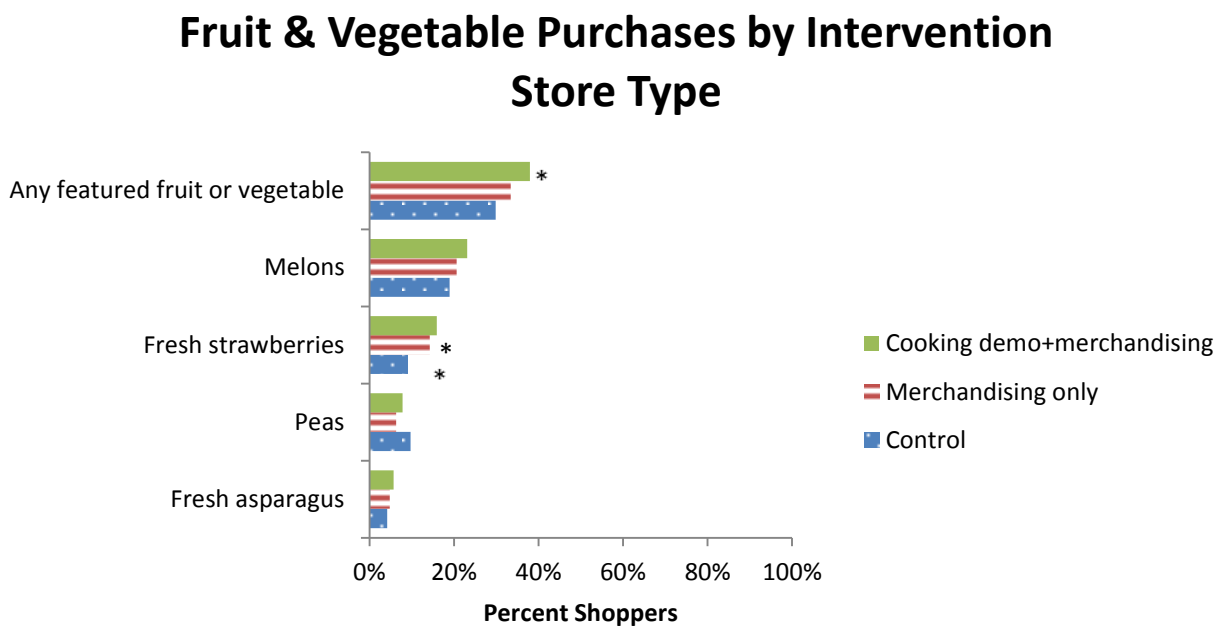


Figure 12. Purchases of *Network* promoted fruit and vegetable by Intervention Store

Associations between merchandising implementation and produce purchases

Purchases of fruits and vegetables were analyzed according to the degree of implementation of the merchandising materials, as shown in Table 8. The degree of merchandising material implementation was significantly associated with more strawberry purchases (Table 8). Overall, full implementation of merchandising materials appears to be associated with a trend toward increased purchases of some fruits, as well as with greater purchases of any fruits or vegetables.

Table 8. Produce purchases by merchandising materials implementation.

	Condition							
	Majority Implementation			Partial Implementation			No Materials	Total
	%	OR[14]	Sig	%	OR	Sig	%	%
Produce Purchases								
Any featured fruit or vegetable	37.1	1.3	.064	32.5	1.1	NS	31.2	33.8
Melons	24.3	1.3	.099	14.2	0.7	NS	19.7	20.9
Fresh strawberries	15.3	1.8	.006	20.8	2.6	.001	9.2	4.9
Peas	7.0	0.7	NS	5.8	0.6	NS	9.2	7.9
Fresh asparagus	4.1	0.8	NS	7.5	1.6	NS	4.9	14.7

[14] Odds ratios in this table are computed using logistic regression to compare three levels of implementation.

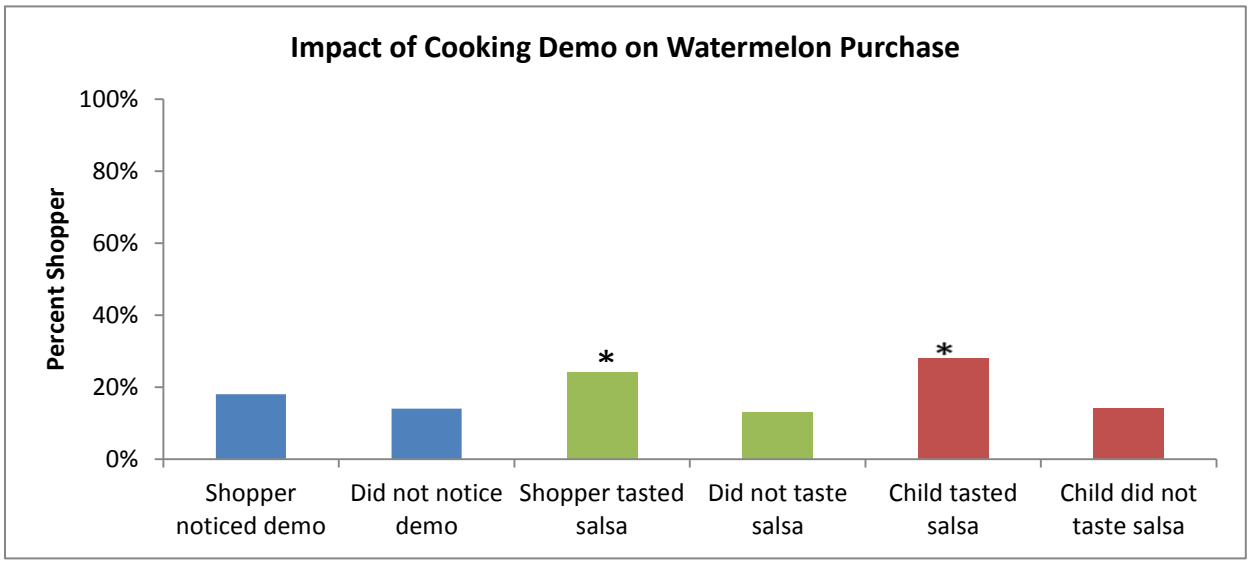


Figure 13. Cooking demonstration influence on the purchase of watermelon.

Impact of *Network* Cooking Demonstration on Produce Purchases

Nearly half (46.3%) of shoppers who noticed the *Network* cooking demonstration said they had tasted the watermelon salsa. Eighty-six percent of the shoppers who had tasted the salsa said they had liked it, and 34% of those who tasted it said they bought something that they hadn't planned to as a result of the food sample. Of shoppers who noticed the cooking demonstration, 47% of children who accompanied shoppers had tasted the salsa, and 77% of these said their child/ren had liked it. Shoppers who tasted the watermelon salsa were twice as likely to purchase watermelon (OR=2.0, p=.003); moreover, shoppers whose children tasted the salsa were also more likely to purchase watermelon (OR=2.4, p=.018) (Figure 13). The cooking demonstration appears to be associated with an increase in purchase of the produce items featured in the May and June newsletters.

Table 9. Produce purchases by shopper awareness of *Retail* intervention.

	Condition							
	Noticed food demo			Noticed merchandising materials only			Noticed nothing	Total
	%	OR[15]	Sig	%	OR	Sig	%	%
Produce Purchases								
Any featured fruit or vegetable	39.4	1.5	.019	33.2	1.1	NS	30.9	33.8
Melons	26.7	1.8	.002	21.7	1.3	NS	17.2	20.9
Fresh strawberries	16.3	1.5	.062	12.8	1.1	NS	11.5	4.9
Peas	7.2	0.8	NS	7.7	0.9	NS	8.4	7.9
Fresh asparagus	4.7	1.2	NS	7.2	1.9	.057	3.9	14.7

[15] Odds ratios in this table are computed using logistic regression to compare shoppers who notice cooking demonstrations or merchandising materials only with shoppers who notice nothing.

Impact of Shopper Awareness of *Network* Intervention on Produce Purchases

Shoppers who noticed the cooking demonstration were significantly more likely to purchase any melons than shoppers who did not notice the cooking demonstration (Table 9). These shoppers were also more likely to purchase at least one of the featured fruits or vegetables.

Multivariate Analysis of Fruit & Vegetable Purchases

Multivariate logistic regression was conducted to determine differences between study groups in fruit and vegetables purchases, while controlling for other factors. Factors entered into the initial model included use of WIC, CalFresh or Food Banks, education, shopping with children, shopping for children, and number of adults in household. Measures found to be significant in univariate analyses (noticing the cooking demonstration, tasting the sample, and having a child taste the sample) were also included in the initial stepwise model. Intervention store type, age, and ethnicity/language were forced into the model. Stepwise procedure was used to develop the final model for the purchase of at least one of the featured fruits or vegetables, as show in Table 10.

Table 10. Multivariate analysis of factors associated with purchase of any featured produce item.

	Odds Ratio of Item Purchase	p-value
Purchase of AT LEAST ONE Fruit or Vegetable Featured in Newsletters Between May-June		
Control Store	1.0	----
Merchandising Store	1.2	NS
Cooking demo + Merchandising Store	1.6	.006
Shopper on WIC	2.0	<.001
White	1.0	---
Latina – English speaking	1.4	.038
Latina – Spanish speaking	1.2	NS
African American	1.0	NS
Asian	3.5	.003
Other Ethnicity	1.8	.073
Age	1.01	.005

As seen in the table above, there was a higher likelihood of purchasing at least one of the featured fruits and vegetables in a cooking demo store, compared with a control store. WIC shoppers were nearly twice as likely to purchase fruits and vegetables as non-WIC shoppers. While the survey did not gather income data, this finding may indicate cost as a possible perceived barrier to purchasing fruits and vegetables, as many shoppers anecdotally expressed frustration with not being eligible for WIC or CalFresh and indicated that they were "caught in

the middle" – earned too much to qualify for food assistance but still considered themselves relatively low income.

Discussion

The evaluation findings do not indicate that the merchandising materials (as implemented) evaluated in this study were alone associated with greater fruit and vegetable purchase, greater self-efficacy regarding healthy cooking behaviors or increased beliefs regarding the health benefits of fruits and vegetables.

A promising indication, however, is that cooking demonstrations coupled with merchandising materials appear to be associated with increased fruit and vegetables purchases, compared with control and merchandising-only stores. Cooking demonstrations may also draw greater shopper attention to merchandising materials, as shoppers at stores with cooking demonstrations were more likely to have noticed merchandising materials. As seen in Appendix G, 48.5% of respondents in stores with cooking demonstrations reporting seeing merchandising materials, compared with 15.8% of shoppers in merchandising only stores and 17.5% of interviewees in control stores ($p<.001$).

In that regard, *Network* sources have indicated that the number of in-store promotions taking place in high population-high poverty areas will be increased in Federal Fiscal Year (FFY) 2012. The *Retail Program* will increase funding to the *Regional Networks* in the Los Angeles, Central Valley, Desert Sierra, and San Diego regions to conduct more store promotions, including food demonstrations.

These results are consistent with other studies of retail interventions, wherein purchases of featured items increases, but other nutrition-related behaviors do not change[16,17]. In contrast, researchers have found improvements in health knowledge, cooking methods and label reading knowledge with more intensive intervention, such as one that included eight in-store cooking demonstrations in a 10-week span and a mass media campaign.[18] The current study suggests that a less intensive intervention with a lower dosage yields only modest increases in fruit and

[16] Gittelsohn J, HF Song, S Suratkar, MB Kumar, EG Henry, S Sharma, M Mattingly, JA Anliker (2010). "An urban food store intervention positively affects food-related psychosocial variables and food behaviors." Health Educ Behav. 37(3): 390-402. June.

[17] Freedman MR, R Connors (2010) "Point-of-purchase nutrition information influences food-purchasing behaviors of college students: a pilot study." Journal of the American Dietetic Assoc. 110: 1222-1226.

[18] Gittelsohn J, W Dyckman, KD Frick, MK Boggs, H Haberle, J Alfred, A Vastine, N Palafox (2007). "A Pilot Food Store Intervention in the Republic of the Marshall Islands". Health Promotion in the Pacific. 14(2): 43-53.
See also Gittelsohn J, V Vijayadeva, N Davison, V Ramirez, LW Cheung, S Murphy, R Novotny (2010). "A food store intervention trial improves caregiver psychosocial factors and children's dietary intake in Hawaii". Am J Clin Nutri 91(3):736-47.

vegetable purchases. Achieving changes in self-efficacy and more robust results would likely require a more intensive intervention with a much higher dosage frequency.

In addition, messaging on shelf labels may need to be reformulated to increase efficacy. Shelf labels that have been shown to be successful in other studies[19] have contained specific nutritional messages, such as a shelf-labeling system used to identify specific foods that are more healthful choices. The *Network*'s shelf labels encouraged specific practices to increase fruit and vegetables consumption, but they lack a specific rationale for the shopper to do so. In contrast, the successful Marshall Islands and Baltimore studies cited above include mass media nutritional education in the former and messaging around healthy choices in the latter.

In this regard, *Network* staff note that to help consumers in small and medium-sized grocery stores choose the healthiest food, shelf signs for the fresh produce section will be developed in FFY 2012. Shelf signage explaining how specific nutrients contribute to improved health will help consumers quickly identify the health benefits of fruits and vegetables. For example, signage for peas will let consumers know that thiamin helps keep the body's nerves healthy. The signage is also intended to increase consumer recall of the *Network* and CalFresh brands and will encourage CalFresh consumers to use their benefits to purchase fruits and vegetables, rather than less healthy alternatives.

Recommendations:

Future Evaluations

One finding of this evaluation was that the intervention was implemented inconsistently across locations. The evaluators recommend that the *Network* conduct an evaluability assessment[20] prior to investing in future outcomes evaluations. An evaluability assessment could be conducted for 10-20% of the cost of a full evaluation in a fraction of the time, saving evaluation dollars while simultaneously providing productive feedback for program improvement. Evaluability assessments help programs prepare for an outcomes evaluation by focusing on improvement of implementation and incorporation of best and promising practices.

As a follow up-on to the prior recommendation, the evaluators recommend that any future outcomes evaluation also includes full process evaluation component. This will enable the evaluators to better document and analyze the relationship between program implementation and program outcomes.

---

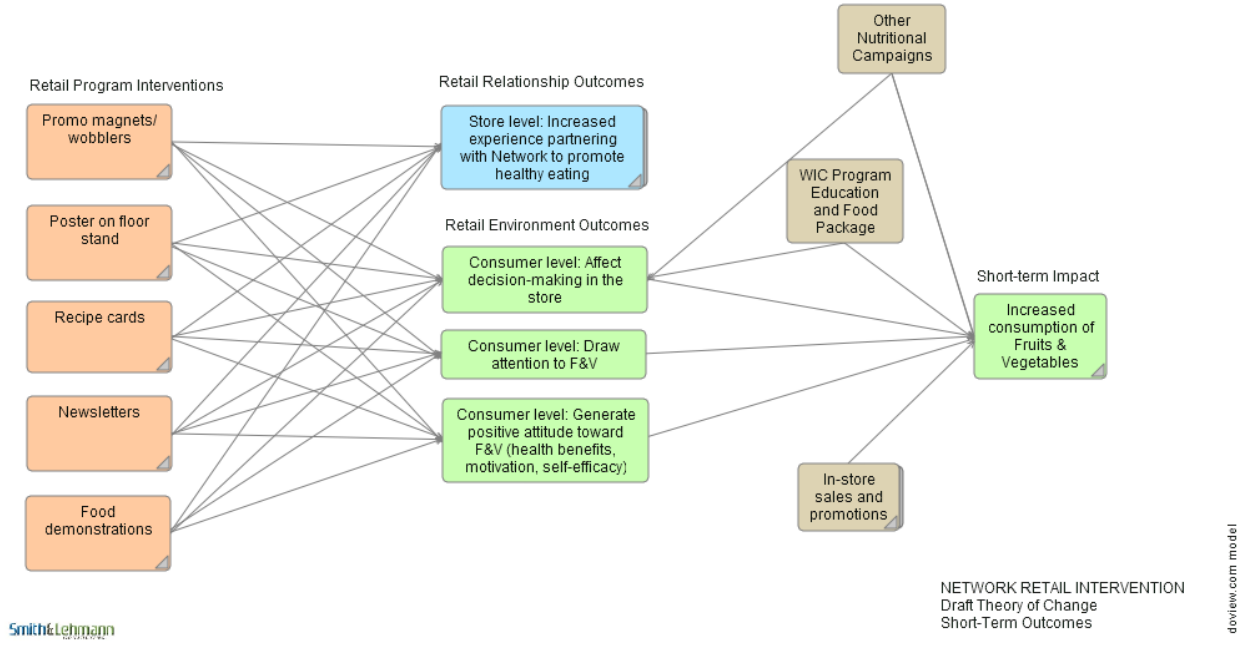
[19] Song HJ, J Gittelsohn, M Kim, S Suratkar, S Sharma, J Anliker (2009). "A corner store intervention in a low-income urban community is associated with increased availability and sales of some healthy foods." Public Health Nutr 12(11): 2060-7.

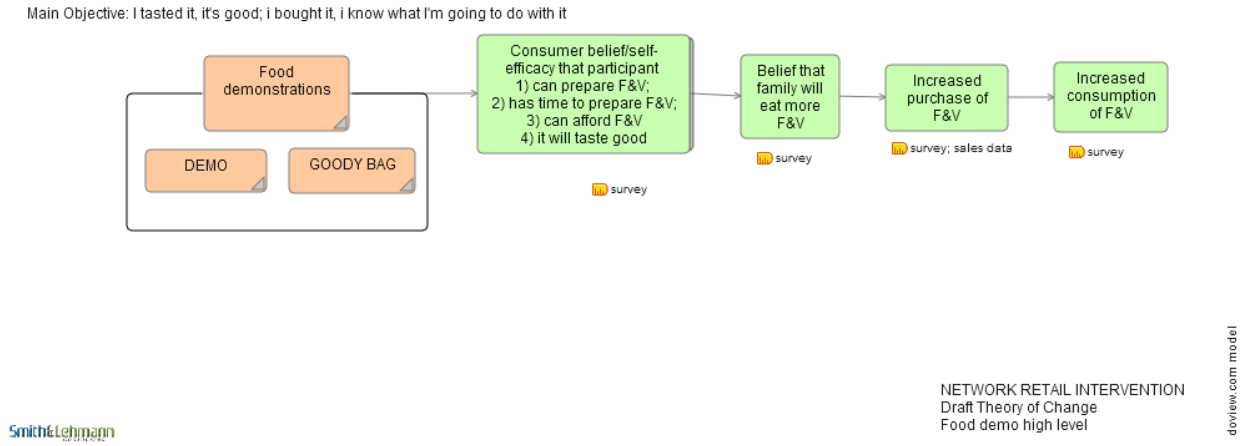
[20] Leviton LC, L Kettel Khan, D Rog, N Dawkins, D Cotton (2010). "Evaluability assessment to improve public health policies, programs, and practices." Annual Review of Public Health. 31: 213-233.

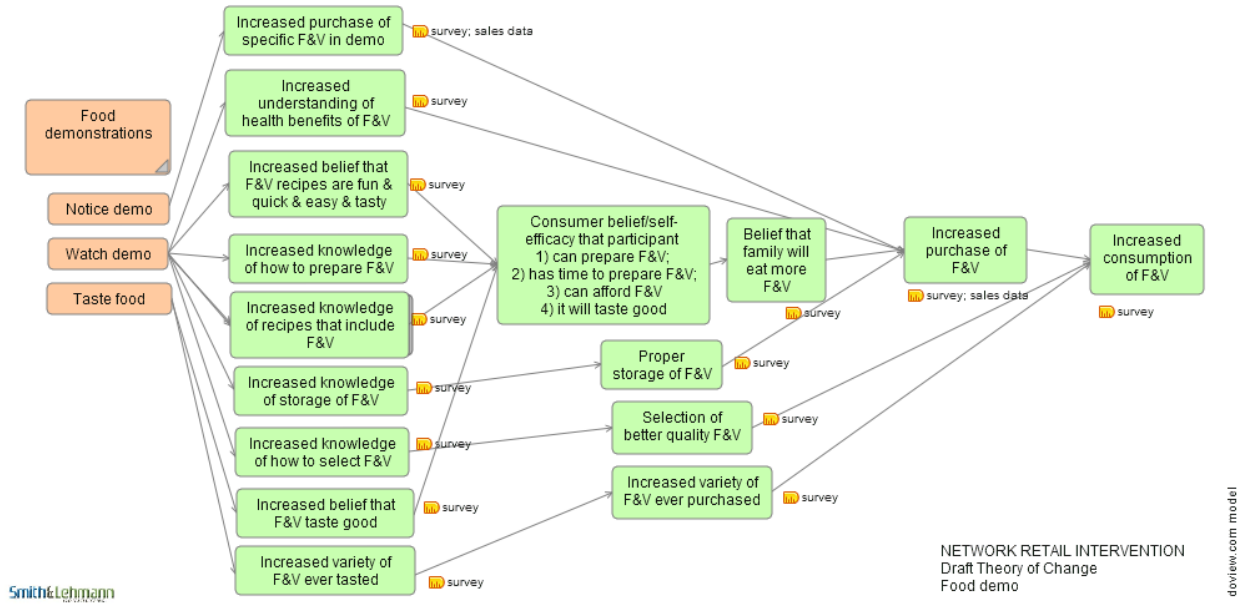
Future Interventions

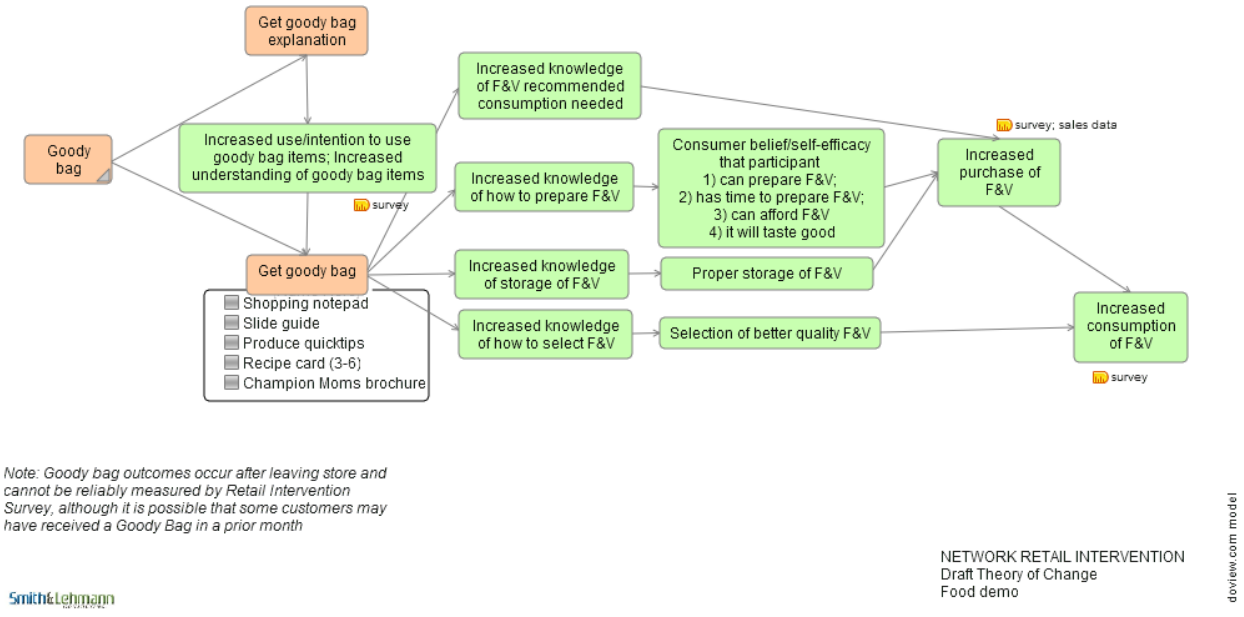
Based on the evaluation findings, the promotion of cooking demonstrations with merchandising materials would appear to be a better use of *Network* resources than the provision of merchandising materials independently of an in-store intervention. The findings indicate that the evaluated promotional materials alone do not appear to be very effective in promoting the desired results of increased fruit and vegetable consumption and greater self-efficacy with respect to the preparation of meals including fruits and vegetables. However, the findings do indicate that cooking demonstrations are associated with positive changes in several outcomes of interest, and may serve to intensify the impact of accompanying merchandising materials.

Appendix A. *Retail Program* Theory of Change

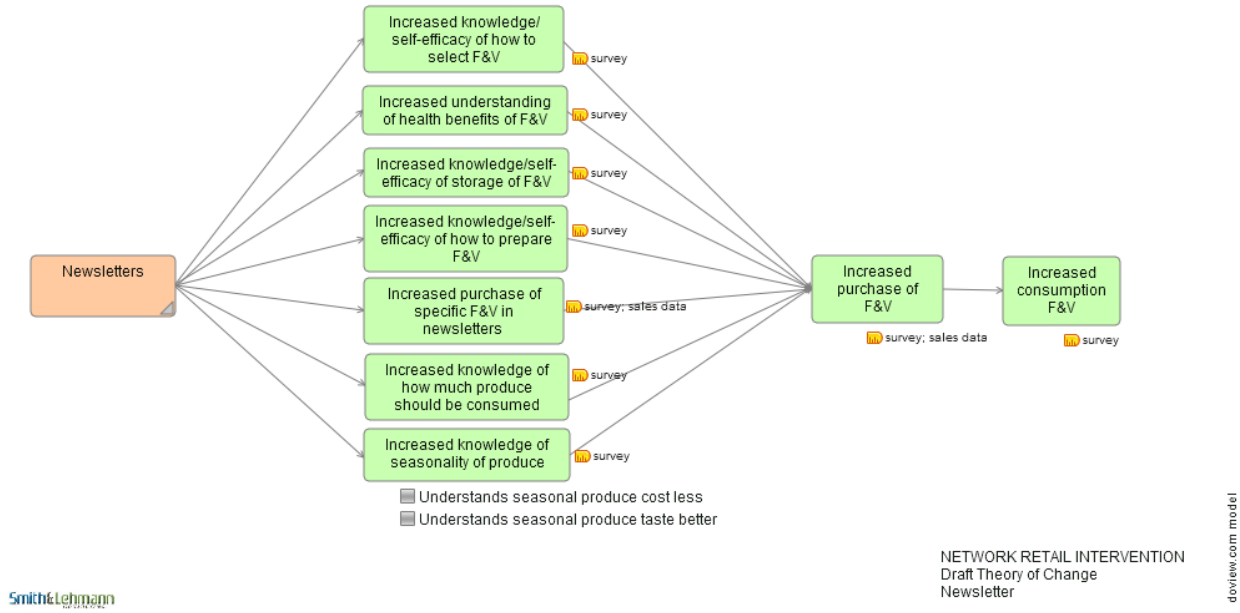


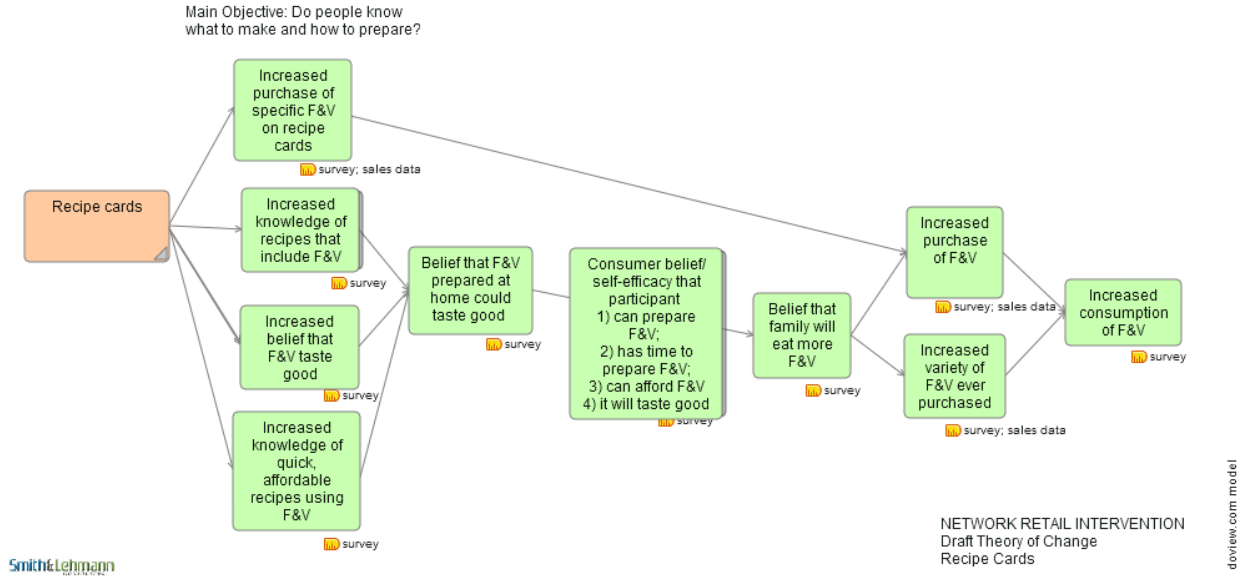


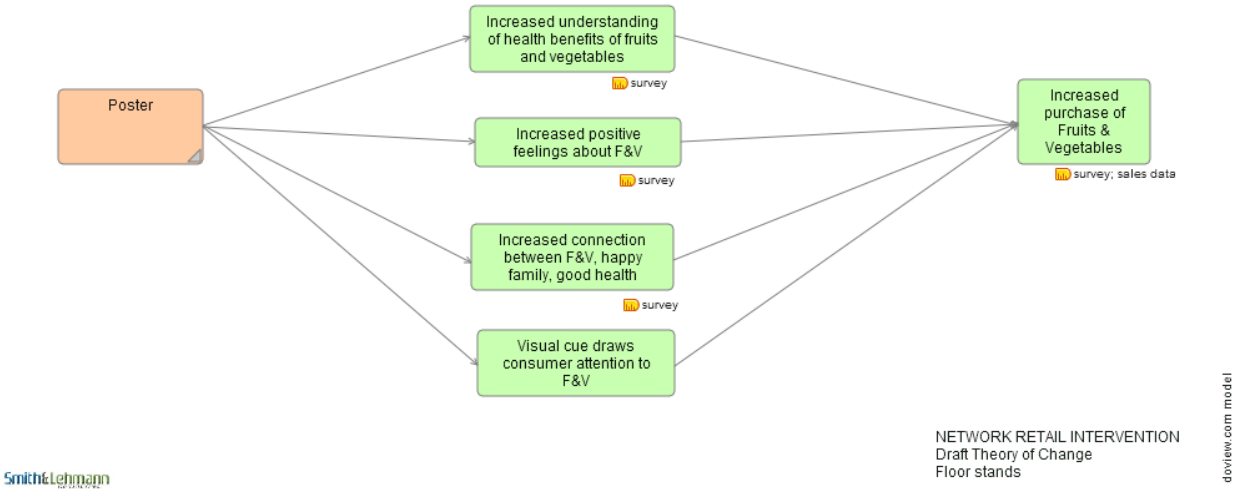


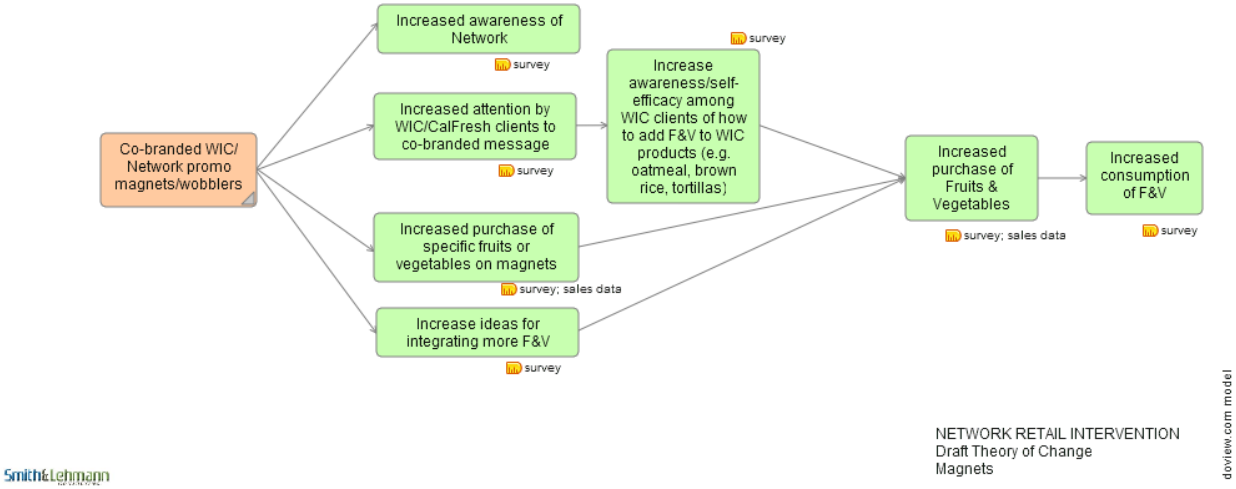


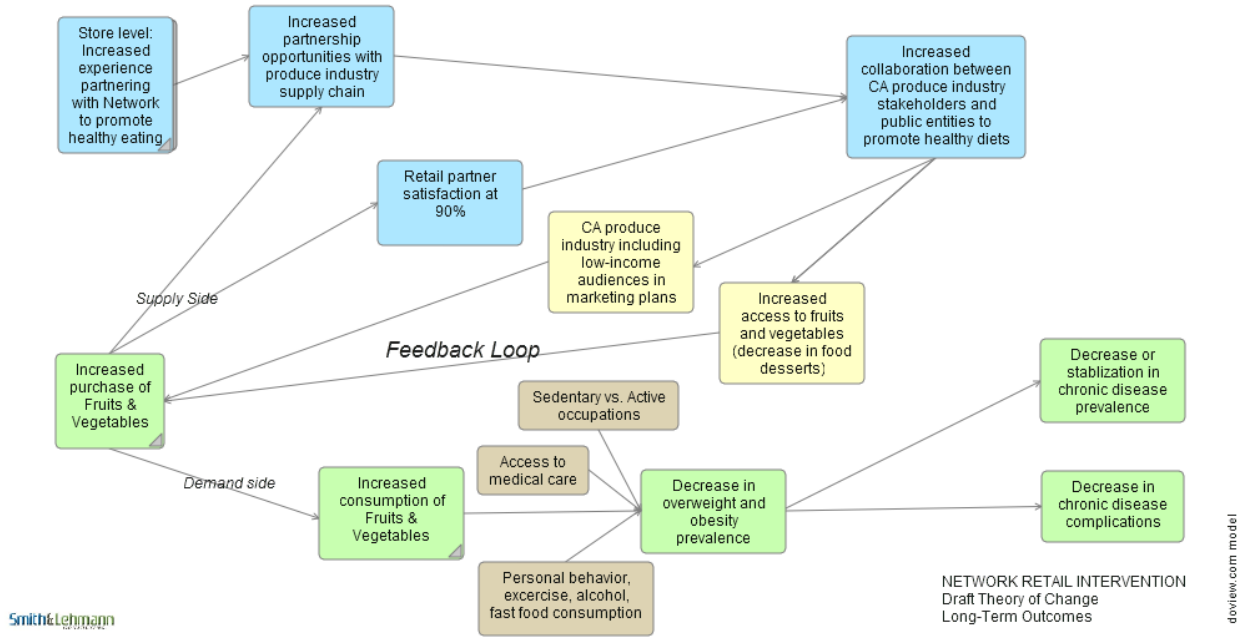
Note: Goody bag outcomes occur after leaving store and cannot be reliably measured by Retail Intervention Survey, although it is possible that some customers may have received a Goody Bag in a prior month


Newsletters
Increased knowledge/ self-efficacy of how to select F&V
survey
Increased understanding of health benefits of F&V
survey
Increased knowledge/self-efficacy of storage of F&V
survey
Increased knowledge/self-efficacy of how to prepare F&V
survey
Increased purchase of specific F&V in newsletters
survey; sales data
Increased knowledge of how much produce should be consumed
survey
Increased knowledge of seasonality of produce
survey
Increased purchase of F&V
survey; sales data
Increased consumption F&V
survey
Understands seasonal produce cost less
Understands seasonal produce taste better
NETWORK RETAIL INTERVENTION
Draft Theory of Change
Newsletter
doview.com model


Main Objective: Do people know what to make and how to prepare?
Recipe cards
Increased purchase of specific F&V on recipe cards
survey; sales data
Increased knowledge of recipes that include F&V
survey
Increased belief that F&V taste good
survey
Increased knowledge of quick, affordable recipes using F&V
survey
Belief that F&V prepared at home could taste good
survey
Consumer belief/ self-efficacy that participant
1) can prepare F&V;
2) has time to prepare F&V;
3) can afford F&V
4) it will taste good
Belief that family will eat more F&V
survey
Increased purchase of F&V
survey; sales data
Increased variety of F&V ever purchased
survey; sales data
Increased consumption of F&V
survey
NETWORK RETAIL INTERVENTION
Draft Theory of Change
Recipe Cards
doview.com model


Poster
Increased understanding of health benefits of fruits and vegetables
survey
Increased positive feelings about F&V
survey
Increased connection between F&V, happy family, good health
survey
Visual cue draws consumer attention to F&V
Increased purchase of Fruits & Vegetables
survey; sales data
Smith&Lehmann
NETWORK RETAIL INTERVENTION
Draft Theory of Change
Floor stands
doview.com model


Co-branded WIC/ Network promo magnets/wobblers
Increased awareness of Network
survey
Increased attention by WIC/CalFresh clients to co-branded message
survey
Increase awareness/self-efficacy among WIC clients of how to add F&V to WIC products (e.g. oatmeal, brown rice, tortillas)
survey
Increased purchase of specific fruits or vegetables on magnets
survey; sales data
Increase ideas for integrating more F&V
survey
Increased purchase of Fruits & Vegetables
survey; sales data
Increased consumption of F&V
survey
Smith&Lehmann
NETWORK RETAIL INTERVENTION
Draft Theory of Change
Magnets
doview.com model


Store level: Increased experience partnering with Network to promote healthy eating
Increased partnership opportunities with produce industry supply chain
Increased collaboration between CA produce industry stakeholders and public entities to promote healthy diets
Retail partner satisfaction at 90%
CA produce industry including low-income audiences in marketing plans
Supply Side
Increased access to fruits and vegetables (decrease in food desserts)
Feedback Loop
Increased purchase of Fruits & Vegetables
Sedentary vs. Active occupations
Decrease or stablization in chronic disease prevalence
Access to medical care
Demand side
Increased consumption of Fruits & Vegetables
Decrease in overweight and obesity prevalence
Decrease in chronic disease complications
Personal behavior, excercise, alcohol, fast food consumption
Smith&Lehmann
NETWORK RETAIL INTERVENTION
Draft Theory of Change
Long-Term Outcomes
doview.com model

Appendix B

Food Maxx Store Location and Assignment to Intervention Group

Cooking Demonstration and Merchandising Stores

- Citrus Heights
- Marysville
- Clovis
- Bakersfield, Ming Ave
- Fresno, Fresno St

Merchandising Only Stores

- Yuba City
- Visalia
- Bakersfield, Chester Ave
- Bakersfield, Niles Ave
- Bakersfield, White Lane

Control Stores

- Antelope
- Bakersfield, Union Ave
- Fairfield, North Texas
- Fairfield, West Texas
- Fresno, Kings Canyon

Store Location Demographics

Store	Race/Ethnicity[21] (Census Categories)				% Speaking Language other than English
	% Anglo	% Latino	% African American	% Other	
Cooking Demonstration and Merchandising Stores					
Citrus Heights	87.9	15.5	2.8	9.3	14.3
Clovis	74.0	30.5	3.0	23.0	26.6
Fresno, Fresno St	37.5	62.8	22.8	39.7	65.2
Marysville	58.1	29.1	1.6	40.4	34.5
Bakersfield, Ming Ave	60.1	37.4	14.5	25.4	32.8
Expected %s	**63.5**	**35.1**	**8.9**	**27.6**	**34.7**
Merchandising Only Stores					
Yuba City	59.4	48.0	2.0	38.5	48.5
Visalia	77.0	35.8	2.1	20.8	27.2
Bakersfield, Chester Ave	44.4	36.7	16.8	38.8	21.6
Bakersfield, Niles Ave	60.2	68.4	4.2	35.5	50.3
Bakersfield, White Lane	65.0	39.0	8.0	27.0	30.8
Expected %s	**61.2**	**45.6**	**6.6**	**32.1**	**35.7**
Control Stores					
Bakersfield, Union Ave	36.0	53.7	31.7	32.3	55.1
Antelope	68.6	6.2	11.9	19.6	44.3
Fresno, Kings Canyon	42.4	53.8	11.6	46.0	46.3
Fairfield, N Texas St	35.4	44.4	24.5	34.9	45.1
Fairfield, W Texas St	53.2	38.0	14.8	32.0	40.5
Expected %s	**47.1**	**39.2**	**18.9**	**33.0**	**46.3**

[21] Ethnicity is collected differently in the US Census than in this study. The Census categories are not directly comparable to this study sample, but provide a measure of the relative proportions of various ethnicities across stores. "Other" race is overrepresented among US Census figures for these store areas, possibly owing to the fact that Latino/Hispanic is not available as a race option on Census forms. Census respondents must choose Anglo, African American, Asian, Native American or Native Hawaiian for race, and then choose Latino/Hispanic separately for ethnicity.

Retail Program

Large Store Intervention Study
Merchandising Materials
March – June, 2011
Central Valley & Gold Country Regions
10 FoodMaxx Locations

Poster/Floor Stand

Description: this 5' tall pedestal-style stand holds a 22" x 28" spring/summer poster. The stand includes protective plastic covers to keep the poster dry and prevent damage. The poster is available in English and Spanish. The imagery highlights the emotional connection people feel towards food and make the point that people can be social with healthy foods. To do this, we had to show real people enjoying themselves while eating fruits and vegetables in various social settings. We want shoppers to think beyond "I'm supposed to eat this" and start thinking "my children would love this", or "this will be a fun addition to dinner". Culturally appropriate dishes reflect *Network for a Healthy California* recipes. The copy was tested and it embodies the three characteristics of our brand (Champions, Change Agents, and Empowering).

Harvest of Month Community Newsletter

Description: these two-sided 8" x 11" newsletters which are available in English highlight a different fruit or vegetable every month. The newsletters are held in vertical large brochure holders that were adhered to the floor stand. The newsletter

Harvest of the Month

Network for a Healthy California

The Harvest of the Month featured vegetable is carrots

Health and Nutrition Go Hand-in-Hand

Eating a variety of colorful fruits and vegetables and getting daily physical activity can help your family stay healthy, feel good, and may lower the risk of serious health problems like obesity, type 2 diabetes, heart disease, and certain types of cancer.

Two medium carrots or eight baby carrots are equal to about one cup of vegetables. One cup of carrots is an excellent source of vitamin A and vitamin K. Vitamin A helps maintain good vision, fight infection, and keep skin healthy. Vitamin K helps stop cuts and scrapes from bleeding too much and starts the healing process.

Healthy Serving Ideas

Snack on carrot sticks dipped in a light dressing.

Add shredded carrots to coleslaw for extra crunch, color, and flavor.

Stir carrots with potatoes for a sweet twist on the traditional mashed potatoes.

Shopper's Tips

- Look for smooth, firm, and well-shaped carrots with an even color.
- Store carrots in a plastic bag and refrigerate for up to two weeks.
- If you buy carrots with the green tops, break off the tops before refrigerating. Chopped carrot tops can be added to soups for extra flavor.

Let's Get Physical!

Gardening is a great way to stay active and grow some of your favorite healthy foods. Planting seeds, weeding, watering, and picking the fruits of your efforts are great ways to add a little physical activity to your day. If you don't have a lot of space, you can still get active by joining a community garden or starting a container garden.

How Much Do I Need?

The amount of fruits and vegetables you need depends on your age, gender, and the amount of physical activity you get every day.

Eat a variety of colorful fruits and vegetables with all your meals and snacks throughout the day to reach your total daily needs!

Recommended Daily Amount of Fruits and Vegetables*

	Girls Ages 9-13	Teens and Adults Ages 14 and up
Males	2½ - 3 cups per day	3½ - 4½ cups per day
Females	2½ - 3 cups per day	3½ - 3 cups per day

*If you are active, eat the higher number of cups per day. Visit www.mypyramid.gov/ for more.

For more recipes and tips, visit www.ca.championsforchange.net

This material was produced by the California Department of Public Health, Network for a Healthy California, with funding from the USDA Supplemental Nutrition Assistance Program (formerly the Food Stamp Program). These institutions are equal opportunity providers and employers. In California, food stamps provide assistance to low-income households and can help buy nutritious foods for better health. For food stamp information, call 877-847-3663. For nutrition information, visit www.dinerosinpromesa.net. © Copyright California Department of Public Health 2006.

includes nutrition information, serving and physical activity ideas, shopper's tips like storage, and daily recommended cups of produce to eat.

Featured produce items:

- March – Carrots & Dried fruits
- April – Avocado & Spinach
- May – Strawberry & Asparagus
- June – Watermelon & Peas

Shelf Magnets

Description: The six different magnets are 3" x 6.5' available in English to remind shoppers how to include fruits and vegetables in a variety of meals and snacks. The magnets are to be placed in various whole grain aisles (cereal, oatmeal, pasta, rice, bread and tortilla) near foods that are represented on the magnet and departments within the stores. For example, the sandwich magnet is to be placed on the shelf that holds whole wheat bread or near a cucumber display. The magnets contain logos of the *Network for a Healthy California*, Women, Infants, and Children (WIC) Supplemental Nutrition Program, and the CalFresh Program, formerly known as Food Stamps and federally known as the Supplemental Nutrition Assistance Program (SNAP). The magnets are to encourage CalFresh and WIC shoppers to buy fruits and vegetables with their benefits rather than less healthy alternatives.

Large Store Intervention Study Activity Tracking – March-June, 2011			
	Central Valley	**Gold Country**	**Total**
Food Maxx Retail Locations	Bakersfield (5), Visalia, Fresno (2), Clovis	Fairfield (2), Citrus Heights, Antelope, Marysville, Yuba City	--
Total # Food Maxx Stores in Study	9 stores	6 stores	15 stores
Cooking Demo+ Merchandising	3	2	5
Merchandising Only	4	1	5
Control	2	3	5
Merchandising materials			
Posters/Floor Stand	1 per store 7 total (2 Latino/3 General Audience/2 African American)	1 per store 3 total (2 Latino/1 General Audience)	10
Times maintenance needed in 4 months	8 times	N/A	At least 8
Shelf Magnets	6 per store	6 per store	
Total	42	18	60
Number Replaced over 3 months	20 replaced	N/A	At least 20
Harvest of the Month Newsletter			
Total Distributed	1,495	682	2,177
Avg per store	213.6	227.3	217.7
Avg per store p/mo	53.4	56.8	54.4
Recipes Cards			
Total Distributed	7,075	745	7,820
Avg per store	1,010.7	248.3	782
Avg per store p/mo	252.7	62.1	195.5
Food Demonstrations			
# Food Demos in 4 mo	15	10	25
Staff per demo	2-3 persons	1-2 persons	1-3 persons
# Different staff	16	6	22
Total taste tests	2,178	1,457	3,635
Avg taste tests per demo	145 (43 min to 250 max)	146 (25 min to 225 max)	145.5 (25 min to 250 max)
Total # recipe cards	1,721	730	2,451
Avg recipe cards p/demo	115 (28 min to 213 max)	73 (25 min to 225 max)	98 (25 min to 225 max)
Total # "goodie bags" (English & Spanish)	2,734	1,043	3,777
Avg "goodie bags" p/demo	182	104	151

Appendix C. Survey Instrument

1) Did you buy any of the following fruits and vegetables today?
[SHOW CARD A AND READ LIST. CHECK ALL THAT APPLY]

- Fresh strawberries
- Fresh asparagus
- Fresh snap or snow peas
- Frozen peas
- Watermelon
- Other melons (cantaloupe, honeydew, etc.)
- None of the above
- Refused/No Answer

2) Have you tried any of the following in the last 30 days?
[READ FROM LIST AND CHECK ALL THAT APPLY]

- Adding vegetables to sandwiches
- Adding vegetables to rice dishes
- Adding fruit to your cereal or oatmeal
- Adding vegetables to your eggs
- Adding vegetables to your pasta dishes
- NONE of the above
- Refused/No Answer

3) Other than sales prices or discounts, did you notice anything in this FoodMaxx today encouraging shoppers to eat more fruits and vegetables?

- Yes <- go to Q4
- No <- go to Q5
- Don't Know
- Refused/No Answer

4) Can you tell me what you noticed?
[DO NOT READ ANSWER OPTIONS; CHECK ALL THAT APPLY]

- Shelf signs
- Newsletters
- Posters
- Cooking demonstration or food samples
- Other (specify below)
- Don't know
- Refused/No Answer
- Other (specify):

5) FoodMaxx is trying different ways of communicating with shoppers. Can you tell me if you noticed any of these shelf signs while you were shopping today?
[SHOW CARD B AND CHECK ALL THAT APPLY]

- SANDWICHES
- RICE
- CEREAL
- EGGS

PASTA
OATMEAL
NONE OF THE ABOVE
Don't Know
Refused/No Answer

6) Can you tell me if you noticed one of these Harvest of the Month newsletters in this FoodMaxx today?
[SHOW CARD C]
Yes
No
Don't Know
[IF VOLUNTEERED:] Not today, but have noticed in past
Refused/ No Answer

7) Did you read any newsletters like this since March 1 of this year until today?
Yes <- go to Q8
No <- go to Q10
Don't know
Refused/No Answer

8) Did you do anything new or different because of the newsletter?
Yes
No
Don't Know
Refused/No Answer

9) Have you bought anything since March 1 of this year because you saw it featured in a newsletter like this?
Yes
No
Don't Know
Refused/ No Answer

10) Have you noticed any of these recipe cards in FoodMaxx since March 1 of this year?
[SHOW CARD D AND CHECK ALL THAT APPLY]
Chickpea dip with fresh vegetables <- Ask Q11
Black bean and corn pitas <- Ask Q13
Honey gingered fruit salad <-Ask Q15
Watermelon salsa <-Ask Q17
None of the above <- Skip to Q19
Don't Know
Refused/ No Answer

11) Have you tried chickpea dip with fresh vegetables at home?
Yes <-Go to Q12
No <- Skip to next
Don't know

Refused/ No Answer

12) Did you or anyone in your family like it?
Yes
No
Don't Know
Refused/ No Answer

13) Have you tried black bean and corn pitas at home?
Yes <- Go to Q14
No <- Skip to next
Don't Know
Refused/ No Answer

14) Did you or anyone in your family like it?
Yes
No
Don't know
Refused/ No Answer

15) Have you tried honey gingered fruit salad at home?
Yes <- Go to 16
No <- Skip to next
Don't know
Refused/ No Answer

16) Did you or anyone in your family like it?
Yes
No
Don't Know
Refused/ No Answer

17) Have you tried watermelon salsa at home?
Yes <- Go to 18
No <- Skip to 19
Don't know
Refused/ No Answer

18) Did you or anyone in your family like it?
Yes
No
Don't Know
Refused/ No Answer

19) Now I have a few questions about shopping and cooking. For each one, please tell me if you are sure or not sure that you can do it.
[READ ITEM. SELECT 1 RESPONSE PER ROW]
[IF SURE, ASK:] Are you very or somewhat sure?
[IF NOT SURE/UNSURE, ASK:] Are you not very sure or not at all sure?
How sure are you that you can...

Select fruits and vegetables that will taste good?
Get your family to eat more vegetables at meals during the next month?
Eat at least 4 cups of fruits and vegetables most days? [SHOW CUP MEASURE]
Store fresh fruits and vegetables so they will last as long as possible?
Buy more fruits and vegetables even when you don't have much money?
Plan meals or snacks with more fruit during the next month?
Serve fruits and vegetables at meals even when feeling tired?

20) Did you notice any of these posters in the FoodMaxx today?
[SHOW CARD E]
Yes
No
Don't know
Refused/No Answer

21) Did you notice someone preparing food or giving food samples in the FoodMaxx today?
Yes
No
Don't Know
Refused/ No Answer

22) Did you taste the watermelon salsa?
Yes <- Go to Q23
No <- Go to Q25
Don't Know
Refused/ No Answer

23) Did you like it?
Yes
No
Don't Know
Refused/ No Answer

24) Did you decide to buy anything you weren't planning to buy based on the food sample?
Yes
No
Don't Know
Refused/ No Answer

25) Are you shopping with kids today?
Yes
No <- Go to Q28
Refused/ No Answer

Go to question 28 if question 21 is No or Don't Know or Refused/ No Answer

26) Did any of the children taste the watermelon salsa?
Yes
No <- Go to Q28
Don't Know

Refused/ No Answer

27) Did any of them like it?

Yes

No

Don't Know

Refused/ No Answer

28) Please tell me whether you agree or disagree with the following statements.

[READ ITEM] Do you agree or disagree?

[THEN ASK:] Do you **strongly** agree/disagree or **somewhat** agree/disagree**?**

I feel I may develop health problems if I do not eat enough fruits and vegetables.

Eating fruits and vegetables reduces your risk of getting diseases like Type II diabetes, cancer or heart disease.

29) I just have a few last questions for statistical purposes.

How many people in your household do you usually shop for?

1, myself <- Go to Q31

2

3

4

5

6

7

8

9

10 or more

Don't Know

Refused/ No

30) How many are under age 18?

0

1

2

3

4

5

6

7

8

9

10 or more

Don't know

Refused/ No Answer

31) What is the highest year of school that you have finished or gotten credit for? [DO NOT READ]

Did not attend school

8th grade or less
Some high school, no diploma
High school grad/GED
Some college, no degree
Associates' degree
4 year college graduate or more (BA/BS/Master's/PhD, etc.)
Don't Know
Refused/ No Answer

32) Which of the following categories describes you best?
[READ OPTIONS. CHECK ALL THAT APPLY]
White
Hispanic or Latino
African-American
Asian (including Filipino)
Native American or Alaska Native
Pacific Islander or Hawaiian Native
Other
Don't Know
Refused/ No Answer
If Other, please specify:

33) Which of the following categories best describes your age?
[READ CATEGORIES]
Are you...
18-24
25-34
35-44
45-54
55-64
65+
Don't know
Refused/ No Answer

34) Have you received any of the following forms of assistance in the past 12 months?
[DO NOT READ. SHOW LIST AND CHECK ALL THAT APPLY]
WIC
Food Stamps aka SNAP/CalFresh/EBT
Emergency Food Banks or food pantries
NONE of the above
Don't Know
Refused/ No Answer

35) Do you feel respondent answered questions truthfully?
Yes
No
Don't Know/ Not Sure

36) Interviewer comments:
37) Interviewer name:
38) Store
    Antelope: 8065 Watt Ave
    Bakersfield: 4128 Chester Ave
    Bakersfield: 4400 Ming Ave.
    Bakersfield: 6465 Niles St
    Bakersfield: 1115 Union Ave.
    Bakersfield: 6300 White Lane
    Citrus Heights: 6982 Sunrise Blvd
    Clovis: 1355 Shaw Ave.
    Fairfield: 1833 **N.** Texas St (Careful!)
    Fairfield: 1955 **W.** Texas St (Careful!)
    Fresno: 4970 E. Kings Canyon Rd
    Fresno: 1177 Fresno St.
    Marysville: 6000 Lindhurst Ave.
    Visalia: 1550 N. Ben Maddox
    Yuba City: 1232 Colusa Ave

Appendix D. Process Evaluation Questions

1. Store name
2. Date of visit
3. Start time of 5-minute observation
4. How many people stopped at the table during the 5 minute period?
5. How many times did retail specialist give a nutritional message to shoppers (in a 5-minute period)?
6. Describe location of floor stand with *Network* poster.
7. Were there any newsletters on the floor stand?
8. Were there any recipe cards on the floor stand?
9. Where is location of Vegetables with Sandwich magnet?
10. Where is location of Vegetables with Rice Dishes magnet?
11. Where is location of Fruit with Cereal magnet?
12. Where is location of Fruit with Oatmeal magnet?
13. Where is location of Vegetables with Eggs magnet?
14. Where is location of Vegetables with Pasta Sauce magnet?
15. Describe location of demo table
16. Is any other non-*Network* signage or messaging evident in the produce section encouraging purchase of fruits and vegetables?
17. Describe signage or messaging.
18. Are there other non-*Network* food demonstration or taste tests evident in the store?
19. Describe the food item(s) featured in the food demo/taste test.
20. Where is the non-*Network* food demo or taste test located?

Appendix E. Demographic Results by Intervention Store Type

	Condition								
	Merchandising+Food Demo		Merchandising Only		Control		Total		Sig.[22]
	n	%	n	%	n	%	n	%	
Age									
Average shopper age[23]	42.1		44.0		41.7		42.6		NS
Don't know	0	0.0	0	0.0	0	0.0	0	0.0	
Refused/No answer	0	0.0	0	0.0	2	0.2	2	0.2	
Total	334	100.0	335	100.0	331	100.0	1000	100.0	NS
Shopping with children									
Yes	101	30.2	105	31.3	116	35.1	322	32.2	
No	233	69.8	227	67.8	215	64.9	675	67.5	
Refused/No answer	0	0.0	3	0.9	0	0.0	3	0.3	
Total	334	100.0	335	100.0	331	100.0	1000	100.0	NS
Household size and composition									
Avg number adults 18 and older	2.5		2.5		2.6		2.5		NS
Avg number children under 18	1.8		1.7		1.7		1.7		NS
No children	95	28.5	120	35.8	92	27.8	307	30.7	
Any children	238	71.5	215	64.2	239	72.2	692	69.2	p=.046
Received assistance in the past 12 months									
WIC (coupons/vouchers)	27	8.1	27	8.1	34	10.3	88	8.8	NS
Food Stamps/SNAP/CalFresh/EBT	108	32.3	104	31.0	109	32.9	321	32.1	NS
Emergency Food Banks	9	2.7	7	2.1	5	1.5	21	2.1	NS
None	187	56.0	95	58.2	181	54.7	563	56.3	NS
Don't know	2	0.6	1	0.3	1	0.3	4	0.4	

[22] Significance testing excludes "Don't know/Refused/No answer" categories
[23] Analysis performed using ANOVA. Chi-square used to analyze categorical data.

	Condition								
	Merchandising+Food Demo		Merchandising Only		Control		Total		Sig.[22]
	n	%	n	%	n	%	n	%	
No answer/refused	1	0.3	1	0.3	1	0.3	3	0.3	
Race/Ethnicity									
White	137	41.0	141	42.1	102	30.8	380	38.0	
Latina – English speaking	90	27.2	117	35.0	120	36.4	327	32.9	
Latina – Spanish speaking	43	13.0	34	10.2	16	4.9	93	9.35	
African-American	40	12.0	24	7.2	52	15.7	116	11.6	
Asian	6	1.8	8	2.3	12	3.6	26	2.6	
Other	15	4.5	10	3.0	28	8.5	53	5.3	
Don't know	1	0.3	0	0.0	0	0.0	1	0.1	
No answer	2	0.6	1	0.3	1	0.3	4	0.4	
Total	334	100.0	335	100.0	331	100.0	1000	100.0	p<0.001
What is the highest year of school that you have finished or gotten credit for?									
Less than high school	64	19.2	67	20.0	66	20.1	197	19.8	
High school grad/GED	98	29.3	99	29.6	113	34.1	310	31.0	
Some college, less than 4-year degree	113	33.9	127	37.9	108	32.9	348	34.9	
College grad (BA/BS/Master's/PhD)	58	17.4	42	12.5	41	12.4	141	14.1	
Don't know	1	0.3	0	0.0	1	0.3	2	0.2	
No answer/refused	0	0.0	0	0.0	2	0.6	2	0.2	
Total	334	100.0	335	100.0	331	100.0	1000	100.0	NS
Language of Survey									
English	291	87.1	301	89.9	314	94.9	906	90.6	
Spanish	43	12.9	34	10.1	17	5.1	94	9.4	
Total	334	100.0	335	100.0	331	100.0	1000	100.0	p=0.003
INTERVIEWER OBSERVATIONS: Do you feel the respondent answered these questions accurately and truthfully?									
Yes	325	97.3	327	97.6	328	99.1	980	98	
No	6	1.8	3	0.9	2	0.6	11	1.1	
Don't know/not sure	3	0.9	5	1.5	1	0.3	9	0.9	

	Condition								
	Merchandising+Food Demo		Merchandising Only		Control		Total		Sig.[22]
	n	%	n	%	n	%	n	%	
Total	334	100	335	100	331	100	1000	100	NS

Appendix F. Outcomes by Intervention Store Type

Purchases of Network-Featured Fresh Produce	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2 sig.
	n	%	n	%	n	%	n	%	
PURCHASING BEHAVIOR									
Did you buy any of the following fruits and vegetables have you purchased today?									
Fresh strawberries	53	15.9	48	14.3	30	9.1	131	13.1	p=0.02
Fresh asparagus	19	5.7	16	4.8	14	4.2	49	4.9	NS
Fresh or frozen peas	26	7.8	21	6.3	32	9.7	79	7.9	NS
Fresh melons	77	23.1	69	20.6	63	19.0	209	20.9	NS
Any of the above	127	38.0	112	33.4	99	29.9	338	33.8	p=0.08
Refused/No answer	0	0	0	0	0	0	0	0	
Total	n=334		n=335		n=331				

Incorporation of Network-Promoted Strategies for Increasing Fruit & Vegetable Consumption	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
In the last month, have you tried any of the following?									
Added vegetables to sandwiches	304	91	286	85.4	282	85.2	872	87.2	p=0.04
Added vegetables to rice dishes	254	76.1	247	73.7	268	81	769	76.9	p=0.08
Added fruit to your cereal or oatmeal	247	74	242	72.2	243	73.4	732	73.2	NS
Added vegetables to eggs	228	68.3	221	66	120	63.4	659	65.9	NS

Added vegetables to pasta sauce	260	77.8	260	77.6	244	73.7	764	76.4	NS
ANY of the above	328	98.2	330	98.5	325	98.2	983	98.3	NS
Refused/No answer	0	0	0	0	0	0	0	0	
Total	n=334		n=335		n=331				

Self-Efficacy	**Merchandising + Food Demo**		**Merchandising Only**		**Control**		**Total**		**X^2sig.**
	n	%	n	%	n	%	n	%	
How sure are you that you can select fruits and vegetables that will taste good?									
Very sure (4)	275	82.3	272	81.2	261	78.9	808	80.8	
Somewhat sure (3)	46	13.8	51	15.2	54	16.3	151	15.1	
Not very sure (2)	12	3.6	8	2.4	12	3.6	32	3.2	
Not at all sure (1)	1	0.3	3	0.9	4	1.2	8	0.8	
Don't know	0	0	1	0.3	0	0	1	0.1	
No answer/refused	0	0	0	0	0	0	0	0	
Total	334	100	335	100	331	100	1000	100	NS
How sure are you that you can get your family to eat more vegetables at meals during the next month?									
Very sure (4)	256	76.6	249	74.3	270	81.6	775	77.5	
Somewhat sure (3)	55	16.5	53	15.8	34	10.3	142	14.2	
Not very sure (2)	16	4.8	21	6.3	22	6.6	59	5.9	
Not at all sure (1)	4	1.2	9	2.7	4	1.2	17	1.7	
Don't know	1	0.3	2	0.6	0	0	3	0.3	
No answer/refused	2	0.6	1	0.3	1	0.3	4	0.4	
Total	334	100	335	100	331	100	1000	100	NS
How sure are you that you can eat at least 4 cups of fruits and vegetables most days?									
Very sure (4)	218	65.3	215	64.2	201	60.7	634	63.4	
Somewhat sure (3)	63	18.8	60	17.9	65	19.7	188	18.8	
Not very sure (2)	43	12.9	43	12.8	57	17.2	143	14.3	
Not at all sure (1)	10	3	15	4.5	8	2.4	33	3.3	

Self-Efficacy	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
Don't know	0	0	1	0.3	0	0	1	0.1	
No answer/refused	0	0	1	0.3	0	0	1	0.1	
Total	334	100	335	100	331	100	1000	100	NS
How sure are you that you can store fresh fruits and vegetables so they will last as long as possible?									
Very sure (4)	236	70.6	218	65.1	232	70.1	686	68.6	
Somewhat sure (3)	56	16.8	66	19.7	60	18.1	182	18.2	
Not very sure (2)	30	9	42	12.5	32	9.7	104	10.4	
Not at all sure (1)	7	2.1	7	2.1	3	0.9	17	1.7	
Don't know	4	1.2	1	0.3	1	0.3	6	0.6	
No answer/refused	1	0.3	1	0.3	3	0.9	5	0.5	
Total	334	100	335	100	331	100	1000	100	NS
How sure are you that you can buy more fruits and vegetables even when you don't have much money?									
Very sure (4)	243	72.7	231	69	232	70.1	706	70.6	
Somewhat sure (3)	52	15.6	57	17	49	14.8	158	15.8	
Not very sure (2)	19	5.7	31	9.2	37	11.2	87	8.7	
Not at all sure (1)	13	3.9	12	3.6	9	2.7	34	3.4	
Don't know	3	0.9	3	0.9	3	0.9	9	0.9	
No answer/refused	4	1.2	1	0.3	1	0.3	6	0.6	
Total	334	100	335	100	331	100	1000	100	NS
How sure are you that you can plan meals or snacks with more fruit during the next month?									
Very sure (4)	272	81.4	264	78.8	257	77.6	793	79.3	
Somewhat sure (3)	44	13.2	51	15.2	45	13.6	140	14	
Not very sure (2)	13	3.9	11	3.3	23	7	47	4.7	
Not at all sure (1)	4	1.2	5	1.5	4	1.2	13	1.3	
Don't know	1	0.3	3	0.9	2	0.6	6	0.6	
No answer/refused	0	0	1	0.3	0	0	1	0.1	
Total	334	100	335	100	331	100	1000	100	NS
How sure are you that you can serve fruits and vegetables at meals even when feeling tired?									
Very sure (4)	261	78.1	264	78.8	273	82.5	798	79.8	

Self-Efficacy

	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
Somewhat sure (3)	46	13.8	45	13.4	35	10.6	126	12.6	
Not very sure (2)	19	5.7	16	4.8	17	5.1	52	5.2	
Not at all sure (1)	6	1.8	8	2.4	3	0.9	17	1.7	
Don't know	2	0.6	1	0.3	2	0.6	5	0.5	
No answer/refused	0	0	1	0.3	1	0.3	2	0.2	
Total	334	100	335	100	331	100	1000	100	NS

Health Beliefs

	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
I feel I may develop health problems if I do not eat enough fruits and vegetables.									
Agree strongly	280	83.8	274	81.8	275	83.1	829	82.9	
Agree somewhat	34	10.2	39	11.6	33	10	106	10.6	
Disagree somewhat	12	3.6	14	4.2	14	4.2	40	4	
Disagree strongly	7	2.1	5	1.5	3	0.9	15	1.5	
Don't know	1	0.3	3	0.9	6	1.8	10	1	
No answer/refused	0	0	0	0	0	0	0	0	
Total	334	100	335	100	331	100	1000	100	NS
Eating fruits and vegetables reduces your risk of getting diseases like Type II diabetes, cancer or heart disease									
Agree strongly	296	88.6	294	87.8	293	88.5	883	88.3	
Agree somewhat	29	8.7	31	9.2	22	6.7	82	8.2	
Disagree somewhat	4	1.2	2	0.6	5	1.5	11	1.1	
Disagree strongly	2	0.6	4	1.2	4	1.2	10	1	
Don't know	3	0.9	4	1.2	7	2.1	14	1.4	
No answer/refused	0	0	0	0	0	0	0	0	
Total	334	100	335	100	331	100	1000	100	NS

Appendix G. Awareness of Merchandising Materials by Intervention Store Type

	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
Did you see any materials in this FoodMaxx encouraging shoppers to eat more fruits and vegetables? (unaided recall)									
Yes	162	48.5	53	15.8	58	17.5	273	27.3	
No	164	49.1	266	79.4	264	79.8	694	69.4	
Don't know	8	2.4	15	4.5	9	2.7	32	3.2	
No answer/Refused	0	0	1	0.3	0	0	1	0.1	
Total	334	100	335	100	331	100	1000	100	p<0.001
Can you tell me what you noticed (unaided recall)?									
Shelf signs	10	6.2	8	15.1	18	31.3	36	13.2	p<0.001
Newsletters	0	0	4	7.6	1	1.7	5	1.8	p=0.002
Posters	5	3.1	17	32.1	6	10.3	28	10.3	p<0.001
Cooking demonstration or food samples	120	74.1	0	0	9	15.5	129	47.3	p<0.001
Other (not on list)	26	16.1	25	47.2	26	44.8	77	28.2	p<0.001
Don't know	3	1.9	5	9.4	4	6.9	12	4.4	p=0.04
No answer/Refused	2	1.2	0	0	0	0	2	0.2	NS
Total	n=334		n=335		n=331				
Can you tell me if you noticed any of these shelf signs while you were shopping today? (aided recall)									
Sandwiches	8	2.4	12	3.6	6	1.8	26	2.6	NS
Rice	20	6	17	5.1	15	4.5	52	5.2	NS
Cereal	29	8.7	30	9	19	5.7	78	7.8	NS
Eggs	16	4.8	11	3.3	5	1.5	32	3.2	p=0.06
Pasta	10	3	10	3	8	2.4	28	2.8	NS
Oatmeal	15	4.5	13	3.9	8	2.4	36	3.6	NS
NONE of the above	260	77.8	249	74.3	265	80	774	77.4	NS
Don't know	0	0	0	0	0	0	0	0	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	n=334		n=335		n=331				

	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
Can you tell me if you noticed one of these Harvest of the Month newsletters in this FoodMaxx today? (aided recall)									
Yes	44	13.2	38	11.3	38	11.5	120	12	
No	278	83.2	286	85.4	284	85.8	848	84.8	
Don't know	11	3.3	11	3.3	9	2.7	31	3.1	
Volunteered: Not today, but have noticed them in the past	1	0.3	0	0	0	0	1	0.1	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	334	100	335	100	331	100	1000	100	NS
Have you taken any newsletters like this since March 1 of this year until today?									
Yes	51	15.3	50	14.9	29	8.8	130	13	
No	275	82.3	278	83	292	88.2	845	84.5	
Don't know/not sure	8	2.4	7	2.1	10	3	25	2.5	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	334	100	335	100	331	100	1000	100	p=0.022
Did you do anything new or different because of the newsletter?									
Yes	33	64.7	34	68	18	62.1	85	65.4	
No	16	31.4	14	28	11	37.9	41	31.5	
Don't know	2	3.9	2	4	0	0	4	3.1	
Refused/no answer	0	0	0	0	0	0	0	0	
Total	51	100	50	100	29	100	130	100	NS
Have you bought anything since March 1 of this year because you saw it featured it in a newsletter like this?									
Yes	37	72.6	33	66	13	44.8	83	63.9	
No	14	27.4	16	32	15	51.7	45	34.6	
Don't know	0	0	1	2	1	3.5	2	1.5	
Refused/no answer	0	0	0	0	0	0	0	0	
Total	51	100	50	100	29	100	130	100	NS

	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
Have you noticed any of these recipe cards in FoodMaxx since March 1 of this year? (aided recall)									
Chickpea dip with fresh vegetables	23	6.9	20	6	11	3.3	54	5.4	NS
Black bean and corn pita	33	9.9	23	6.9	13	3.9	69	6.9	p=0.01
Honey gingered fruit salad	15	4.5	17	5.1	14	4.2	46	4.6	NS
Watermelon salsa	91	27.3	26	7.8	5	1.5	122	12.2	p<0.001
NONE of the above	205	61.4	271	80.9	281	84.9	757	75.7	p<0.001
Don't know	9	2.7	7	2.1	16	4.8	32	3.2	NS
Refused/No answer	0	0	0	0	0	0	0	0	
Total	n=334		n=335		n=331				
Have you tried Chickpea dip at home?									
Yes	7	30.4	8	40.0	6	54.5	21	38.9	
No	16	69.6	11	55.0	5	45.5	32	59.3	
Don't know	0	0	1	5	0	0	1	1.9	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	23	100	20	100	11	100	54	100	NS
Did you or anyone in your family like chickpea dip?									
Yes	7	100	6	75	5	83.3	18	85.7	
No	0	0	2	25	0	0	2	9.5	
Don't know	0	0	0	0	0	0	0	0	
No answer/Refused	0	0	0	0	1	16.7	1	4.8	
Total	7	100	8	100	6	100	21	100	NS
Have you tried Black bean and corn pitas at home?									
Yes	11	33.3	6	26.1	7	53.9	24	34.8	
No	22	66.7	17	73.9	6	46.1	45	65.2	
Don't know	0	0	0	0	0	0	0	0	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	33	100	23	100	13	100	69	100	NS

	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
Did you or anyone in your family like Black bean and corn pitas?									
Yes	11	100	5	83.3	7	100	23	95.8	
No	0	0	1	16.7	0	0	1	4.2	
Don't know	0	0	0	0	0	0	0	0	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	11	100	6	100	7	100	24	100	NS
Have you tried Honey gingered fruit salad at home?									
Yes	5	33.3	8	47.1	10	71.4	23	50	
No	10	66.7	9	52.9	4	28.6	23	50	
Don't know	0	0	0	0	0	0	0	0	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	15	100	17	100	14	100	46	100	NS
Did you or anyone in your family like Honey gingered fruit salad?									
Yes	5	100	7	87.5	8	80	20	87	
No	0	0	0	0	2	20	2	8.7	
Don't know	0	0	0	0	0	0	0	0	
No answer/Refused	0	0	1	12.5	0	0	1	4.3	
Total	5	100	8	100	10	100	23	100	NS
Have you tried Watermelon salsa at home?									
Yes	11	12.1	8	30.8	1	20	20	16.4	
No	80	87.9	18	69.2	4	80	102	86.6	
Don't know	0	0	0	0	0	0	0	0	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	91	100	26	100	5	4.1	122	100	p=0.07
Did you or anyone in your family like Watermelon salsa?									
Yes	11	100	7	87.5	1	100	19	95	
No	0	0	1	12.5	0	0	1	5	
Don't know	0	0	0	0	0	0	0	0	
No answer/Refused	0	0	0	0	0	0	0	0	
Total	11	100	8	100	1	100	20	100	NS

	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
Did you notice any of these posters in the store today? (aided recall)									
Yes	35	10.5	31	9.3	16	4.8	82	8.2	
No	291	87.1	297	88.6	309	93.4	897	89.7	
Don't know	8	2.4	7	2.1	6	1.8	21	2.1	
No answer/refused	0	0	0	0	0	0	0	0	
Total	334	100	335	100	331	100	1000	100	p=0.019
FOOD DEMONSTRATION QUESTIONS									
Did you notice someone preparing food or giving food samples in the FoodMaxx today?									
Yes	261	78.1	13	3.9	3	0.9	277	27.7	
No	71	21.3	319	95.2	324	97.9	714	71.4	
Don't know	2	0.6	3	0.9	4	1.2	9	0.9	
No answer/refused	0	0	0	0	0	0	0	0	
Total	334	100	335	100	331	100	1000	100	p<0.001
Did you taste the watermelon salsa?									
Yes	121	46.3	0	0	0	0	121	43.7	
No	139	53.3	13	100	2	66.7	154	55.6	
Don't know	0	0	0	0	1	33.3	1	0.3	
No answer/refused	1	0.4	0	0	0	0	1	0.4	
Total	261	100	13	100	3	100	277	100	p<0.001
Did you like it?									
Yes	107	88.5							
No	12	9.9							
Don't know	1	0.8							
No answer/refused	1	0.8							
Total	121	100							

	Merchandising + Food Demo		Merchandising Only		Control		Total		X^2sig.
	n	%	n	%	n	%	n	%	
Did you decide to buy anything you weren't planning to buy based on the food sample?									
Yes	41	33.9							
No	80	66.1							
Don't know	0	0							
No answer/refused	0	0							
Total	121	100							
Did your children try the watermelon salsa?									
Yes	39	47							
No	43	51.8							
Don't know	0	0							
No answer/refused	1	1.2							
Total	83	100							
[If yes:] Did they like it?									
Yes	30	76.9							
No	9	23.1							
Don't know	0	0							
No answer/refused	0	0							
Total	39	100							

Leaders Among Us: Peer-Led Efforts to Promote Healthy Eating and Active Living in California

Prepared by the
Atkins Center for Weight and Health
University of California, Berkeley

Leaders Among Us: Peer-Led Efforts to Promote Healthy Eating and Active Living in California

This report contains a review of the literature and case studies about peer-led health promotion programs for the California Department of Public Health, conducted by the Atkins Center for Weight and Health at University of California Berkeley. The goal was to identify peer-led approaches, best practices, lessons learned from successes and challenges, and how to maximize and sustain peer-led health promotion efforts in the future.

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The contents of this report are solely the responsibility of the authors and do not necessarily represent the official views of the California Department of Public Health.

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Executive Summary

At the request of the *Network for a Healthy California*, the Atkins Center for Weight and Health at the University of California, Berkeley, embarked on a study to learn about promising practices in peer-led health promotion related to nutrition and physical activity in California. The goal of this research was to identify successes, challenges, best practices and lessons learned with respect to a range of elements associated with the design and implementation of peer-led efforts, including recruitment, training, support, compensation, and institutional sustainability. By identifying successes, challenges, and best practices of peer-led efforts, this research informs the *Network*'s ongoing efforts to maximize the effectiveness of peer-led health promotion in California.

The research questions were:

- What are different approaches to peer-led promotion of improved diet and physical activity?
- What are best practices with respect to key elements of peer-led approaches, such as recruitment, training, support, and retention?
- How effective are peer-led approaches in promoting improved health-seeking behaviors?
- What are the main lessons learned from the programs' successes and challenges?
- Which factors are associated with the institutional sustainability of peer-led approaches?
- How can the *Network* maximize the effectiveness of peer-led efforts in the future?

Peer leaders, who share the same language, neighborhood, cultural and/or socioeconomic background as the target populations, are often more able to effectively reach those audiences than outside professionals. Peer-led health promotion efforts are having noticeable impact; use of peers for health promotion has been shown to be effective at improving diverse outcomes, including nutrition and physical activity behaviors and chronic disease prevention, self-management, and screening.

This report begins with a summary of current evidence about peer-led approaches from a review of the literature. This is followed by findings from interviews and site visits conducted with four programs that incorporate peer-led approaches for the promotion of improved diet and physical activity. The four programs reviewed were:

- CalFresh Promotion (Alameda County Public Health Department Nutrition Services, Oakland, CA)
- Cooking Matters (Three Squares, San Francisco, CA)
- Mothers Taking Action (Ventura County Health Care Agency, Ventura, CA)
- Nutrition Ambassadors (Second Harvest Food Bank Santa Cruz County, Watsonville, CA)

The case studies consisted of a review of program documentation, including funding proposals, training materials, and other program documentation, individual and group interviews with program staff and peer leaders, observations of peer-led classes and discussion groups, and interviews with external stakeholders, including program partners, funders and community stakeholders familiar with these efforts.

A brief overview of the *Poder Popular para la Salud del Pueblo: Promotores Comunitarios de Salud* strategy, funded by The California Endowment, is also provided as an example of an innovative approach that develops and supports peer leaders in community organizing/civic engagement to address the environmental and social determinants of health.

The report concludes with recommendations for maximizing future peer-led efforts. It is our hope that the findings will also be of interest to other peer-led programs, funders of peer-led efforts and policymakers interested in promoting improved diet and physical activity.

Findings from current evidence

Principal rationales for involving peer leaders in health promotion

- Peer leaders can be trained to be a credible source of information.
- Peer education is beneficial and empowering for peer leaders as well as community participants.
- Peer leaders can tap into an already established means of sharing information and advice.
- Peer leaders can reinforce learning through ongoing contact and by serving as role models.
- Peer leaders can be used to educate those who are hard to reach through conventional methods.

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Benefits of peer-led health promotion

- May improve positive health outcomes.
- Can lead to peer leader employment and education.
- Can lead to increased community capacity.

Challenges of peer-led health promotion

- Sustaining adequate funding.
- Providing managerial organization, oversight, and support.
- Recruiting and retaining peer leaders.

Best practices for implementing peer-led approaches in health promotion

- Deploying adequate and effective planning and management.
- Identifying and recruiting participants with strong communication and interpersonal skills.
- Providing practical, hands-on and ongoing training.
- Ensuring sufficient supervision and retention efforts.
- Involving peers in program evaluations.
- Providing additional opportunities for peer leaders to engage with the community.

Findings from case studies

Program implementation of specific elements

- Attributes of successful peer leaders are passion, drive, concern for their communities, and a willingness to go “above and beyond.”
- Effective training includes content knowledge about diet and nutrition, outreach, presentation and facilitation skills, and ample time for practice in presenting the material.
- Strategies to incentivize and retain peer leaders include cash payment, in-kind gifts, acknowledgement, celebrations, and opportunities for professional development.

Major outcomes for community members

- Increased fruit and vegetable consumption.
- Decreased soda/increased water consumption.
- Increased physical activity.
- Increased knowledge about nutrition.
- Improved cooking and grocery shopping skills.
- Enrollment in CalFresh
- Increased information sharing about healthy eating and active living.

Impacts on peer leaders

- Many peer leaders noted improvements in their own habits that mirrored the outcomes for community members.
- Peer leaders also cited increased self-esteem and self-confidence.
- Peer leaders benefit from professional development attained through additional knowledge, facilitation skills, and connections to and enrichment from program staff.
- For some peer leaders, participation in these programs can serve as a springboard for paid employment.

Institutional factors associated with sustainability

- A sufficiently long funding period is needed to allow for developing the program, assessing peer leader skills, building capacity among peer leaders, and creating awareness and positive recognition of the program in the community.
- Institutional support for peer leaders is critical to long-term success, particularly in developing mechanisms to address issues such as transportation and childcare for peer leaders.
- Other forms of institutional support include providing peer leaders with professional skills such as time management and organization that they may not have acquired elsewhere, and ensuring buy-in from agency staff not directly involved with the programs, since agency staff may be faced with additional demands.

Recommendations for implementing peer-lead approaches

- Use formal recruitment and screening processes to identify the right mix of peers.
- Clearly communicate role and time expectations from the outset.
- Provide adequate training on outreach, community engagement and presentation skills in addition to content matter (e.g., nutrition, physical activity).
- Assure sufficient staffing to provide peers with the support they need while avoiding staff burnout.
- Provide peers with organizational and time-management skills.
- Maintain close ties between staff and peer leaders to promote retention and a sense of identification with the agency.
- Conduct exit interviews to identify ways to increase retention.
- Develop a clear and thoughtful policy regarding compensation for peer leaders.
- Recognize that it takes time to train and develop peer-leaders. Project timelines should allow for the development of a strong foundation, particularly in the early stages of program implementation.

Peer-led approaches can play an important role in promoting improved health and promoting healthy eating and active living in low-income and other communities. Implementing these recommendations and best practices in peer-led approaches may improve health promotion outcomes and promote positive individual, family, and community change; develop leadership; and build sustainable capacity within the community.

Introduction

Increased rates of obesity and diet-related chronic health conditions have led to growing efforts to promote healthy eating and active living in communities throughout the United States. The peer-led model for health promotion has been used with promising results and has been found to be particularly effective in serving low-income and immigrant communities. Awareness of the benefits of peer-led efforts is growing. The Affordable Care Act recognizes community outreach workers as important members of the health care workforce. The month of October has been recognized as Promotores Month in the State of California.

The *Network for a Healthy California* has supported peer-led programs to promote improved diet and physical activity. This research report identifies successes, challenges, best practices and lessons learned associated with peer-led efforts, with the goal of providing recommendations to maximize the *Network*'s support of peer-led efforts.

Research Questions

The following questions guided this research:

- What are different approaches to peer-led promotion of improved diet and physical activity?
- What are best practices with respect to key elements of peer-led approaches such as recruitment, training, support and retention of peer leaders?
- How effective are peer-led approaches in promoting improved health-promoting behaviors?
- What are the main lessons learned from the programs' successes and challenges?
- Which factors are associated with the institutional sustainability of peer-led approaches?
- How can the *Network* maximize the effectiveness of peer-led efforts?

Methods

These methods were used to answer the research questions:

- A review of the published literature on the effectiveness of peer-led approaches and best practices in the field
- In-depth case study research on four programs implementing peer-led efforts in California
- A review and brief profile of other peer-led approaches:
    - A profile of The California Endowment's (TCE) peer-led *Poder Popular para la Salud del Pueblo: Promotores Comunitarios de Salud* strategy based on interviews with TCE and program staff, and a review of evaluation findings.
    - Brief profiles of an additional six peer-led efforts not represented by the in-depth case studies (see Appendix D).

A Review of the Literature on Peer-Led Approaches

A comprehensive review of the literature on the current state of peer-led health promotion was conducted (see Tables 3 and 4). Peer reviewed articles and non-peer reviewed reports from the "gray" literature[1] published from 1960 to 2012 were included. Searched databases included: CINAHL, ERIC, Health Source: Nursing/Academic Edition, MEDLINE, Scopus, SPORT Discus, WOK Web of Science Citation Index Expanded, UN database, USDA national nutrition database and CDC. Additional articles and information were obtained from health promotion program and agency websites, including the California Department of Public Health, Network for a Healthy California and other obesity prevention programs in California and in the United States.

A variety of search terms was used. The terms used for the search were peer-led, peer-led health promotion, best methods community health, obesity prevention efforts, community health promotion, low income communities health, improved diet, healthy eating, healthy eating active living programs, being active, physical activity or exercise, best practices in peer-led approach, peer-led success, and evaluation of peer-led programs. More specific searches were conducted to supplement this initial search and included terms such as peer-led program, healthy eating, diet change, improved diet, improved physical activity, behavior change peer-led promotion, community health, peer-led programs in low-income communities, health promotion in low-income populations, community health workers, promotores or promotores de salud as well as the names of specific programs and authors. The inclusion criteria were broad; any publication or report was included if it contained information pertinent to the use of peer leaders for health promotion.

Definitions

The term "peer" refers to individuals who are similar to target populations with respect to attributes such as gender, ethnicity, language, country of origin, socioeconomic status and life experiences. There are many terms for peer leaders, including community health workers, community health outreach workers, community health advisors, lay health advocates, "promotores(as)" or "promotores(as) de salud," outreach educators, community health representatives, peer health promoters, and peer health educators.

Peer leaders can fulfill a range of important functions in health promotion. The "Community Health Worker National Workforce Study" by the US department of Health and Human Services (HHS 2007), a review of the literature on the peer leader workforce and its contributions to the national health care delivery system, summarized these functions:

Peer Leader Functions in Health Promotion

- Provide interpretation and translation service
- Provide culturally appropriate health education and information
- Provide assistance for people to get the health care needed
- Provide informal counseling and guidance on health behaviors
- Advocate for individual and community health needs
- Direct to services such as first aid and blood pressure screening

[1] "Gray" literature refers to reports, white papers or other briefs that are not published commercially; these may or may not be vetted through the peer-review process like most journal articles.

Involving peers in a health promotion program can increase program effectiveness and sustainability (Rones and Hoagwood 2002). Peer leaders have been involved in both primary and secondary prevention programs and associated with clinical and health service agencies, as well as public health agencies. Examples of secondary prevention programs using peer leaders include support and education about self-management for patients with chronic disease, such as diabetes education; clinical outreach and advocacy for access to health care; and support for patients in substance abuse programs. Primary prevention programs have utilized peer-led efforts in chronic disease risk factor reduction and prevention, promotion of nutrition and physical activity, immunization promotion, preventive behaviors for HIV/AIDS, and promotion of breastfeeding.

History of Peer-Led Health Promotion

Community health workers are a common component of health systems around the world (WHO 2007). In the U.S., the first documented peer-led health promotion initiative focused on student influenza immunization at the University of Nebraska in 1957 (Helm *et al* 1972). In the 1980s and 1990s, peer-led health promotion was used to reduce the incidence of smoking and substance abuse among young people (Nash 1987; Morgan and Eiser 1990; Hansen and Graham 1991; McKegarney and Barnard 1992; Rhodes 1994; Klee and Reid 1995).

As peer-led approaches to health promotion gained traction throughout the country, efforts to further define and standardize the professional category of "community health worker" followed. In 1993, the Centers for Disease Control (CDC) established the first database on community health workers and, in 1995, the Annie E. Casey Foundation funded the first comprehensive study of the practice, outlining the core competencies required.

Core competencies for community health workers

1. Bridging cultural gaps between communities and the health and social service systems;
2. Providing culturally appropriate and accessible health education and information, often by using popular education methods;
3. Assuring that people get the services they need;
4. Providing informal counseling and social support;
5. Advocating for individuals and communities within the health and social service systems;
6. Providing direct clinical services, such as basic first aid, and administering basic health screening tests;
7. Building individual and community capacity.

In 2001, the American Public Health Association issued a statement formally recognizing the contribution of these workers, and urged policy initiatives to establish their role in health care delivery (Keane *et al* 2004; Yanochik *et al* 1976).

Initiatives to develop a role for specialist community health workers in nutrition emerged in tandem with the community health worker movement. In the early 1970s, as part of a response to the US War on Hunger report, the Arizona Department of Health developed the "community nutrition worker" job classification. This specialist nutrition worker concept was created to ensure that sufficient effort and expertise of community health workers were devoted to nutrition problems facing low-income minority communities, including growth retardation, iron deficiency anemia, obesity and poor infant feeding practices.

Nationwide, the Special Supplemental Nutrition program for Women, Infants and Children (WIC), also begun in the early 1970s, is now among the largest employers of peer counselors, with thousands working in different states, Indian Tribal Organizations and territories as well as in local WIC agencies. Workers are typically recruited from low-income communities and trained for particular roles in WIC clinics, such as peer breastfeeding counselors. Over half (56%) of pregnant WIC participants were found to be enrolled at local WIC agencies that offered breastfeeding peer counseling (Collins 2010). The role and types of staff recruited, job descriptions and training vary at both the state and county level.

At about the same time, the USDA created the Expanded Food and Nutrition Education Program (EFNEP) specialist nutrition worker/peer leader. Initiated as a pilot program in response to the increasing recognition of poverty in America and of the link between poverty and malnutrition, EFNEP now operates in all 50 states and the U.S. territories. Pilot studies in several states, including California, helped identify effective approaches for contacting at-risk families and teaching and sustaining education programs for people living in poverty. In the EFNEP model, members of the community are recruited and trained to be peer educators who provide outreach to groups of people from limited resource households and conduct a series of standardized classes for low-income adults and youth on nutrition, food safety and physical activity. Expansion of their role in addressing obesity prevention is under discussion in some states.

Rationale

Just as there is no single prescription for peer-led health interventions (or uniform nomenclature, for that matter), the theoretical underpinnings of these efforts also vary. Table 1 summarizes the principal rationales for peer-led health promotion (mainly health education) and the use of peers in health promotion programs.

Table 1: Rationale for Peer-Led Approaches in Health Promotion

Rationale	Sources
✓ **When conditions for successful peer-led approaches are met (appropriate job role, training, supervision, etc.), peer-led approaches may be *less costly* than professional-led approaches to health promotion.**	Jones 1992; HEA 1993; Peers *et al* 1993; Gibson *et al* 2007.
✓ **Peers are a *credible* source of information.**	Perry 1989; Woodcock *et al* 1992; Clements and Buczkiewicz 1993; Jarvis 1993; Mellanby *et al* 2000.
✓ **Peer education is *beneficial and empowering* for peer educators as well as participants.**	HEA 1993; Klepp *et al* 1986; Ford and Inman 1992; Hamilton 1992; HEA 1993; Phelps *et al* 1994; Bhattacharyya *et al* 2001; Keane *et al* 2004.
✓ **Peer education can tap into an *already established* means of sharing information and advice. Peers have also been shown to be *effective in improving knowledge and attitudes*, with more limited success in dietary and physical activity behavior change.**	Finn 1991; Clements and Buczkiewicz 1993; Jarvis 1993; Witmer 1995; Essa 2001.
✓ **Peer leaders can be *more effective* than professionals when working with lower income and minority/culturally distinct groups, for a variety of reasons. Among them, members of peer groups tend to identify with peer leaders and are likely to be more receptive to their advice and inputs.**	Clements and Buczkiewicz 1993; Peers *et al* 1993; HEA 1993; Taylor *et al* 2000.
✓ **Peers can reinforce learning through ongoing contact and by serving as role models.**	Perry and Sieving 1993; Clements and Buczkiewicz 1993; Jay et al 1984; Kelly et al 1991; Israel et al 1998; Coleman et al 2011.
✓ **Peer education can be used to educate those who are *hard to reach* through conventional methods.**	King 1993; Rhodes 1994; Two Feathers *et al* 2005; Starkey *et al* 2009.

Peer leaders may be more effective than professionals working with lower income and minority/culturally distinct groups for a variety of reasons. Among them, members of peer groups tend to identify with peer leaders and are likely to be more receptive to their advice and inputs. Some research has shown that information, particularly sensitive information, is more easily shared between people of a similar age, ethnicity, community and culture. Mellanby *et al* (2000) compared the impacts of peers and non-peers delivering the same material, finding that peer leaders were as or more effective as non-peers. Reviews of school health programs suggest that programs can be more effective among school-aged children when delivered by peers rather than adults.

The theories of change behind peer-led promotion emphasize the unique role that peers can play as "change agents" at the individual, family and community levels. Peer leaders can also stimulate systems change through community capacity building for civic engagement. In Table 2, Turner and Shepherd (1999) provide an overview of theoretical approaches. However, of note, Perez-Escamilla (2008) found that although studies of peer-based nutrition education programs among Latinos were often based on at least one behavioral change theory, there was a notable lack of specifics on how these theories were operationalized.

Table 2: Applicable Theories of Change for Peer-led Health Promotion

Theory	Source	Application to Peer-Led Approach
Role Theory	Sarbin 1976	Peer educators serve as role models.
Social Learning Theory (or Change in Behavior Theory)	Bandura 1977	Use social relations to support behaviors change.
Communication of Innovations Theory (or Diffusion of Innovation Theory)	Rogers 1983	Change agents (peer leaders) influence key "opinion leaders" within a community. These opinion leaders in turn act as peer educators. The effective communication occurs when the source and receiver are similar in certain attributes, such as beliefs, values, education and social status.
Social Inoculation Theory	Duryea 1991; McGuire 1968; McGuire 1974; West and Michell 1995; Michell and West 1996; Duryea 1991; Coggins and McKellar 1994	Emphasizes social pressures to adopt unhealthy behaviors. Although, this theory has been questioned on the extent to which peers exert pressure and the reliability of self-reported claims about peer pressure, some have reported adopting this theory in efforts to help adolescents prepare and practice counter-arguments to resist peer pressure.

Peer-led health promotion interventions tend to be specific to the unique setting where they take place. As a result, there is a dearth of research assessing methodologies in a systematic way. As Perez-Escamilla (2008) indicated in his review of nutrition education by peer workers among Latinos, there have been no studies to determine the ideal characteristics of peer leaders, such as the best type of training, optimal client loads, dosage, educational approach or setting. Because these parameters vary widely in studies published thus far, "no clear patterns have emerged to make objective process recommendations." More operational research is needed, as Dickin *et al* (2005) have shown that "the characteristics of peer nutrition educators and the work context are significant determinants of nutrition education program effectiveness."

Table 3 summarizes published studies and case reports that included peer leaders in health promotion programs focused on nutrition and physical activity. A more detailed table is included in Appendix B. It contains descriptions about how peer leaders are used in a variety of interventions, provides evidence about the effectiveness of programs using peer-led approaches, and includes lessons learned. Approximately 90% of listed studies, many of which used a rigorous randomized, controlled study design, showed a positive impact on outcome measures among intervention participants. Outcome measures included primarily nutrition and activity-related knowledge, attitudes, beliefs and behaviors; in a few studies, physiological measures were also included.

Table 3. Examples of Programs Using Peer Leaders to Promote Nutrition and/or Physical Activity

Author, Year	Location	Target Population			Education					Outcomes[5]			Key Lessons Learned About Peer Leaders (PL)
					Duration	Peer Leader Primary[4]	Topic			Diet	PA	Other	
	US [1]	Adult [2]	His-panic	Low SES [3]			Diet	PA	Other				
Design: Randomized, Controlled Trial													
Anderson, 2005	●	●	●	●	3mo	●			●			+	PL more influential than conventional breastfeeding support.
Becker, 2008	●	●			8 mo	●			●			+ (+ f/u)	PL influential in prevention of eating disorders.
Buller, 1999	●	●		●	18 mo (18 mo f/u)	●	●			+ (+ f/u)			PL can be effective in workplace environment.
Elder, 2006	●	●	●		12 wk (12 mo f/u)	●	●			+ (Ø f/u)			Participants responded positively to the interpersonal contact, which is why results diminished after one year with loss of PL contact.
Harvey-Berino, 2003	●			●	16wk	●	●	●		Ø	Ø		Home visiting program feasible using PL.
Story, 2002	●				12wk		●			+			Student PL showed highest fruit and vegetable intake/lowest intake or high fat foods compared to students who were not PL.
Toobert, 2002	●	●			18 mo		●	●		+	+		PL useful adjuncts to traditional educators.
Townsend, 2006	●			●	8wk		●			+			Youth PL useful adjuncts to traditional educators.
Two Feather, 2005	●	●	●	●	4wk	●	●		●	+		+	Improvements in outcomes due, in part, to the commitment and persistence of PL.
Williams, 2001; Auslander, 2000	●	●		●	3mo (3mof/u)	●	●			+			PL had little or no formal training with regard to nutrition/teaching skills and methods, but through a training protocol were able to consistently and accurately deliver program as intended.
Wilson, 2012	●				1yr (1yrf/u)	●	●			+ (Ø f/u)			PL perceived as credible role models, and as such are effective disseminators of information.

Author, Year	Location	Target Population			Education					Outcomes[5]			Key Lessons Learned
Design: Quasi-experimental or Pre-Post Comparison in Intervention Group													
Balcazar, 2005	●	●	●	●	6 mo	●	●	●		+	+	+	Recommend a continuing PL training module of PL online.
Coleman, 2011	●			●	1 d	●	●		●	+			Youth PL can be easily integrated into community-based health ed.
Davies, 2009		●	●	●	15 sessions (1yrf/u)	●				+		(+ f/u	PL gained new knowledge and confidence. Activities took longer than expected; need to be clear about time commitment when recruiting.
Dzewaltowski, 2009	●				2yr		●	●		Ø .	+		Teaching student leadership skills increased confidence to influence school staff to improve physical activity environments.
Elbel, 2002	●	●		●	3.5 wk	●		●			+		PL improved self-efficacy and levels of physical activity.
Forneris, 2010	●				12 wk (1yr and 2yr f/u)	●	●			+ (Ø f/u)			Using PL results in a dual impact of the program on health behaviors of both the participants and the leaders.
Goldfinger, 2008	●	●		●	10 wk (1 yr f/u)	●	●	●	●	+ (Ø f/u)	+	+	A PL program leads to weight loss in addition to changing knowledge and behaviors.
Puska, 1986		●			7yr		●	●	●	+		+	Possible to develop a network of PL in a geographically large area.
Rose, 1992	●	●			2wks (3mo f/u)	●	●	●		+	+	+	Individuals who lived in housing residences with PL benefited.
Staten, 2005	●	●	●	●	12 wk (6 mo f/u)	●	●	●		+ (+ f/u)	+		PL can advocates for community change. Lack of males.
Stock, 2007					(2-3hr/wk) 21wk	●	●			+		+	Need to compare student vs. teacher led, and need to do longer study to see if benefits are sustained.
Taylor, 2000	●	●	●	●	4wks 6mo f/u	●	●			+			Continued teaching needed to sustain knowledge and skills.
Teufel-Shone, 2005	●	●	●		12 wk	●	●	●		+			Interaction provided by PL had a positive psychosocial impact. PL had prior experience in community outreach, contributing to success.

Abbreviations: PA = physical activity; f/u = follow-up; SES = socioeconomic status; wk = weeks; yr = years; mo = months; d=day.

Key to header (see Appendix B table for additional study details):

1. If not marked, study was conducted outside of the United States.
2. If not marked, study was conducted with children.
3. If not marked, either information not available or study participants were not exclusively from low SES.
4. PL provided education to peers in coordination with non-lay program staff.
5. + signifies improvement in outcome measure; Ø signifies no improvement in outcome measure.

Benefits

Health outcomes. Peer-led interventions have had positive impacts on diabetes self-management, breastfeeding outcomes, general nutrition knowledge, dietary intake behaviors and physical activity. With adequate training, peer leaders without prior knowledge in the field can retain and transmit accurate information (Witmer 1995). In addition to delivering education, given an opportunity, peer leaders can also be influential in changing the social, economic and environmental determinants of health through advocacy efforts (Israel *et al* 1998).

Peer leader employment and education. There have also been reports of significant positive spillover effects for the peer leaders themselves, which can provide additional positive benefits for the community. Several EFNEP studies have shown program-related improvements in employment and education (Perez-Escamilla 2008). A recent small qualitative study of EFNEP participant experiences (Hibbs and Sandmann 2011) identified positive changes in skill development, community status, relationships with family/community, empathy and self-esteem. The factors that contributed to these changes were the peer educators' indigenous status, personal identification with the work, and the quality of training, support, and work experiences. The knowledge and sense of efficacy gained through the program can serve as a catalyst for peer leaders to further their education (Taylor *et al* 2000). Some programs award certification for completing training and serving as health promoters, which can assist participants in finding future employment. Additionally, educational interventions aimed at enhancing the support and understanding of peer leaders' partners can improve family well-being and health (Davies *et al* 2009).

Community capacity. At the community level, peer leaders are able to establish and strengthen social networks, which lead to greater levels of social support throughout program implementation and beyond. Positive psychosocial effects of interpersonal contact with peer leaders have been observed in several cases. Moreover, the specialized training provided to peer leaders helps build a human resource base that the community can continue to draw on (Rones and Hoagwood 2002). It is frequently reported that community members continue to meet and work together for health promotion and community improvement objectives after the program intervention, leading to important sustainability and spillover effects (Taylor *et al* 2000). Israel *et al* 1998 reported that actively engaging the social, economic and environmental determinants of health through community engagement efforts has also been found to be critical to supporting effective behavioral change on the individual and family levels.

Challenges

Funding. By far the largest challenge facing peer-led health promotion programs is difficulty obtaining and sustaining adequate funding to continue training for advanced education and follow-up sessions, purchase of training materials and other necessary class items, incentives, and compensation for peers' work (HHS 2007).

Managerial. Program administration challenges include communication about time commitments, role expectations, inadequate amount or quality of trainings (trainings may omit critical leadership, organizational and communication skills), lack of follow-up sessions to maintain and improve skills and knowledge (Williams *et al* 2001, Aulander *et al* 2000), and an inability to recruit male participants as peer receivers of interventions.

Recruitment. Program staff needs to address a number of barriers to participation, especially when peer leaders are volunteers. Barriers include:

- Competing commitments. Such as work and family, can make active involvement of peer leaders and participants difficult. Program organizers need to be sensitive to scheduling needs in order to maximize participation and minimize burn-out (Essa 2001).

- Lack of childcare and/or transportation. These are significant impediments to participation (Poston *et al* 2001; Havas *et al* 2000; Sahay 2006; Jerant *et al* 2004; Bailey *et al* 2005; Mann *et al* 2005). Providing these services can enhance attendance and retention.

- Unsupportive family members. This can undermine participation of peer leaders. Intra-family conflict can arise when male partners resent their spouses' increased autonomy or activity outside the home. Evidence also suggests that resistance from male partners can impede uptake of change initiatives, such as improved diet, at the participant level (Davies *et al* 2009). To address this, some programs have targeted work with male members of local communities in order to raise their awareness and generate buy-in.

- Immigration status, fear of traveling or drawing attention. These can be important issues in peer-led health promotion programs for low-income immigrants and migrant farm workers. In areas with high levels of undocumented immigrants, this barrier can affect every step of the intervention, from recruitment, to retention through completion of the program (Essa 2001).

Best Practices

The experience and contributions of peer educators are usually influenced by the wider context of program delivery**.** Despite the lack of systematic research pointing to best practices, some general observations do emerge from the literature.

> *"Interventions can carry into the classroom but they don't always carry into work places, homes, schools and organizations. The peer-led approach can make changes in a variety of places."*

Planning and management. Before undertaking a peer-led health promotion initiative, program planners and managers need knowledge of effective strategies for achieving program objectives among the target group; knowledge of the target group and community, including informal leadership structures, existing resources and networks; and an understanding of cultural issues. A clear and concise intervention plan and detailed and appropriate role and job descriptions for peer leaders are also essential to effectively recruit, train and manage/supervise/mentor peer leaders (Wagner 1982; Gibson 2006; Essa 2001; Perez-Escamilla *et al* 2008).

Identifying and recruiting participants. Studies emphasize the critical importance of selection and identification of participants to serve as peer leaders. According to Turner and Shepherd (1999) some of the means of identifying peer leaders include:

- Staff selection
- "Snowballing," whereby a sample of community members select peer leaders, who in turn select additional peer leaders
- Using key community informants to identify opinion leaders
- Sociometric methods in which some or all community members nominate influential members

In practice, peer leaders are generally recruited through networking, often using local religious or community centers and businesses as focal points for reaching into communities to find individuals with the right skill and character mix to succeed as peer leaders. Recruiters look for individuals who have strong communication and interpersonal skills, good organizational skills, and appropriate language and cultural competence (HHS 2007).

Training. Practices vary widely, with some programs engaging in only informal training, and others implementing multi-week formal training programs with a validated curriculum. The HHS 2007 survey found that hours of training ranged from 9 to 100. Ongoing training is important to maintain fresh skills and to facilitate retention. Training can take the form of continuing education classroom instruction, individual mentoring, or on-site technical assistance. In California (unlike in some states, like Texas) there are no statewide requirements for certification of peer leaders, but there are increasing efforts to establish standardized training programs, some of which are sponsored by non-profit agencies, and others in higher education institutions. Some of these programs offer certification and other forms of credentialing (Keane *et al* 2004).

In 1976, a successful training program was developed by the Arizona Department of Health to formalize the job title "Community Nutrition Worker." Most participants had not completed high school, were members of the communities they served, and participated in training and certification prior to commencing their work. Careful job descriptions, initial and on-the-job training programs and close supervision and mentoring by public health nutritionists characterized the effort, which was integrated into a comprehensive nutrition program for the state (Yanochik *et al* 1976). The program gradually grew to include a progression of job descriptions from entry to more senior levels, and the training program became a curriculum for local community college credit and remains a recognized and active course.[2]

Practical and "hands on" training is generally the most effective. Active engagement in the roles they will play in the community can help gain confidence and commitment. In addition to specific health-related knowledge, training courses often include leadership and organizational skills. At times, participants may have health-related misconceptions or other attitudes and beliefs that can be an important potential barrier to embracing healthy behaviors (Davies *et al* 2009). Therefore, understanding the beliefs of the peer leaders and clarifying misconceptions should be an important part of the training.

Supervision and retention. Retention strategies include efficient administrative tracking of participants, persistence, skillful teamwork, and a positive, caring attitude. Rewards that emphasize personal and intangible benefits, such as recognition and personal growth, combined with in-kind or financial incentives can be effective for retention. Adequate supervision, regular feedback and accountability mechanisms are critical, for volunteers and lay leaders alike. Tasks should be clearly defined and appropriate for the skill level and role of the peer leader. Workloads must be carefully monitored (United Nations 1989). Peer mentoring—pairing a newly trained health promoter with one who is experienced—can also be very effective (Hibbs and Sandmann 2011).

Involvement in evaluation. Both process and outcome evaluation techniques are useful in tracking the success of peer-led health promotion initiatives. Active participation of peer leaders in ongoing evaluation can provide relevant feedback. While a number of methodologies are available, Israel *et al* (1994) outlined core principles that inform health education evaluation. These include:

- design evaluations that enhance participants' capacity;
- involve stakeholders in all phases of the process;

[2] http://www.centralaz.edu/home/academics/divisions_and_programs/dietetic_education/degrees_and_certificates/community_nutrition_worker.htm.) The Arizona Community Nutrition Workers are employed in a variety of roles, particularly in WIC programs, where they provide dietary assessment, breastfeeding counseling, dietary advice, referral for services, home visit follow-ups, as well as community advocacy for nutrition environment change to support individual dietary behavior change.

- strengthen collaboration among participants through the process;
- use clear language and constructive communications;
- follow the norms of partnership: mutual respect, recognition of participant capacities and open communication;
- include context, process, impact and outcome;
- integrate the use of qualitative and quantitative methods.

An example of a methodology that actively engages peer leaders (promotores) in program evaluation has been described by the California Institute for Rural Studies (CIRS). The focus of the evaluation in this program, *Organizing for Community Health: The Poder Popular Promotores Comunitarios de Salud Strategy (2005 - 2008)*, was highly participatory and qualitative. Rather than designing and applying a series of closed questionnaires and conducting statistical analyses of participant responses, the evaluation team developed flexible, open-ended guides for interviewing small groups of people, from agency staff to key promotores, committee members and external stakeholders (CIRS 2009).

Advocacy opportunities. Although peer education can be effective in positively impacting health behaviors of participants and their families, the role of the peer leader can be expanded beyond a particular health promotion or intervention focus. Peer leaders can be further trained and used in overall community development programs. Following a community organizing or community engagement model, peer-led health initiatives can empower community leaders and members as partners in transforming the social determinants of health by building their capacity as citizens to effect change in their environment and improve the conditions that support healthy eating and physical activity (Israel *et al* 1998).

Compensation

Incentivizing Peer Leaders. Although often part-time volunteers, peer leaders have also been salaried employees. Some peer workers believe that the work is most effective if it is done through a deep commitment to voluntary community service (Keane *et al* 2004). Latino Health Access, a non-profit organization (http://latinohealthaccess.net) serving a community of 65,000 people carefully selects peer leaders for paid staff positions from a volunteer corps. The HHS (2007) study noted that programs serving immigrants, migrant workers, and the uninsured were more likely to rely on volunteers than other types of programs. This may stem partly from the promotores tradition in Latino communities, but may also reflect limited access to funding.

In developing countries, one of the primary reasons for relying on volunteers is the assumption that paying outreach workers is not financially sustainable in community health settings. Not paying outreach workers has led to problems with attrition, as well as conflicts emerging from unpaid peer leaders working long hours alongside paid staff. Compromises, through in-kind rewards to peer participants in health promotion programs, have been used effectively. Intangible incentives may be the most effective motivation and retention incentives for peer leaders; these include personal and professional development, visible improvements in community well-being, and recognition and status within the community. In developing countries, a mixed incentive approach has been particularly successful (Bhattacharyya *et al* 2001). This unique approach offers a combination of money, non-monetary factors (e.g., skill development, community recognition, support, preferential treatment), community factors (e.g., community involvement in selection and training of peer leaders), factors that motivate communities to support and sustain peer leaders (e.g., visible change, associations, community empowerment), and factors that motivate staff to support and sustain peer leaders (e.g., policies or legislation). Finally, relying exclusively on unpaid volunteers may raise ethical concerns. For instance, the United Nations (1989) report, *Managing Successful Nutrition Programmes,* found that 60% of the participants in a survey of volunteers from developing countries were motivated by the *hope* of obtaining paid work.

Community selection. Health promotion interventions promoting new behavioral norms may work best in clearly defined, close-knit communities, where peer supporters are in regular contact with members of a stable community (Starkey *et al* 2009).

Integration. Using peer leaders may work best when paired with traditional health care delivery. As Gibson (2007) puts it: "If a peer-led approach is taken, this is not a substitute for integration with professionals. Multifaceted 'joined-up' approaches work best, although coordination requires more effort."

Conclusion: Review of the Evidence

The evidence to date strongly suggests that peer leaders can be effective—and at least as effective—as non-lay educators in health promotion. However, more research is needed to compare the cost-effectiveness of peer leaders to more traditional didactic approaches, to identify factors to maximize the sustainability of peer-led approaches, and to measure long-term impacts on nutrition and physical activity behaviors and physiological measures of health.

Table 4: Review of the Evidence on Peer-led Approaches on Diet and/or Physical Activity

Author/Year (Location)	Article/Report Title	Target Group/Focus/ Study Design	Components/ Role of Peer Leader	Evaluation Results of Peer Program/ Lessons Learned
Anderson et al. 2005 **(Connecticut, US)**	A Randomized Trial Assessing the Efficacy of Peer Counseling on Exclusive Breastfeeding in a Predominantly Latina Low - Income Community	**Target:** Pregnant women (less than 32 weeks gestation) who were considering breastfeeding (n=135), 72% Hispanic **Focus:** Breastfeeding **Design:** Randomized, controlled trial	**Components:** 3 prenatal home visits, 9 postpartum home visits, and daily in-hospital visits after the birth. Control group received conventional breastfeeding services. **Role of peer leaders:** Peer counselors were used for home and hospital visits.	**Evaluation results:** Increased breastfeeding (27%) vs. control (2.7%). **Lessons learned:** Peer counseling may be more influential than conventional breastfeeding support. Mothers had cell phone numbers of peer counselors to use during a crisis.
Balcazar et al. 2005 **(US)**	Evaluation of *Salud Para Su Corazon* (Health for Your Heart) - National Council of La Raza *Promotora* Outreach Program	**Target:** n=320 Hispanic adults **Focus:** Cardiovascular disease risk **Design:** Pre-post treatment evaluation	**Components:** Promotores training, activities to recruit participant Hispanic families, 6-month intervention (*Your Heart, Your Life* curriculum). **Role of peer leaders:** Recruitment of participants and delivery of curriculum.	**Evaluation results:** Positive effects on participants' fat intake, cholesterol intake and physical activity. Promotores referred 74% of participants for blood pressure screening, 81% for blood cholesterol and 70% for blood glucose. 90% of referred participants were screened. **Lessons learned:** Recommend a continuing education module of promotores training using a Web-based curriculum.
Becker et al. 2008 **(New York City, New York, US)**	Effectiveness of Peer-Led Eating Disorders Prevention: A Replication Trial	**Target:** n = 188 Undergraduate women **Focus:** Eating disorder risk **Design:** Randomized, controlled trial	**Components:** Two 2 hour sessions of either cognitive dissonance or media advocacy program. **Role of Peer Leaders:** Sessions were delivered by trained sorority peer leaders.	**Evaluation results**: Programs reduced thin-ideal internalization, body dissatisfaction, dietary restraint and bulimic pathology. **Lessons learned:** Support the viability of using peer leaders in eating disorder prevention.
Buller et al. 1999 **(Tucson/ Phoenix, Arizona, US)**	Randomized Trial Testing the Effect of Peer Education at Increasing Fruit and Vegetable Intake	**Target:** n=905 Lower socioeconomic, multicultural labor and trades employees **Focus:** Fruit and vegetable intake **Design:** Randomized, controlled trial	**Components:** Discussion with coworkers, Five a Day Program with printed materials. **Role of peer leaders:** Talk with coworkers, keep records of contact with coworkers, attend trainings, speak with researchers about progress, distribute materials.	**Evaluation results:** Increased fruit and vegetable intake compared to the control group and persisted at 6 months. **Lessons learned:** Peer leaders can be influential in a workplace environment.

Author/Year (Location)	Article/Report Title	Target Group/Focus/ Study Design	Components/ Role of Peer Leader	Evaluation Results of Peer Program/ Lessons Learned
Coleman et al. 2011 **(California, US)**	Teen Peer Educators and Diabetes Knowledge of Low-Income Fifth Grade Students	**Target:** n=72 Low-income 5th grade students **Focus:** Type 1 diabetes **Design:** Pre-post treatment evaluation	**Components:** Health fair with 5 stations, 5 to 10 students per rotation. Stations: (1) PR/event planning (2) cooking group (3) physical activity group (4) media group (5) diabetes education group. **Role of peer leaders:** High school students were trained during 6 ninety minute lessons on diabetes education and headed the stations at the health fair	**Evaluation results:** Positive impact on participants' diabetes knowledge and healthy eating. **Lessons learned:** For peer mentoring to be an acceptable approach to chronic disease prevention, longer study periods and health-related outcomes are necessary to establish validity. Youth leaders can be easily integrated into community-based health education.
Davies et al. 2009 **(Southampton, UK)**	Intervening to change the diets of low-income women	**Target:** 330 took part in taster sessions and 46 attended cookery club sessions Low income women in black and minority ethnic communities **Focus:** Nutrition **Design:** Post treatment evaluation	**Components:** "Breaking the Cycle Program", knowledge and attitudes of healthy eating, eating patterns and cooking practices. **Role of peer leaders:** Training course for leaders in community food + health skills (healthy eating, management of diabetes, coronary heart disease, breast feeding). Leaders led behavior change activities in community (campaigns, educational sessions, development of resources) and practical sessions (cooking clubs, budgeting sessions, shopping tours).	**Evaluation results:** Peer leaders thought they already knew enough about topics but at end had gained new knowledge about nutrition topics and about becoming peer leaders, leaders developed confidence and enjoyed running session. **Lessons learned:** Peer leader activities took longer than expected; need to be clear about time commitment when recruiting for training.
Dzewaltowski et al. 2009 **(US)**	Healthy Youth Places: A Randomized Controlled Trial to Determine the Effectiveness of Facilitating Adult and Youth Leaders to Promote Physical Activity and Fruit and Vegetable Consumption in Middle Schools	**Target:** n=1582 Middle school students **Focus:** Nutrition and physical activity **Design:** Pre-post treatment evaluation	**Components:** Site coordinators were trained in strategies for increasing physical activity and fruit and vegetable intake via behavioral and environmental change. Site coordinators implemented practices/policies/ programs that promoted fruits and vegetables consumption and physical activity and facilitated youth-led advocacy groups. **Role of peer leaders:** Peer leaders were classmates who created awareness of physical activity and nutrition while in classrooms, during school lunch and in after school programs.	**Evaluation results:** No impact on fruits and vegetables consumption. Positive effect on physical activity level. **Lessons learned:** Teaching students leadership skills increased their confidence that they could influence school staff to provide supportive physical activity environments.

Author/Year (Location)	Article/Report Title	Target Group/Focus/ Study Design	Components/ Role of Peer Leader	Evaluation Results of Peer Program/ Lessons Learned
Elbel et al. 2002 **(Texas, US)**	A pilot study evaluating a peer-led and professional led physical activity intervention with blue-collar employees	**Target:** Skilled labor employees, majority male, of railroad company (n=148) **Focus:** Physical activity **Design:** Quasi-experimental (pre-post treatment vs. control comparison)	**Components:** A physical education program held twice a week for 3.5 weeks (total of 7 courses, 25-45 minutes long) aimed at enhancing self-efficacy and physical activity. **Role of Peer Leaders:** A 49 year old laborer was trained to coordinate small group discussions, present on course materials and basic physical activity principles.	**Evaluation results:** No significant difference in energy expenditure between groups at the 3 time points. Peer-led group showed significant increase in stage of change from baseline to 4 and 8 weeks. Individuals who reported being regularly physically active reported 5% increase in energy expenditure at post. Significant effect on self-efficacy for peer group. Both groups showed increase in employees reporting regular physical activity over time. **Lessons learned:** Peer intervention improved self-efficacy and levels of physical activity.
Elder et al. 2006 **(San Diego County, CA, US)**	Long-Term Effects of a Communication Intervention for Spanish- Dominant Latinas	**Target:** n=357 Hispanic women (ages 18-65 years) with low levels of acculturation **Focus:** Nutrition **Design:** Randomized, controlled trial	**Components:** 14 week nutrition communication intervention. Home visits or telephone contacts plus tailored print education materials. Control group received only off the shelf materials and no *promotoras*. **Role of peer leaders:** *Promotoras* conducted the home visits/ telephone contacts, negotiated behavioral change goals, and provided support/encouragement.	**Evaluation results:** Positive impact at 12 weeks on total fat, fructose, and total carbohydrate intake. Group differences disappeared 12 months post intervention. **Lessons learned:** Hard to tease out if the *promotoras* or the printed materials contributed to changes. High level of contact of *promotoras* with subjects. Results suggest that respondents responded positively to the interpersonal contact, which is why results diminished after one year with loss of contact from *promotoras*.
Forneris et al. 2010 **(Virginia/ New York, US)**	Results of a Rural School-Based Peer-Led Intervention for Youth: Goals for Health	**Target:** n=2120 6th grade students **Focus:** Nutrition **Design:** Quasi-experimental	**Components:** 12 weekly lessons with an activity book. **Role of peer leaders:** Peer leaders who were high school students with 2 days of training taught the program.	**Evaluation results:** Positive effects on self-efficacy and fat/fiber knowledge. **Lessons learned:** Using peer leaders results in a dual impact of the program on health behaviors of both the participants and the leaders.

Author/Year (Location)	Article/Report Title	Target Group/Focus/ Study Design	Components/ Role of Peer Leader	Evaluation Results of Peer Program/ Lessons Learned
Goldfinger et al. 2008 **(New York, US)**	Program HEAL: Peer Education Leads to Weight Loss in Harlem	**Target:** Low income, overweight and obese African American adults (average age 68 years; n=26) **Focus:** Weight loss and diabetes **Design:** Pre-post treatment evaluation	**Components**: 90 minute course, 8 sessions spread over 10 weeks, two refresher courses; Workshops based on Chronic Disease Self-Management Program from Stanford University. **Role of peer leaders:** 2 peer leaders led 8 pilot sessions at a church to a class of 26 adults. Recruited peer educators from existing social network (church) to enroll participants.	**Evaluation results:** Changes in attitudes, behaviors, knowledge about healthy eating, physical activity and depressive symptoms. Weight was measured at 22 weeks, 32 weeks and 1 year after enrollment. Showed peer-led program can lead to weight loss in addition to changing knowledge and behaviors. **Lessons learned:** Peer leaders were community members who already had the trust of their neighbors as teachers.
Harvey-Berino et al. 2003 **(Akwesasne, New York, US)**	Obesity Prevention in Preschool Native-American Children: A Pilot Study Using Home Visiting	**Target:** n=23 Preschool Native-American children **Focus:** Obesity prevention **Design:** Randomized, controlled trial	**Components:** Two treatment groups: (1) parenting support only - based on the Active Parenting curriculum, (2) obesity prevention plus parenting support focused on how to develop appropriate eating and exercise behaviors in children. **Role of peer leaders:** Peer educators participated in an initial 120 hours of an education program and during the program, reviewed cases and progress reports. They conducted the program in the home of each participant.	**Evaluation results:** Positive effects on energy intake (borderline) for the group with obesity prevention and parent support. No effect on maternal eating and exercise behaviors. **Lessons learned:** Home visiting program shows promise.
Puska et al. 1986 **(North Karelia, Finland)**	Use of lay opinion leaders to promote diffusion of health innovations in a community program: lessons learned from the North Karelia program	**Target:** Adults with an emphasis on middle-aged men n= 1919; lay leaders n=399 **Focus:** Cardiovascular disease risk **Design:** Pre-post treatment evaluation	**Components:** Health education, screening, hypertension program, intensification of treatment and rehabilitation. **Role of peer leaders:** Lay opinion leaders to promote desired health innovations. Two leaders were identified in each village and were typically active members of local organizations like the farmers' union, housewives club, church, hunting club, heart association, and village committee. Leaders were trained to note smoking and dietary habits and blood pressure of community members, advise them about needed behavioral change, and refer them to local health professionals. Activities included distributing leaflets and other materials, creation of non-smoking areas in bars and restaurants, giving out vegetables, and encouraging people to quit smoking.	**Evaluation results:** Interviews were conducted with 7 opinion leaders from 2 different municipalities. Four of the interviewees engaged in high level of activity in their community. 75% of people responded either "very positively" or "positively" to discussions about health matters. Discussions about physical activity were easiest. **Lessons learned:** It's possible to develop a network of opinion leaders in a geographically large area by organizing training meetings; however, 1/2 of originally trained workers withdrew after 3-5 years.

Author/Year (Location)	Article/Report Title	Target Group/Focus/ Study Design	Components/ Role of Peer Leader	Evaluation Results of Peer Program/ Lessons Learned
Rose, 1992 (US)	Evaluation of a Peer-Education Program on Heart Disease Prevention with Older Adults	**Target:** n=23 Urban senior housing residents **Focus:** Cardiovascular disease risk **Design:** Quasi-experimental	**Components:** Peer leaders trained on health promotion, heart disease and risk factors, hypertension prevention, low-fat, low-cholesterol, and low-sodium diets, exercise, stress management, communication skills. **Role of peer leaders:** Communicate information informally to rest of residents	**Evaluation results:** Intervention group received more information from their peers than through public media. Positive impacts on participants' diet and exercise knowledge, self-efficacy and risk for heart disease. **Lessons learned:** The program appeared to benefit individuals who lived in housing residences where the peer educators also resided.
Staten et al. 2005 (Arizona, US)	Pasos Adelante: The Effectiveness of a Community-based Chronic Disease Prevention Program	**Target:** Hispanic adults (mostly women) n=216 **Focus:** Nutrition and physical activity **Design:** Pre-post treatment evaluation	**Components:** 12 week program facilitated by community health workers. Group sessions in community settings for 2 hour periods. **Role of peer leaders:** 11 promotores led the sessions working in pairs. Promotores actively involved in walking clubs for 7 weeks.	**Evaluation results:** Positive impacts on physical activity and fruit and vegetable consumption, decreased soft drink consumption, increased knowledge/skills. Retention of impacts at 6 months post intervention. Promotores reported that subjects were losing weight. Promotores helped form coalitions with community groups for more walking paths, playgrounds in the area. **Lessons learned:** Lack of males who joined the program might mean that women are more motivated by programs emphasizing social support and networks. Promotores may be advocates for community change.

Author/Year (Location)	Article/Report Title	Target Group/Focus/ Study Design	Components/ Role of Peer Leader	Evaluation Results of Peer Program/ Lessons Learned
Stock et al. 2007 (Canada)	Healthy Buddies: A Novel, Peer-Led Health Promotion Program for the Prevention of Obesity and Eating Disorders in Children in Elementary School	**Target:** Elementary school students n=232 intervention; n=151control **Focus:** obesity and eating disorders prevention **Design:** Quasi-experimental	**Components:** Nutrition, physical activity, healthy body image lessons **Role of peer leaders:** Paired with younger student; teach 30-min lesson to younger buddy using presentations, games, art activities. lead 30-min physical activity session	**Evaluation results**: Both older and younger students improved health knowledge/ attitudes/behavior (but not body image) compared to control; smaller increase in BMI and heart rate than control (no change in blood pressure). **Lessons learned:** Did not compare student led vs. teacher led; need to do longer study to see if benefits are sustained, adding measure of empathy and social responsibility in future study.
Story et al. 2002 (Minneapolis/St. Paul, Minnesota, US)	Peer-led, School-Based Nutrition Education for Young Adolescents: Feasibility and Process Evaluation of the TEENS Study	**Target:** n=1000, 7th grade students; n=272 trained as peer leaders **Focus:** Nutrition **Design:** Randomized, controlled trial	**Components:** Classroom based (done by teachers for skill building and decision-making for healthful food choices--peer leaders helped in this part); family involvement (newsletters, behavioral coupons), school environment (vending machines, extramural activities) videos, snack preparations, food record activity, hands on learning stations, games. **Role of peer leaders:** Led group activities, organized and directed sessions, stations, and games.	**Evaluation results:** Students who were peer leaders showed highest fruit and vegetable intake/lowest intake of high fat foods, almost 90% of peer leaders reported that they enjoyed program and thought they did a good job. **Lessons learned**: Recommend more than 1 day of training for peer leaders, more training on group management/ leadership, communication skills, should compare peer-led to teacher-led
Taylor et al. 2000 (Colorado, US)	Knowledge, Skills, and Behavior Improvements in Peer Educators and Low-Income Hispanic Participants After a Stage of Change-Based Bilingual Nutrition Education Program	**Target:** n=56 Low-income Hispanic population (specifically mothers and their preschool children) **Focus:** Nutrition **Design:** Quasi-experimental	**Components:** Printed education materials (Food Guide Pyramid, brochure, flip chart, resource guide) and a five unit nutrition education program**.** **Role of peer leaders:** Peer leaders were Hispanic grandmothers and grandmother figures (*abuelas*) that delivered the nutrition education program.	**Evaluation results:** Peer educators scored significantly higher in post-test and follow-up, indicating an increase in knowledge and skills. Positive impacts for participants in knowledge and behavior. **Lessons learned:** Continued teaching needed to sustain nutrition knowledge and skills.

Author/Year (Location)	Article/Report Title	Target Group/Focus/ Study Design	Components/ Role of Peer Leader	Evaluation Results of Peer Program/ Lessons Learned
Teufel-Shone et al. 2005 **(Arizona, US)**	Developing and Adapting a Family-based Diabetes Program at the US Mexico Border	**Target:** Adults with type 2 diabetes (n = 72 adults; n=249 family participants including children and grandchildren) **Focus:** Nutrition and physical activity for diabetes risk **Design:** Pre-post treatment evaluation	**Components:** 12 week program with 10 contacts by *promotoras* (3 home visits, 5 educational sessions, 2 celebratory events). Activities and curriculum provided. **Role of peer leaders:** *Promotoras* provided transportation and childcare when necessary. *Promotoras* delivered the curriculum (curriculum delivery flexible to accommodate differences in *promotoras'* skills).	**Evaluation results:** Reduced sweetened drink consumption, family members exercising together, family support, trend in greater communication about healthy food choices, buying food from places with healthy choices. No impact on fruit and vegetable, soft drink, low or nonfat milk consumption. **Lessons learned:** Participants indicated that the social interaction provided by the *promotoras* was the best part of the program. Program participation had positive psycho-social impact on participants (less depressed and isolated). *Promotoras* had some prior experience in community outreach, which may have contributed to program success.
Toobert et al. 2002, 2007 **(Utah, US)**	Support for health behavior change among women at risk for heart disease: the Mediterranean Lifestyle Trial. Long-term effects of Mediterranean lifestyle: a rando-mized clinical trial, post-menopausal women with type 2 diabetes	**Target:** Postmenopausal women with type 2 diabetes and at risk for cardiovascular disease (n=279) **Focus:** Nutrition, physical activity, social support and stress management. **Design:** Randomized, controlled trial	**Components:** A comprehensive lifestyle management intervention involving initial 6-month intervention then randomization into maintenance groups. Intervention delivered by a registered dietitian, an exercise physiologist, stress-management instructor, and both professional and lay support group leaders. **Role of Peer Leaders:** Lay-led support group solidified peer interpersonal support during initial intervention period. During maintenance period, leaders continued weekly meetings with exercise assistants. After 6 month these meetings went down to 2 per month for 6 months, then 1 per month for 6 more months. The first 6 months of the intervention were designed to teach the program components and build group cohesion.	**Evaluation results:** After baseline, three sets of outcome measures at 6, 12, and 24 months across conditions were recorded. Reduced percent of calories from fat, increased physical activity, increased use of stress-management techniques. Improvements in some but not all psychosocial variables. **Lessons learned:** Peer leaders may be useful adjuncts to traditional educators.
Townsend et al. 2006 **(California, US)**	Evaluation of a USDA Nutrition Education Program for Low-Income Youth	**Target:** California youth ages 9-12 (n=5111) **Focus:** Nutrition **Design**: Randomized, controlled trial	**Components:** 6-8 hours, 7 lessons of nutrition education with food preparation and tasting. Focus on awareness of fruits and vegetables/ food safety. **Role of Peer Leaders:** Trained leaders (teachers, after-school staff, summer day camp staff, community agency personnel, and select teenagers) delivered the EFNEP lessons.	**Evaluation results:** Students, both male and female, significant positive improvements in nutrition knowledge, food prep skills and safety practices. Significant improvement in food selection behaviors only in males. **Lessons learned:** Youth peer leaders may be useful adjuncts to traditional educators.

Author/Year (Location)	Article/Report Title	Target Group/Focus/ Study Design	Components/ Role of Peer Leader	Evaluation Results of Peer Program/ Lessons Learned
Two Feathers et al. 2005 **(Detroit, Michigan, US)**	Racial and Ethnic Approaches to Community Health (REACH) Detroit Partnership: Improving Diabetes-Related Outcomes Among African American and Hispanic adults	**Target:** n=151 African American and Hispanic adults with type 2 diabetes **Focus:** Diabetes **Design:** Randomized, controlled trial	**Components:** *The Journey to Health* curriculum was used for African American participants and *El Camino a la Salud* was used for Hispanic participants. They were designed to increase participants' diabetes self-management understanding, self-efficacy and autonomous motivation (included nutrition and physical activity components). **Role of peer leaders:** African American and Hispanic community residents completed a 10-week "Family Health Advocate" training program and invited potential participants by mail and telephone to participate. They also delivered the curriculum intervention.	**Evaluation results:** Positive impacts in some aspects of participants' diabetes self-care knowledge, dietary behaviors and hemoglobin A1c. **Lessons learned:** Improvements in outcomes may be due, in part, to the commitment and persistence of the Family Health Advocates.
Williams et al. 2001; **Auslander et al. 2000** **(Midwest, US)**	Process Evaluation Methods of a Peer-Delivered Health Promotion Program for African American Women, The Short-Term Impact of a Health Promotion Program	**Target:** n= 294 Low-income, overweight African American women (ages 25–55 years) **Focus:** Nutrition **Design:** Randomized, controlled trial	**Components:** Active learning exercises that emphasize risk awareness, self-efficacy and skills training. **Role of peer leaders:** African American women from the community delivered a nutrition program over 12 sessions (6 group sessions and 6 individual sessions).	**Evaluation results:** Peer educators overall delivered 91.8% of the material for Wave 1 and 88.7% of the material for Wave 2 accurately. Positive impacts on participants' knowledge, eating patterns and fat intake. **Lessons learned:** Peer educators had little or no formal training with regard to nutrition/teaching skills and methods, but through a training protocol were able to consistently and accurately deliver the nutrition program as intended.
Wilson et al. 2012 **(Virginia, US)**	Fruit and vegetable intake among rural youth following a school-based randomized controlled trial	**Target:** n=1119 (48.5% female, 50% white, with a mean age of 12.7 years) 7th grade students **Focus:** Fruits and vegetables **Design:** Randomized, controlled trial	**Components:** Eight 1-hour workshops on the negative effect of tobacco use and the benefits of eating the recommended fruits and vegetables servings daily. Students also had to perform an activity with their parents. **Role of peer leaders:** Peer leaders (high school students) presented the workshops during health class for eight weeks.	**Evaluation results:** Positive effects on fruit and vegetable servings and nutrition knowledge. **Lessons learned:** Peer leaders are perceived as credible role models, and as such are effective disseminators of information.

Lessons from the Field: Four Peer-Led Efforts in California

We reviewed four health promotion programs to understand how peer-led approaches are being implemented currently in existing programs in California. We begin with descriptions of the four programs, followed by a synthesis of key findings based on interviews and site visits.

The four programs reviewed:

- CalFresh Promotion
- Cooking Matters
- Mothers Taking Action
- Nutrition Ambassadors

Table 5 briefly describes each program and provides a comparative overview of the key elements of the peer-led component, followed by a more detailed description of each program.

Table 5: Descriptions of Programs with Peer Leaders

Program	Peer Leader Recruitment	Peer Leader Training	Peer Leader Responsibilities and Expectations	Peer Leader Support	Peer Leader Retention	Peer Leader Compensation
CalFresh Promotion (Alameda County Department of Public Health)	• Local schools and parent groups • Goal is for each staff to recruit two peer leaders • Recruitment by year: 2010 = 10 2011 = 8	• One day (8-hour) training • Curriculum-based and lecture style • Led by Project Lean staff • Materials from MyPlate, Cal Fresh promotion information, food groups and physical activity demonstrations	• ***Individual-based*** • Outreach • Recruitment • Find meeting space • Deliver curriculum to 20 community participants through two sessions, each consisting of three two-hour classes	• Staff provide one-on-one support and assist with organization and administrative processes • Staff attends presentations to provide support and debrief with peer leaders	• 10-20% leave the program before their commitment ends • Main factors: life situations, lack of comfort delivering material	• $1,400 for recruiting 20 people and teaching two 3-class sessions
Cooking Matters (Three Squares)	• Partner agencies with existing community leaders • Local parent groups • Goal is to recruit 15-20 peer leaders per site per year • Recruitment by site in 2011: • Livermore = 20 • Concord = 16	• 8 weekly classes, 3 hours each • 6 weeks of curriculum, 2 weeks of practice • Interactive and hands-on • Led by Kaiser health educator • Material from MyPlate, reading labels, portioning meals, healthier options, healthy cooking	• ***Team-based (6)*** • Some peer leaders recruit their own participants, others work with sites that have already recruited participants • Deliver curriculum to 15 community participants through 6 two-hour weekly classes	• On-site staff support as requested • Phone or email support as needed	• 10-20% leave the program before their commitment ends • Main factors: time conflicts and schedule changes, new jobs	• $300 for teaching a 6-week course • Free produce from cooking classes

Program	Peer Leader Recruitment	Peer Leader Training	Peer Leader Responsibilities and Expectations	Peer Leader Support	Peer Leader Retention	Peer Leader Compensation
Mothers Taking Action (Ventura County Department of Health Services)	• Partner CBOs • Word of mouth • Recruitment by year: 2010 = 12 2011 = 14	• 8 week training session with 5-6 weeks of core curriculum and 2-3 weeks of practice • Based on the Freirian model, the training focuses on participatory learning in a small group setting, with an emphasis on facilitation skills and content knowledge of nutrition and physical activity	• ***Individual-based*** • Co-develop outreach plan • Recruit 5-10 participants • Facilitate one-time, two-hour dialogue sessions with community participants – the goal is to conduct 2 sessions per month, or 24 per year per facilitator • Conduct follow-up calls 3-4 weeks after the dialogue session • Attend monthly meetings with staff and other peers	• Staff provide one-on-one support and assist with organization and administrative processes • Staff also assist with recruitment and securing space for meetings	• 66-70% leave the program before their commitment ends • Main factors: finding paid employment, summer travel, family commitments and lack of comfort facilitating sessions	• $50 for each session facilitated, 12 month commitment
Nutrition Ambassadors (Second Harvest Food Bank)	• Health fairs, food banks and churches • Door to door in communities served by the program	• 6 week training • Material from MyPlate, reading labels, physical activity, cooking demos and basic advocacy skills • Training approach varies depending on group's educational level and learning style	• ***Team-based*** • Offer programs twice a month, alternating nutrition classes and cooking demonstrations • Provide assistance with all aspects based on comfort level: presentation, set up, clean up, produce distribution	• Staff provide one-on-one support and assist with organization and administrative processes • Staff also assist with recruitment and securing space for meetings • Staff attend presentations and provide support as needed, including teaching initial classes until peers are comfortable doing so	• No exact figures available, however staff estimate one year retention at approximately 85% • Main factors: finding paid employment, summer travel, family commitment	• Free bags of produce

CalFresh Promotion

Agency. Alameda County Public Health Department Nutrition Services.

Agency Mission/Goals. The mission of the Alameda County Public Health Department (ACPHD) is to work in partnership with the community to ensure the optimal health and well-being of all people. The mission of Alameda County Nutrition Services (ACNS) is to promote and support healthy eating and physical activity through committed partnership with communities to reduce chronic disease and improve long-term health, while its vision is that all people live in safe, connected neighborhoods that offer fresh, affordable foods, are choosing active healthy lifestyles and are engaged in their communities. ACNS staff includes registered dietitians, community health outreach workers, other public health professionals, and managers.

Intervention. ACNS has been working for over seven years to establish parent groups called Healthy Living Champions for Change at targeted schools in two cities in Alameda County: Oakland and Livermore. The purpose of these groups is to create a forum for building the capacity of the community to address the high incidence of obesity and related health problems. The vision of these groups is that they are an educated, organized and mobilized group of people who take action to ensure that the conditions exist in their community for people to eat better and be more active. ACNS seeks to address growing rates of childhood obesity by partnering with parent leaders to educate/empower their peers to develop and maintain healthy eating habits and to promote physical activity as a healthful way of engaging with their children. CalFresh Promotion is a pilot program that utilizes a peer-to-peer approach (the *Promotora* Model) based on the observation that community health workers and adult leaders play an important role in improving the health of their communities by building trust, brokering communication, and providing linkages to a wide range of services. California Project LEAN (Leaders Encouraging Activity and Nutrition) developed a curriculum (English and Spanish) with three lessons designed to build the capacity of promotores in predominately Spanish-speaking communities in Alameda, Fresno and Tulare Counties to promote CalFresh and increase consumption of fruits and vegetables and levels of physical activity.

> *"When paid professionals are done teaching they go home. In the peer-led approach, the peer stays in the community and very likely continues this education and effort in almost every scope of their life."*

Target Population. The target population for the CalFresh Promotion Program is community members in Alameda County who may be eligible for CalFresh benefits. They tend to be Spanish-speaking families with diverse levels of physical activity and nutrition knowledge. Many report barriers to physical activity because they live in neighborhoods with violence and may not feel safe in outdoor activities.

Peer-Led Approach. The pilot program is in its second year, with ten peer leaders recruited in 2011 and eight in 2012. Peer leaders are parents of Oakland Unified School District elementary and middle school students. Each of the peer leaders plans and delivers at least three 2-hour trainings to their peers. They are also responsible for promoting the trainings and coordinating logistics such as training locations, dates and times. Peer leaders are selected from local schools that serve neighborhoods with a high incidence of poverty and obesity. Most are Latina and primarily Spanish-speaking, reflecting the demographics of the communities where the program is implemented. Each ACNS program staff member takes responsibility for recruiting about two peer leaders. Staff work with existing groups of parents in communities (such as the Champions for Change Program) and with local elementary schools. Although it is not a formal process, peer leader recruitment identifies individuals with leadership skills who demonstrate interest in healthy living, nutrition and CalFresh, as well as in developing professional skills. There is a financial incentive, so peer leader candidates are also encouraged to view it as a job opportunity.

Cooking Matters: Learning the Basics of Healthy Cooking

Agency. Three Squares

Agency Mission/Goals. The mission of Three Squares, a San Francisco-based nonprofit, is to encourage and enable healthy eating and sustainable food systems through education and advocacy. The organization collaborates with community partners to research, plan, implement, and evaluate programs and policies that help make the food system more equitable and sustainable. Three Squares works with low-income individuals to give them the tools and training they need to make positive changes in their communities. The goal is to build stronger, healthier communities.

Intervention. Three Squares' main program, Cooking Matters, offers a free six-week-long series of cooking and nutrition education classes to low-income adults, children, and families. In each two-hour session, participants receive one hour of nutrition education, then participate in one hour of hands-on cooking instruction. Each week, participants take home a bag of fresh fruits and vegetables to make the week's recipes at home. The Cooking Matters curriculum has been recognized by the USDA with a special award for excellence in nutrition education.

Target Population. The target population for Cooking Matters is low-income families who desire to make lasting changes in the way they eat, cook, and shop for food. Courses take place at different sites serving low-income populations with other services, including food pantries, clinics, after-school programs, churches, shelters, low-income housing sites, free dining rooms, schools, community centers, and an urban farm.

Peer-Led Approach. Over 60% of Cooking Matters classes in the Bay Area have been conducted entirely in Spanish, which has posed a challenge to Three Squares staff and volunteers, most of whom are not fluent in Spanish and must rely on outside assistance to teach these classes. La Clínica de la Raza, a Cooking Matters host site, first introduced Three Squares staff to the promotores model of training community members to be educators and spokespeople for their communities. Through a partnership with San José State University's nutrition program, a promotores training curriculum was created and piloted in 2011.

The peer-led component of the Cooking Matters program has been in operation for one year. The first eight-week pilot promotores training program was conducted in partnership with La Clínica de la Raza in the city of Pleasant Hill and a Kaiser Permanente Community Health Educator. La Clínica staff selected 20 participants who were already working on community health issues from a pool of over 40 interested applicants. Promotores who participate in the training complete an extensive pre- and post-test on each nutrition topic in the Cooking Matters curriculum. Promotores who completed the eight-week training showed a level of nutrition knowledge comparable to that of traditional Cooking Matters instructors, who are typically chefs or nutritionists (82% post-test average compared to 85% for traditional instructors).

In 2012, Three Squares partnered with Kaiser Permanente's Diablo Region and the Tri-Valley Community Foundation to offer a promotores training series in the city of Livermore. Parents recognized for being leaders in the community were recruited at two elementary schools with a high percentage of low-income families. Currently, Three Squares is training another cohort of promotores in Pleasant Hill through a partnership with La Clínica de La Raza. In 2012, twelve peer leaders were recruited in Livermore and sixteen in Pleasant Hill. Most of the peer leaders recruited are Latina and primarily Spanish-speaking, reflecting the demographics of the communities where the program is implemented.

Mothers Taking Action: Facilitating Dialogue and Connecting Communities

Agency. Ventura County Health Care Agency

Agency Mission/Goals. The Public Health Department of Ventura County's Health Care Agency works with and supports community-based organizations and health care providers across the County, with particular focus on communities with health disparities and reduced access to care. Their goals are to:

- Promote health and model healthy behaviors
- Prevent illness, injury and spread of disease
- Assure quality and accessible health services
- Prepare for and respond to emergencies and disasters, and assist communities in recovery

> *"We're not teaching them, but being with them. Being at the same level as people is powerful. I'm a mother, just like them."*

Intervention. Mothers Taking Action is a joint effort of the Ventura County Public Health Department/San Joaquin County Public Health Service, Public Health Institute, California Food and Justice Coalition, and the National Opinion Research Center (NORC). The Public Health Institute, NORC, and California Food and Justice Coalition provide program technical support.

Target Population. The program is designed to reach and serve low-income mothers across Ventura County. There are income eligibility guidelines, but peer leaders do not screen as part of their outreach. Because most outreach occurs through partner organizations, those attending the program's sessions are pre-approved.

Peer-Led Approach. Mothers Taking Action (MTA) is a pilot program that was developed on the theory that while existing efforts to promote healthy eating and more active living are focused on media and traditional educational approaches, communities are most successful when individuals take ownership and become mobilized to take action on their own. The MTA approach supports mothers who engage with one another in a meeting or dialogue session to share what they know and learn about health, healthful activities (i.e., walking clubs), and nutrition. The focus is on interpersonal communication as a primary means of education, as opposed to traditional classroom lectures. Program activities are deliberately designed to include mothers in discussions; MTA meetings provide a supportive place for participants to reflect on what is important to them, analyze the problems they face and what can be done about them, showcase skills that have been developed, make the connection between healthy communities and healthy families, and exchange ideas and formulate action steps.

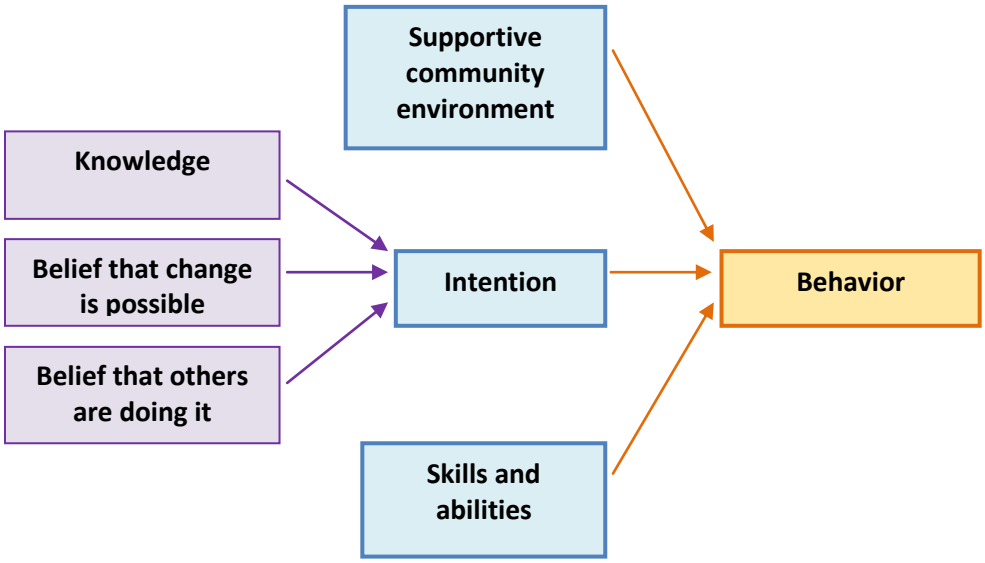
In the meeting, participants learn about the scope and severity of the local obesity epidemic, what can be done about it and where to go for more information and assistance. A group leader, who is a more experienced peer leader, serves as a role model for the idea that change is possible and facilitates exchanges between mothers who have made changes and are planning to make more and those that are just beginning to learn about the issues of obesity and healthy eating. Mothers develop a sense that they are not alone and that their peers are making changes. Participants describe the changes they intend to make.

Mothers Taking Action peer leaders who have served in more traditional health outreach worker roles report this approach is more effective because of the power of discussion. As a peer leader explained, *"We're not teaching them, but being with them. Being at the same level as people is powerful. I'm a mother, just like them. When I teach people they just say yes, but it doesn't sink in."* This was corroborated by another peer leader, who noted that, *"when I get information at health fairs I read about it and then forget it all."*
As a facilitator, the peer leader keeps the meeting on track and promotes full and active participation in the dialogue. The goal of the peer leader is to be able to answer "yes" to the following questions once the group session is completed:

- Did the group confront the seriousness of the local obesity epidemic?
- Did the group understand the recommended obesity prevention steps and have a chance to talk about them?
- Did the group have an opportunity to hear what action steps members of the group have already taken?
- Did each member of the group have the chance to state out loud what steps they intend to take after the meeting?
- Did everyone leave with a clear understanding of where they can go for additional information, assistance and support?

Figure 1 is a visual representation of the theory of change behind MTA's approach.

Figure 1: Mothers Taking Action Theory of Change



This pilot program, including planning, implementation and evaluation, is in its second year. Twelve peer leaders were recruited in 2011 and fourteen in 2012. Most of the peer leaders recruited were Latina and primarily Spanish-speaking, reflecting the demographics of the communities in Ventura, California, where the program is implemented.

Nutrition Ambassadors

Agency. Second Harvest Food Bank Santa Cruz County

Agency Mission/Goals. Founded in 1972, Second Harvest Food Bank Santa Cruz County (SHFB) was the first food bank in California and is the second oldest in the nation. SHFB's mission is to end hunger and malnutrition by educating and involving the community. Through a network of 200 agencies and programs and their 3,000 volunteers, SHFB distributes over 7.3 million pounds of food annually to low-income families, children, and seniors. Their vision is to use 95 cents of every dollar for program services while increasing the distribution of healthy foods and nutrition education.

Intervention. SHFB has been engaging with partner agencies around nutrition for several years to build support for produce distribution and nutrition education efforts. Having laid the groundwork with staff and agencies, SHFB began developing the Nutrition Ambassadors (also known as "Passion for Produce") nutrition education and produce distribution program in 2008, building upon lessons learned from several years of offering nutrition education at a local health clinic. In 2009, SHFB opened the first pilot site at the Church of the Nazarene in Watsonville, California. After enlisting the support of the pastor and church staff, SHFB recruited the first group of Nutrition Ambassador Volunteers. SHFB partners with a variety of program partner institutions in low-income neighborhoods. The partner sites offer their facilities twice a month, to provide convenient indoor locations for nutrition education and produce distribution. Partner sites also assist in the initial recruitment of at least 6 volunteers. The program has been able to expand to over 20 sites over the past two-and-a-half years with the support of a Community Development Block Grant.

Target Population. The program's goal is to address the lack of access to fresh produce and nutrition information among farmworkers and other low-income families, which contributes to high local incidences of obesity and diet-related disease. Most classes are delivered in Spanish.

Peer-Led Approach. The Nutrition Ambassadors program is a community-based approach to peer nutrition education and produce distribution. The program also focuses on empowering volunteers to step up as leaders in their community.

SHFB's focus has been to train community members in need of food bank services as peer nutrition educators. Volunteers commit to a six-week training course to become Nutrition Ambassadors. They learn basic nutrition concepts (such as the My Plate approach to healthy eating) and skills (such as reading nutrition labels). The training also emphasizes the importance of physical activity as part of a healthy lifestyle, provides an introduction to the SNAP program (CalFresh in California), and provides training in basic community advocacy skills (with a focus on nutrition and health issues). Nutrition Ambassadors receive a curriculum and materials binder of information for their on-going reference. After the completion of the classes, the group does a run-through of a Passion for Produce nutrition class and produce distribution, to prepare to open the program to the public. Each site's training session concludes with a graduation celebration, featuring a healthy and delicious meal shared by volunteers, partner site representatives, and food bank staff, the awarding of certificates of completion, and healthy living gift baskets for all the Ambassadors. Participants also share personal lessons learned and their new commitment to good nutrition and healthy living.

Once the site opens to the public, the Nutrition Ambassadors offer sessions twice a month, alternating between nutrition classes and cooking demonstrations. In addition to exposing community members to new food items, recipes and ways of preparing food, the cooking demonstrations help convince community members that healthy food can also be delicious; as one respondent noted, *"tasting is believing."*

The program keeps messages simple to facilitate incremental changes at home. The program has over 20 lesson plans, providing information on a variety of nutrition topics. AmeriCorps volunteers and volunteer chefs and home cooks present cooking demos and healthy recipe tastings at sites once a month. There is a recipe of the month that

peer leaders use at each site to feature produce that is in season and available through the food bank. In addition, the SHFB distributes produce at each session and the program provides bilingual recipe cards for participants to take home. Peer leaders invite community participation and input through activities designed to facilitate information sharing, as well as create an environment where everyone can learn from each other's knowledge and experiences.

In addition to the relational benefits of peer-led efforts, the Nutrition Ambassadors play a vital role in augmenting staff capacity. Since classes and food distribution require teams of up to seven people, the program staff stated that these efforts would not be possible without the peer leaders' support.

Key Findings

Key findings from the four case studies include a description of the implementation of peer-led approaches, successes, challenges, best practices and lessons learned in these areas:

- Program procedures, including recruitment, training, support, retention and compensation of peer leaders, as well as recruitment and support of community members.
- Outcomes of peer-led approaches with respect to community members.
- Impacts of peer-led approaches on the peers themselves.
- Institutional factors associated with the sustainability of peer-led approaches.

Peer Leader Recruitment

Key Findings: Peer Leader Recruitment

- Peers are recruited in a variety of ways, including from schools, churches, clinics and as identified by other community leaders.
- Most programs do not have formal screening or application processes, although some would like to do so in the future.
- Attributes of successful peer leaders include passion, drive, concern for their communities and a willingness to go "above and beyond."
- Community members with higher levels of education and/or previous peer leader experience may be more successful, at least in the initial phases of program implementation.
- Programs with a team-based approach can effectively utilize peers with a range of skills, while those relying on peer leaders to present individually may benefit from a more rigorous recruitment and screening process

Recruitment of the right number and mix of peer leaders is crucial to the success of these efforts. Peer leaders are the face of these programs to the community and best represent the program when they are trusted and respected members of the community and reflect the communities in language, ethnicity, socioeconomic status, country of origin and family status. Other desirable attributes include being willing to make significant time and

energy commitments to the program; mastering complex content such as weight and nutrition; and successfully presenting to and facilitating groups. Ideal peer leaders also "walk the talk" by serving as positive role models in their communities. The challenge is recruiting enough peer leaders with these attributes to make programs viable.

The programs recruited peer leaders through a variety of techniques, including recruiting parents from local schools and other grassroots organizations. Some programs recruit from other peer leader programs, such as *promotoras* working with local clinics, enabling them to obtain leaders with prior experience.

Peer leaders may also be recruited by going door-to-door or conducting outreach at venues including health fairs, food banks and churches. A "snowball" technique is often used in which community leaders are identified and asked to recommend others they believe might be a good fit.

Personal characteristics of successful peer leaders include empathy and concern for others, motivation and a willingness to go "above and beyond" the call of duty. A high degree of passion was a recurring theme cited by many key informants. As a peer leader noted, *"It's not only words people respond to, but your passion. People respond to people, especially if you've been there and know what they're going through."* A program staff member explained, *"Passion is key to success. It's hard to measure, but we know it when we see it. If someone has enough passion, they can surprise you."*

Other desirable attributes of a peer leader:
"Humility, honesty, a willingness to learn and charisma," a *"calling to help the community"* and a *"spirit of service."* In fact, one of the programs does not discuss the stipend they provide during the recruitment process, to dissuade people from joining the program for *"the wrong reasons."*

A good understanding of the program, the causes and effects of obesity, the importance of physical activity and healthy eating, and an ability to firmly grasp the issues and *"go beyond memorization."*

"It's not only words people respond to, but your passion. People respond to people, especially if you've been there and know what they're going through."

Program staff noted that those with previous experience as peer leaders and/or higher levels of education are often more successful in this work, particularly when working on their own versus part of a team. As a peer leader explained, participation in the program can be *"difficult if you don't understand the material. It's easier if you've attended school before."*

Data from CalFresh Promotion (the only program with information on peer leader educational levels), showed that nearly half (46%) of the peer leaders reported some college education, compared with only 12% of community members – a nearly four-fold difference. However, while higher educational levels may be beneficial, it may also create a gap in understanding between peer leaders and community members. One side note: some peer leaders do become motivated to further their education; this was the case for three CalFresh Promotion peer leaders working with the FoodLink program in Tulare County, who decided to attend college and advance their careers in health as a result of participation in the program.

Despite the desire to recruit peer leaders with the attributes mentioned, the programs did not have a formal recruitment process and most accept all interested applicants for peer leader positions. As a staff member explained, *"our main process is to put the word out. We take everyone. Some people sink and some swim."* Accepting all applicants appears to work well in the case of team-based approaches such as Second Harvest and Three Squares, which use teams of several peer leaders with varied skills to present classes and cooking demonstrations. As a staff member explained, *"There's always something for somebody to do. It's all about empowering people as leaders in the community."* Team-based approaches have the advantage of allowing individuals with strong presentation skills and a good grasp of the content matter to present, while allowing others

to play a range of supporting roles, including set up, food preparation, food distribution, etc. Team members can gradually take on more challenging roles as they gain knowledge and become more comfortable with the content matter and presenting to a group.

Peer leaders are likely to adopt the healthy behaviors they are promoting. An additional advantage of accepting all types of applicants is spreading knowledge and behavior change among a larger cadre of community members, with subsequent spillover effects in their families and the broader community.

The Mothers Taking Action and CalFresh Promotion programs rely on individual peer leaders to facilitate discussions or teach classes. Both programs require higher skill levels in their peer leaders. CalFresh Promotion seeks people who possess content knowledge and presentation skills, and the Mothers Taking Action program seeks people who have strong group facilitation skills. These programs expressed greater interest in formalizing the recruitment process to better screen candidates. While they are still trying to determine the best recruitment process, they are increasingly aware of its importance.

CalFresh Promotion staff attend all peer-led presentations so they can support the peer leaders and provide feedback and guidance after each session. While no staff are present during Mothers Taking Action groups, peer leaders are paired with a more experienced "support leader" and are given a lot of time to practice. They are not required to offer sessions until they feel ready to do so.

Peer Leader Training

Key Findings: Peer Leader Training

- Training must provide peer leaders with content knowledge about diet and nutrition as well as effective presentation and facilitation skills.
- Ample time for practice in presenting material is essential.
- Peer leaders could benefit from additional training on effective presentation and recruitment strategies.
- Successful training is geared to participants' educational levels and learning styles.

After selection, effective training is essential for the success of peer-led efforts. The training process may need to transmit a large amount of complex information and skills to individuals with varying degrees of education and literacy. The trainings vary in length and format. While all appear to effectively transmit content knowledge, most of the peer leaders interviewed cited a desire for additional training and skill-building in the areas of outreach, facilitation and presentation. As an external stakeholder noted, *"my experience is that constant teaching is required in peer-led programs. Not just about subjects like healthy eating, but also the basics of public speaking, overcoming shyness, professionalism and many other topics."*

The CalFresh Promotion peer leaders in Alameda County said the greatest challenge was learning to do presentations, primarily because they were expected to do so on their own after a single eight-hour training (although with staff present). Peer leaders said that they did not feel very prepared at the end of the training, and suggested they could benefit from a longer training broken up into shorter sessions. Both staff and peers said it was difficult to remain focused during one day-long session. Staff did, however, offer peers on-going support and training, which was reported to be helpful. In contrast, the other programs offered ample opportunity for

practicing and observing, and/or allowing team members to take on less challenging roles while gaining experience.

Providing time to practice delivering the information or facilitating group discussions is essential. The Three Squares training, which is based on the Cooking Matters curriculum, integrates practical advice on teaching the curriculum throughout the training. For example, the trainer will periodically interject, *"You'll be teaching this information, so here's a tip on how to do that."* The Three Squares training sessions are three hours long, with two hours devoted to content and an extra hour for discussing teaching techniques and answering questions.

Most staff cited the importance of taking different learning styles into account and adapting trainings to the needs of each audience, based on adult learning theories. For example, one trainer uses a more interactive, hands-on style with low literacy groups, while incorporating more visuals, such as PowerPoint presentations, for groups with higher levels of education. The training component also provides staff with an important opportunity to identify each peer leader's areas of strength, as well as types of support needed to help them succeed. In the case of team-based approaches, staff also can identify the most appropriate roles for each participant.

Three of the programs provide training by their own staff, while the California Food and Justice Coalition (CFJC) provides training for Mothers Taking Action peer leaders. Mothers Taking Action staff and peer leaders spoke very highly of the training, but reported a preference for a "train the trainer" model, which would allow them to replicate the training and adapt it to local needs and capabilities. Staff also felt that they could provide more targeted training regarding outreach and recruitment of community members, given their greater familiarity with the region.

One training area that could be further developed is skills to help peer leaders and community members promote policy, systems or environmental change in their communities, e.g., improving school food, increased access to fresh fruits and vegetables or improving safety and walkability in their neighborhoods. With the exception of Mothers Taking Action, this is an area in which the peer leaders receive little training, despite growing interest in these approaches on the part of community members.

Peer Leader Responsibilities and Expectations

Key Findings: Peer Leader Responsibilities and Expectations

- Peer leaders make significant commitments to the programs, in terms of training, developing outreach plans, recruiting community members, delivering trainings and other services, following up with community members and receiving support from program staff.
- Clarifying all expectations and commitments from the outset is key to program success.

Peer-led programs place significant demands on the peer leaders, including the time they must commit to training, delivering services, attending meetings and receiving one-on-one support; the length of time they must commit to the program; the number of people they are responsible for recruiting; the number of classes or other deliverables they are responsible for; and the provision of follow-up and support for community members. Specific responsibilities for each of the programs are as follows:

CalFresh Promotion

- No time commitment—the only commitment is to deliver the trainings.
- Participate in one day-long eight-hour peer-leader training session.
- Recruit at least 20 participants who complete the full education, consisting of three two-hour sessions (six hours total).
- Deliver at least two complete training sessions for community members.
- Assist with collection of evaluation data.
- Meet with program staff as needed.

Mothers Taking Action

- Commit to one year in the program.
- Participate in peer leader training consisting of eight sessions (six "core" and two practice sessions) of four to six hours per session, representing an initial training of approximately 40 hours.
- Co-develop an outreach plan with program staff.
- Recruit five to ten participants to participate in each education session
- Conduct an unspecified number of one-time dialogue sessions (ideally two per month, but no minimum).
- Follow up with dialogue session attendees on progress toward healthy changes and offer support.
- Attend monthly meetings with program staff and other peer leaders.
- Communicate with staff as needed.

Second Harvest

- Commit to one year in the program.
- Participate in one six-session training. Each session is approximately one hour long, representing a total initial training of approximately six hours.
- Teach or assist with two sessions per month (alternating nutrition classes and cooking demonstrations).
- Assist with produce distribution three times per month.

Three Squares

- Participate in six weekly three-hour training sessions, representing an initial training of 18 hours.
- Complete 12 hours of homework as part of the training.
- Recruit 15 to 20 participants for a six-week Cooking Matters series.
- Teach or assist with at least one six-week Cooking Matters series.
- Assist with evaluation and data collection.
- Communicate with staff as needed.

Programs with a longer time commitment of one year or more, appear to experience the highest rates of attrition, based on staff reports. Attrition is due to peer leaders obtaining paid employment (as opposed to limited program stipends), traveling, or taking time off during the summer to take care of children or migrate, in the case of agricultural workers. As a staff member commented*, "we wish we would have accounted for that in terms of scheduling and reaching our numbers."*

Supporting Peer Leaders

Key Findings: Supporting Peer Leaders

- Staff support for peer leaders is essential.
- As with peer leaders, drive, motivation, passion and charisma are attributes of successful staff.
- Levels of staff support were often significantly higher than anticipated, resulting in staff working overtime and fielding calls at off hours.
- Good relationships with staff can help peer leaders feel less isolated and more a part of the agency or program.

Given the high expectations placed on the peer leaders, coupled with perhaps limited professional experience, a high degree of staff support is essential to the success of peer-led efforts. As a staff explained, *"You can't develop leaders in eight sessions."*

The programs support peer leaders in different ways. Second Harvest and CalFresh Promotion staff are present during presentations, where they provide support, answer questions peer leaders are not familiar with and provide feedback after each session. Staff presence at presentations requires additional resources, but is seen as a good return on investment, as it advances the framework of using peers as the most effective conduits for promoting change. CalFresh Promotion staff said that peer leaders, partnering with local CalFresh outreach workers who attend the CalFresh Promotion classes, have had more success enrolling community members in CalFresh than program staff, which is one of the program's main goals. Staff also provide a tremendous amount of support with outreach, recruitment and helping peer leaders prepare for classes and discussions.

Staff are largely committed, passionate, empathic and charismatic individuals, much like peer leaders. They tend to have a desire to serve their communities, a strong connection with peer leaders, and a deep desire to see them succeed. Since peer leaders often do not work in the office, relationships with staff are vital in making peer leaders feel less isolated and part of the program agency.

Staff support typically extends well beyond the standard 40-hour, 9-5 work week. They reported working many overtime hours and receiving calls from peer leaders at all hours of the day and night. This 24/7 availability contributes significantly to program success, but not all staff can meet this demand and many are susceptible to burnout as a result. Some staff attributed peer leaders' tendency to contact them at all hours to a lack of professional experience They suggested adding training in practical skills such as scheduling, timelines, and organization.

Peer Leader Retention

Key Findings: Peer Leader Retention

- As with other volunteer programs, peer-led efforts can experience high rates of attrition.
- Promoting retention can contribute to increased effectiveness and sustainability, particularly given high investments in training and supporting peer leaders.
- Strategies used to incentivize and retain peer leaders include cash payment and in-kind gifts.
- Other means of promoting retention include acknowledgement, celebrations, and opportunities for professional development.
- Exit interviews can help programs identify main reasons for attrition and strategies for promoting retention.

Retention of peer leaders can contribute to program success in a number of ways. There are advantages to having a larger pool of skilled and experienced peer leaders to draw from. Given the significant investments in training and supporting peer leaders, retention can also contribute to reduced costs and long-term sustainability of the program.

The key strategies used to retain peer leaders are compensation in the form of cash, gift cards and in-kind gifts, and recognition, including graduations, celebrations, or business cards. At an intrinsic level, factors contributing to retention are personal satisfaction derived from the work, increased status and recognition in the community, continued education about issues relating to nutrition and physical activity and the opportunity to interact with people beyond the peer leaders' daily spheres.

There are many factors that make it difficult to retain peer leaders, including the need to find paid employment, changes in work schedules, the need to take care of children during the summer or make a move out of the area. Lack of transportation and/or childcare can also make it difficult for peer leaders to commit to the programs. For instance, transportation challenges can be addressed by locating programs in close proximity to where the peer leaders and community members live. Providing childcare may allow many peer leaders to continue their work. As a peer leader explained, *"It's difficult because we have kids and we have to arrange care for our children. The first training did not provide childcare, but the later ones did."* Peer leaders said that childcare at the trainings also allowed them to focus greater attention on learning the material.

Other program elements that can make it difficult to retain peer leaders include the need to incur out-of-pocket costs for travel or supplies purchases, such as food for cooking demonstrations. While program stipends can cover these costs, they are sometimes inadequate, creating a burden on peer leaders. The rising cost of gasoline has also become a problem in recent years and is something programs may need to address.

Unclear or unrealistic expectations can impact retention. One of the programs reported high rates of attrition because peer leaders did not realize the program would entail as much effort as it did. Making program expectations very clear from the outset is important, especially when programs require a large commitment from peer leaders or expect them to go beyond their comfort levels. Although clear expectations may make recruitment more challenging, it may ultimately result in higher retention rates.

A strong connection between peer leaders and program staff can also foster retention, since peer leaders typically do not spend much time in the agencies' offices and can feel isolated.

Staff from one of the programs that experienced high attrition said they would like to hire peer leaders into paid positions in the future. Until resources are available to do that, they plan to recruit a significantly larger pool of potential leaders to compensate for the anticipated attrition.

None of the programs conducted formal exit interviews to identify specific reasons why peer leaders leave their positions or to identify ways to promote retention. Doing so could provide important insights to help increase retention.

Compensating Peer Leaders

Key Findings: Compensating Peer Leaders

- The issue of providing compensation for peer leaders has been the subject of much debate.
- All but one program provide cash compensation for peer leaders, with significantly varying amounts.
- Some programs consider the education and training the peer leaders receive part of their compensation.
- All peer leaders seem reasonably satisfied with compensation, claiming they are largely doing this to serve their communities.

There is no consensus about providing peer leaders with monetary compensation, and there are strong opinions on both sides. Those opposed to compensating peer leaders maintain that it negates the fundamental "spirit of service" guiding these efforts, that doing so could attract people interested in this work for the wrong reasons, that compensation will result in greater attrition if it is no longer available and that providing compensation creates a gap and possible mistrust between peer leaders and community members. Conversely, those in favor of compensation assert that peer leaders are para-professionals performing an important service and should be treated as such, that compensation promotes greater retention, and that the provision of compensation results in a higher degree of accountability among peer leaders. Many feel that being a peer leader is incredibly hard work, and it should be compensated accordingly. As an external stakeholder explained, "*These promotoras need to be paid and full-time. The recruitment and outreach they do is a lot of work. While they value giving back, it is exhausting. They also have to feed their families and pay gas. We need to make sure they themselves are healthy and well-taken care of, so that if they have diabetes or want to lose weight, they are supported to do so by having health benefits, for example."*

Only Second Harvest does not provide peer leaders with monetary or in-kind compensation, with the exception of the bag of produce offered to attendees at classes and cooking demonstrations. (The program is implemented within the context of a food bank, which typically rely heavily on volunteers to assist with program implementation.) While noting that the peers are "true volunteers," staff also expressed concerns that people receiving a stipend might stop volunteering if resources for compensation were no longer available.

Compensation varies considerably among the other programs. Mothers Taking Action offers peer leaders $50 per group discussion facilitated, while Three Squares offers a flat stipend of $300[3] and CalFresh Promotion offers the highest level of compensation, $1,400 for successful completion of all requirements. These amounts of compensation are meant to cover the peer leaders' time and related expenses, including travel and telephone calls. How this compensation computes on an hourly basis is unclear, but in some cases it is low, with peer educators possibly even subsidizing the programs.

[3] This sum is based on an amount below what is required for tax and other reporting purposes.

The training the peer leaders receive is often considered an important part of the "compensation package." As a staff member explained, *"We pay the promotores for the classes they teach, not for the training. We believe the training is like a class for them, so what they receive in terms of learning is a payment."* Another incentive for peer leaders is gathering work-related experience and obtaining references and recommendations that may help them obtain paid employment.

When asked about satisfaction with the amount of monetary compensation received, peer leaders receiving compensation claimed they are largely doing this to serve their communities, but would be happier with higher compensation. In contrast, the Second Harvest peer leaders, who receive no compensation, expressed no desire for financial compensation, noting that they are happy to serve their community and continue to learn new things.[4]

Peer Leaders and Community Members

Many of the issues regarding peer leaders, including recruitment, training, retention and support, apply to interactions between peer leaders and community members as well. This section highlights different ways the programs have addressed these issues and key lessons learned.

Recruiting Community Members

Key Findings: Recruiting Community Members

- Peer leaders often recruit from their personal circles of friend, family and neighbors.
- Peer leaders noted that recruiting community members beyond their circles has been more challenging than anticipated.
- Staff members needed to assume responsibility for recruitment, particularly in the early stages of program implementation.
- Guidelines regarding recruitment in SNAP-eligible census tracts have been a barrier to recruitment for some programs.

The programs use a variety of approaches to recruit community members, which is sometimes the responsibility of peer leaders and at other times falls on, or is taken on, by staff. Peer leaders responsible for recruitment noted that recruiting people beyond their personal networks is one of the most challenging aspects of their work, with many citing a desire for more in-depth training to increase relevant skills.

In general, peer leaders recruit from among their friends, family, neighbors and other personal contacts. In addition to providing the programs with access to an often previously untapped "market" for their services, recruitment among the peer leaders' networks can result in greater levels of commitment, as participants may feel more accountable to the peer leaders than to strangers.

[4] The socioeconomic status of peer leaders, which could be an important factor affecting attitudes toward compensation, was not assessed.

In addition to personal networks, community members are recruited through schools, clinics and other community based organizations. The Second Harvest program also conducts outreach among community members waiting for produce at the food bank.

Mothers Taking Action peer leaders noted that community members sometimes express low levels of interest when invited to a "talk." They have identified more fun and engaging "hooks" to draw participants in, such as cooking demonstrations or dance classes, after which the peer leaders engage them in conversation about health and obesity prevention.

On-time attendance at Second Harvest sessions is encouraged by issuing numbers to participants as they arrive. At the end of each session, produce is set up as a mini-farm stand and is distributed on a first-come, first-served basis, allowing earlier arrivals access to the most appealing products.

A significant barrier to recruitment cited by Mothers Taking Action peer leaders is finding adequate space to hold meetings. Ideally, meetings are held at peer leader homes. However, they explained that is often not possible, because their homes are too small, with living rooms often serving as bedrooms, or because shared housing with unrelated adults is common. Many have been holding groups in local churches and other community locations, but have had to seek new venues on an on-going basis, which is time consuming and challenging for people who are shy or possess limited English skills, as is the case for many peer leaders. In fact, the staff coordinator for Mothers Taking Action did all the outreach recruitment during the first year of the pilot.

A more significant barrier to recruitment cited by Mothers Taking Action peer leaders is that sessions must be held in areas where over 50% of the population have incomes below 185% of the federal poverty level, which limits both the number of people they can serve and the venues where they can hold events. The peer leaders have also expressed frustration with an inability to serve more affluent community members,[5] who also suffer from high rates of nutrition- related illness and could benefit from the program. The peer educators have recommended removing these zoning requirements in order to serve more community members.

Supporting Community Members in Making Change

Key Findings: Supporting Community Members in Making Change

- Supporting community members to make healthy changes is an important role for peer leaders.
- Training peer leaders to provide referrals, but not answer questions on topics they are not knowledgeable about is essential.
- Additional support for peer leaders helping promote community level change can increase the effectiveness of those efforts.

Supporting community members to adopt healthier behaviors is an important role for the peer leaders. This can be done proactively, through support, encouragement, follow-up, referrals and advice, or passively, simply by serving as positive role models in the community. In either case, the fact that peers are community members in frequent contact with their neighbors is an important benefit. As a funder said,

> *"The main advantage is that when paid professionals are done teaching they go home. In the peer-led approach, the peer stays in the community and very likely continues this education and effort in almost every scope of their life."*

[5] While there is no prohibition on serving more affluent community members, the need to target low income populations makes it difficult to do so.

Another external stakeholder explained, "*When participants see their peer educators in the community, at the grocery store for example, they look up to them as role models. This way peer educators are able to promote health messages on the spot right there in the community. They are impressed and inspired by peers who walk the walk and talk the talk."*

Nonetheless, questions and concerns beyond the peer leaders' skill set arise, typically issues such as diabetes management and more in-depth aspects of nutrition. Peer leaders need to be able to offer referrals to help participants access that information, and advised to say "I don't know" when questions arise that they cannot answer. As a funder of peer-led efforts explained,

"We look to see that there are provisions to train peer educators on how to answer questions they are not trained to answer. For example, if someone asks a peer educator questions about a diet specific to diabetes, a peer educator should not answer these questions. A system should be in place for making sure peer educators know what they can and cannot answer."

> *"When participants see their peer educators in the community, at the grocery store for example, they look up to them as role models."*

Another aspect of support that is becoming increasingly important is providing peer leaders with the ability to engage community members in advocating for policy, systems and environmental changes to increase access to healthy food and physical activity. This is particularly evident in the case of Mothers Taking Action, which encourages community members to examine the root causes of poor health and identify actionable solutions.

With growing awareness of structural issues such as food deserts, unhealthy school food and barriers to physical activity, community members themselves are increasingly interested in tackling issues related to policy and environment. Although the peer leaders are able to provide some ideas and resources for doing this, their knowledge and skills in policy advocacy and local resources to offer assistance is limited. Given the one-time nature of the Mothers Taking Action meetings, staff and peer educators are aware of the need to partner more closely with other agencies that can pick up where their sessions leave off, such as encouraging skill building in healthy cooking or working on improving school food. As one staff stated, *"We need a partner for when we identify those leaders who are motivated. We do our job in getting them excited about the issue"* but then need to connect them with someone who can help them implement their ideas.

Poder Popular Program

Poder Polular para la Salud del Pueblo: A Profile of Empowering Communities to Address the Social and Environmental Determinants of Health

In addition to the case studies a review of the *Poder Popular Para la Salud del Pueblo, Promotores Comunitarios de Salud* strategy was conducted. This effort, a principal component of The California Endowment's Agricultural Worker Health Initiative, utilized a network of community-based peer leaders whose role was to engage community members to identify and address root causes of poor health through policy and systems change.

The findings in this section are based on a review of evaluations of this effort, supplemented by interviews with *Poder Popular* program managers and staff at The California Endowment. The format is therefore somewhat different from the other case studies included in this report.

Introduction

Whereas traditional health promotion focuses on individual level change, *Poder Popular* has taken an "upstream" approach, seeking to address the social and environmental determinants of health through grassroots mobilization and community engagement to effect policy and systems change. Through the *Poder Popular* program, communities were able to advocate around issues such as food deserts and the high cost of healthy food, traffic safety, security and gangs, safe housing, occupational health in the fields, HIV/AIDS prevention, and environmental health, especially water and pesticide exposure. Critically, this strategy addresses community well-being by advancing the leadership and proactive involvement of community members themselves in identifying environmental barriers and seeking solutions for greater health.

Most remarkably, the strategy succeeded in engaging and mobilizing a predominantly low-income, immigrant and largely undocumented population of individuals with low English proficiency that have much to lose by stepping forward and making their voices heard, but in so doing discovered there was also much to be gained. One of the most important lessons of this initiative was that once these communities develop leadership, gain knowledge of rights, and learn to engage authorities productively to solve local problems, the program investment has built-in sustainability that may last well beyond initial achievements.

Program Description

Mission/Goals. The *Promotores Comunitarios de Salud* strategy ("*Promotores*" or "*Poder Popular*") seeks to improve community health by providing farmworkers and other residents of agricultural communities with the skills to identify the root causes of poor health and the tools to advocate for policy and systems change. Communities are empowered to create change through community organizing and civic engagement. The program defined health broadly to include all aspects of well-being.

Agency. The *Poder Popular: Promotores Comunitarios de Salud* strategy was implemented in seven of California's principal agricultural regions[6] between November 2005 and October 2008. At each site, consisting of two or three communities of fewer than 10,000 residents, a community-based organization coordinated the strategy. The community-based organizations chosen for site implementation had varied areas of focus, including primary health care provision, employment services, community organizing, and social services. The commitment of an "anchor" agency to medium- and long-term engagement in the intensive work of community organizing was essential to success at the local level. Agencies with prior experience in community organizing often, albeit not always, found it easier to adopt this approach than those with a focus on social services or primary health care. In 2012, four years

[6] The counties of San Diego, Kern, Ventura, Fresno and Merced, the Napa-Sonoma region and the Coachella Valley.

after the formal end of funding, many of the communities involved in the program continue to be active in some form.[7]

Target Population. Low-income Spanish-speaking farmworkers and other residents of agricultural communities. The population was comprised of migrants, immigrants and settled formerly-migrant workers.

Peer-Led Approach. Approximately 250 community-based promotores, 70 percent of them women, were recruited and trained, priority issues affecting community health and well-being were identified through asset-mapping and surveys, resident-led comités (community committees) were formed at all sites, and advocacy plans were developed and implemented. The comités effected a number of policy and systems changes resulting in improved community health. The promotores gained personal empowerment and improved self-esteem, which was essential to their ability to organize residents and help them advocate for change.

Core components of the Poder Popular: Promotores Comunitarios de Salud strategy

- Selection, recruitment and training of farmworkers and other community residents to become *promotores*
- Community survey and health needs assessment
- Community asset mapping
- Recruitment of local *comités*, composed of *promotores* and/or other residents
- Identification of priority health needs
- Action plans to advocate for change with local and regional authorities and decision makers
- Ongoing training and technical assistance for staff, *promotores* and *comité* members

Key Findings

How Does the Program Work?

Peer Leader Recruitment

The *Poder Popular* program relied on both paid staff (program manager and two to three field coordinators) and volunteers. The field coordinators were responsible for identifying and recruiting volunteer promotores (community leaders) interested in working to create healthier communities.

Identifying potential leaders required an intensive and broad scan of a community using established personal networks, as well as churches, public events, schools, and other community networks and gathering spaces. In addition to seeking diversity and candidates with skills and leadership potential, characteristics such as respect, a spirit of cooperation and community awareness were important considerations. A team-building orientation was also desirable in potential leaders. Staff living in the communities or with close ties to them had the greatest facility with recruitment, and it was found that active involvement of managers can help assure a broad selection of participants.

[7] Although several communities have obtained new funding sources, even where there is no longer direct funding to the *Poder Popular* program, many of the activities have continued, either under a new rubric, folded into other programs, or on an *ad hoc* basis by community leaders trained through the program.

Agency staff discovered that emphasizing the personal empowerment and educational aspects of the program, as well as the direct benefits to participants and their families of creating change, was critical to motivating participation.

Peer Leader Training

Training activities that were interactive and experiential had the greatest impact. Training emphasized community organizing techniques and local political processes (how public authorities operate and how to approach and engage them). Clarity in the desired results of training, both what constitutes the program's success and its link to promotores' own reality, was essential.

Once promotores took action based on the training (e.g., conducting community surveys or attending city council meetings), the concrete meaning became more accessible. Program managers found that such understanding helps individuals take ownership early on, which is critical to sustainability and retention of leadership.

In addition, training was most effective when supervisors or field coordinators worked alongside the promotores — for example in conducting asset mapping and community surveys, as well as in mobilization activities including knocking on doors with the promotores, who at first may lack confidence.

Supporting Peer Leaders

The role of the agency in developing skills, leadership and individual empowerment cannot be overstated. Leadership development in promotores seemed to be more successful where ongoing dialogue and open communication existed at all levels, which built trust and set the tone for respect among the promotores, comité members and community residents. Open communication considered the diversity among people in age, gender, skills, and experience. It also enabled emergence of diverse types of leadership, for example, among youth or people with disabilities.

Agencies had to carefully calibrate their level of oversight and engagement with peer leaders. The need to set clear parameters and provide ongoing support and supervision was essential; however, they also needed to be prepared to let go of the process, allowing the volunteer leadership to take the program in the direction desired by the community.

As *Poder Popular* staff members report, this type of work can be very hard, requiring persistence, long hours and prolonged one-to-one engagement with community members, but it is also extremely rewarding on personal, professional and community levels.

Promotores in Action

In one community, residents told staff that they could not act on health information about the importance of regular physical activity to prevent obesity and diabetes – they could not let their children play outside. The local park was unsafe due to lack of policing, and was also unsanitary. *Poder Popular* staff taught them how to engage the local parks and recreation authority, city council members, and other community allies to bring about a change in the quality of the park. Not only did community leaders achieve a clean and safe park, they also gained the skills and confidence to act as leaders and change agents, which they went on to apply to a number of issues, including affordable and safe housing, and environmental regulation.

Peer Leader Retention - Compensating Peer Leaders

The hard work of the (mostly female) promotores raises important issues about retention and fairness in rewarding efforts. Although some modest financial incentives at times were distributed (gift-cards, for example), generally, agencies found that the voluntary nature of the work was critical to its ongoing success. Promotores were most effective when they felt they were gaining personal skills, seeing changes in their families and communities, and rewarded with recognition in the form of ceremonies, awards and certificates.[8]

Constant guidance was important to instill loyalty to the program and aid retention. A certain amount of attrition in a voluntary community organizing initiative, especially where residents live under precarious conditions, is to be expected. Consequently, staff learned that continual motivation of the people who can participate is of critical importance.

Given the nature of this approach, that it requires a commitment among peer leaders to a grassroots community organizing and change approach, a number of informants indicated that these should be volunteer, rather than professional, paid positions. This raises the question of whether there is a qualitative difference in this role from peer-educators providing health promotion education in their communities. Are the latter more likely to see themselves as auxiliary service providers to professional community health outreach efforts? There is clearly no fine line, since the peer-educators are also motivated by the ability to act as change agents in their communities, and to take leadership roles. Indeed, these roles need not be so different, and adding a community organizing component to a health behavior education program may be an easy and logical extension, just as embedding health behavior change education into a civic engagement project flows logically from the goals of creating environmental changes.

Recruiting Community Members

Forming resident *comités* in each community is the first step toward broader community involvement. Although practice varied, it was seen as generally best for promotores to become part of the *comité*. Motivating residents to participate in community activities was one of the biggest challenges faced by program staff. They faced the same types of barriers as other peer-led efforts, including lack of time, lack of transportation and the need for childcare. Allocating sufficient resources to provide baby-sitting and healthy snacks at meetings eased participation for many over-stretched residents.

However, given the nature of an advocacy-oriented intervention, *Poder Popular* had to address issues that traditional peer-educators may not face. Rather than being asked to only change consumption and exercise behaviors, community members were challenged to also become active in tackling the environmental and policy conditions that support those changes.

[8] Staff at one site reported that after the ongoing success of the program attracted additional funding, *promotores* were hired to implement the new grants. While this was positive for the individuals, who enjoyed professional growth and monetary reward, staff noted that the *promotores*' participation fell off and was significantly less engaged once it was viewed as "paid work."

Program staff needed tremendous persistence and training to deal with community rejection and three potentially entrenched challenges as shown in Table 6.

Table 6: Peer Led Challenges

Challenges	Responses
Perceptions of powerlessness, general apathy or frustration from lack of immediate results.	✓ Maintain clear communication about the goals and purpose of the program. At the same time, be flexible: agencies devised ways to provide an early sense of accomplishment to keep people engaged.[9]
Fear of retribution from employers, landlords and others threatened by these activities.	✓ To address fears relating to precarious immigration status, or retaliation from local businesses, some agencies and *promotores* held meetings in people's homes as part of a strategy to build trust.
Suspicion of outside manipulation, or conflict generated by individuals with some power in the community who may feel threatened by emerging leadership.	✓ From the outset, staff should be prepared to develop strategies to manage inter- and intra-group conflict; it is critical to obtain a deep understanding of a community, its history with organizing and other programs, and the local relationship networks. Working with local staff whenever possible can facilitate this.

These are significant risks, especially when working with communities that have tenuous immigration status. Although the program did not contribute to these risks, they could not always be mitigated. For example, several communities suffered setbacks in their programs when respected leaders or their family members were deported. In some areas, open hostility, including vigilantism targeting immigrants can pose serious impediments. However, there were some instances where local progressive law enforcement actively partnered with the promotores in order to address shared community concerns, which led to much greater inter-group understanding. In the latter case the community easily transitioned into sustaining the promotores' activities after the initial program period.

Supporting Community Members in Making Change

The *Poder Popular* program was designed so that once community leaders gain confidence through leadership training and related civic engagement activities, they can move into advocating for change at the community and policy level. The development and implementation of an action plan in the third year of the program married prior learning and outreach to public action. Comités and promotores identified the most important issues, where resources and power were held, and potential allies; then they developed an advocacy strategy, which they adjusted as circumstances warranted. Agency support is crucial to coaching promotores or comité members about the make-up of public bodies and individual authority's positions on issues, how to respond to questions or challenges, and how to follow up.

As a result of the trainings, asset mapping and surveys, program participants initiated a wide array of civic engagement activities. Some examples include: participation in town hall meetings with local officials, information campaigns around water and school board decisions that impact community health, informational events on

[9]For example, early in the mapping process one agency was able to fund a community effort to create a local soccer field. Although it was not part of the long-term strategy, it did give community members an immediate sense of program efficacy.

consular services or housing issues, health fairs, cultural events, census- and survey-taking for grant proposals, organizing neighborhood clean-ups, providing safety support to school crossings and setting up local community markets to provide healthy affordable food.
Activities often grew more ambitious over time as participants gained knowledge, skills and confidence, and established relationships with local authorities. For example, one group of promotores began by working to get the city to sponsor a local farmers market; several years later, not only is the market an ongoing success, the city has delegated its management to the promotores, including the opportunity for the group to generate income through fees from vendors.

Styles of advocacy can vary. Some took a "soft" approach, beginning with community events and outreach activities that would not incite conflict. As they gained experience operating in the public arena, promotores and comités were able to negotiate and advocate from a more secure position. Other groups utilized mobilization and protest, at times around a crisis situation such as a traffic accident or the closing of a facility; they campaigned for large turnouts at public events, demanded Spanish translation at public meetings, and brought in the news media to generate pressure for policy change.

Collaborating

The networks and alliances formed by promotores and comités with other organizations and institutions, as well as those formed at an inter-agency level, played a significant role in the program's success, and were themselves a robust example of residents' empowerment. Alliances were forged with news media, schools, clinics, community-based organizations, city and county officials (including city managers and law enforcement personnel), city councils, state assembly commissions, foundations and other nonprofits, local businesses and growers (agribusiness), churches, libraries, Mexican consulates, and other groups and institutions.

> *"Interventions can carry into the classroom but they don't always carry into work places, homes, schools and organizations. The peer-led approach can make changes in a variety of places."*

Significant utility can be found in unlikely partnerships, such as with employers, private businesses and trade associations. Agribusinesses can support grassroots organizing efforts where they see that the resulting worker well-being contributes to greater productivity and harmony with the work force community. Partners like these will not always agree on all the issues, but they can sit at the same table and find common goals.

Outcomes and Evaluation

Unlike education programs that focus on dietary and exercise changes, a community organizing approach is not as amenable to many standard evaluation measures, such as a one-year post-intervention survey of consumption patterns. For example, how does an evaluator assess the fact that a program goal was to establish a dialogue with the local town council? As one funder put it, "the point is that the meeting took place, not what came out of the meeting." Thus, measurable changes may need to focus on program components, such as successful asset mapping, and the ability to sustain the engagement of the community in identifying and pursuing goals. Logical frameworks describing conditions prior to the intervention and steps taken may be one useful tool. Participatory evaluation – assuring that the community members themselves are involved in defining what was important to them and the project's impact – is the best mode. Outcomes by definition will be different for every community. Whereas one community may need a new stoplight to improve safety, another may prioritize a community garden, or community mobilization to urge local authorities to attend to infrastructure or enforce environmental regulations.

What Does it Take to Make a Community Organizing Strategy Sustainable?

Lessons from the *Poder Popular* program indicate that the following are key components for sustainability:

- Core **agency** commitment to staffing and long-term follow-through. Experience with community organizing, use of local staff and building broad alliances.
- Understanding the **community history** and dynamics at the outset. Careful and broad selection of potential **leaders**.
- Balancing **early program achievements** to sustain interest and visibility with the need to focus on the **long-term goals** of the program. Flexibility in substance and timing of programming.
- **Rewarding** participants/leaders through their own empowerment, but also through regular and ceremonial acknowledgments of appreciation. Promoting "ownership" early on among promotores and comité members.
- Identifying appropriate **technical assistance** – needs are highly variable according to levels of engagement, types of advocacy, community-identified needs, and local political and economic context. A "one-size-fits-all" model is not necessarily effective across diverse communities.
- Allowing and facilitating increasing **independence** of promotores and comités over time. Heavy staff accompaniment is necessary in the early phases, and the time needed for close shepherding varies considerably, but the most successful groups are able to sustain their own leadership capacity with less and less direct staff involvement as they gain capacity, establish relationships, and the community begins to see the direct health benefits of the initiative.

Summary of Key Findings

Successes

- Peer leaders trained in advocacy and civic engagement were successfully able to mobilize their communities to identify and address environmental and policy issues that were barriers to community health, leading to positive changes in systems, the built environment and policy.
- Despite a limited three-year time line, the project was able to establish a number of sustainable interventions, as well as effect large and small changes that have lasting impact on communities.
- Many communities gained greater knowledge and skills of how to interact with local authorities to improve community well-being; several participants have gone on to participate as members of local school and water boards, and serve in other elected and volunteer positions in their communities.

Benefits

- Noticeable changes in community conditions, such as safer spaces for recreation, housing, improved water quality, and greater access to affordable healthy food, have the potential to be a tremendous catalyst to support sustained changes in individual and family health behaviors.
- Leadership skills that are developed within the community have lasting impact, and can be drawn upon to address additional community well-being issues as they arise.
- Peer leaders (and staff) reported significant personal benefits with this empowerment approach, including knowledge and skill development, greater personal efficacy, and strengthened social ties.
- Greater intra-group and inter-group understanding can result from bringing a previously isolated and disenfranchised sector of the population into the public sphere. While this may also be a source of conflict, most reports were of positive results in improved relationships and more harmonious co-existence. Initiatives where local authorities welcomed and supported the efforts have enjoyed significant sustainability.

Lessons Learned and Recommendations

- The *Promotores Comunitarios de Salud* strategy made impressive strides in a relatively short time frame. Because of the very intensive nature of one-to-one coaching and assistance that this work requires, three years is actually a very limited amount of time to fully launch, develop, evaluate and sustain a civic engagement program. Most program participants would have preferred a longer timeline in order to fully develop leaders and allow the programs to become well established.
- Agencies that only have background in individual service/behavioral change may need to form partnerships with groups that are experienced with a grassroots organizing perspective in order to be effective with a policy and systems change strategy.
- The issue of monetary compensation needs further study in this context. Current practice appears to shy away from paying peer leaders, since the framework of the intervention is around mobilizing civic engagement, rather than service delivery, but questions remain about fairness, and motivation and retention of over-stretched volunteers.
- Unlike peer education programs, community organizing can encounter serious social obstacles in the form of fear of the authorities, resistance from community members who may feel threatened by emerging leaders, and potential hostility from some external stakeholders, such as local authorities, business owners, or neighboring communities. Deep scoping of the relationships and history of communities targeted for this type of intervention is critical to managing potential conflicts, and using staff with local knowledge is essential to accomplish this. Relationships are smoothest when local stakeholders and authorities are brought in from the beginning and encouraged to support the efforts.

Conclusion: Why Choose This Approach?

One of the most obvious strengths of a community organizing/civic engagement approach is that the core program activities themselves build sustainable capacity within the community. Thus, developing effective and consistent dialogue with public authorities leads to ongoing positive resolution of community health issues. Personal and working relationships that develop help promote positive intra- and inter-group relationships, enhancing understanding and acceptance of these traditionally marginalized communities by their neighbors. Notably, promotores and comité members have gained seats on local citizens' advisory committees, and school and water boards, as well as serving on boards of local non-profits and clinics, thus becoming an ongoing institutionalized channel for addressing community health needs.

Despite the challenges of a community organizing approach, the unique payoff is potentially very large: meaningful environmental changes impacting health, lasting leadership and improved grassroots involvement in local governance that will lead to further progress, and the side benefit (because it is necessary to the work) of individual growth – self-esteem, self-efficacy, positive family role-models, and strengthened social support networks.

Are Programs with Peer-Led Approaches Effective?

Outcomes for Community Members

One of the primary goals of the four selected programs' peer-led health promotion efforts is to create change in community participants' attitudes, knowledge, and behaviors. Evaluation data are available for the four programs.[10] While not all programs collect the same evaluation data or rigorously test the impact of the peer-led approach, the findings indicate that interventions with peer-led efforts have resulted in progress toward achieving their goals and objectives. Table 7 summarizes evaluation findings for the profiled programs. While increases varied across programs, all programs showed improvements with respect to the principal outcomes of interest.

Table 7: Peer-Led Program Behavioral Outcomes

Indicators: Percentage of participants who…	**CalFresh Promotion**	**Three Squares/ Cooking Matters**	***Mothers Taking Action***	**Nutrition Ambassadors**
Increased fruit and vegetable consumption	99%*	***	*13%***	97%*
Took steps to eat healthier or be more active	n/a	n/a	*100%**	n/a
Decreased soda and/or increased water consumption	n/a	***	*10%** (decreased soda & increased water)*	95%* (decreased soda)
Increased physical activity	97%*	***	*27%***	n/a
Enrolled in CalFresh	55%*	n/a	*n/a*	n/a
Ate more healthy foods	n/a	n/a	*12%***	n/a
Shared information about healthy eating/active living with peers	n/a	n/a	*82%**	n/a
Improved cooking skills	n/a	***	*n/a*	95%*
Reduced portion sizes	n/a	n/a	*n/a*	93%*
Read nutrition labels	n/a	n/a	*n/a*	84%*

* Percentage who reported behavior change by responding to Yes/No questions.
** Percentage who indicated behavior change by responding to open-ended questions. As such, these percentages are not comparable to those from questions with a Yes/No format.
***Detailed findings for the Cooking Matters program are presented below and in Table 7.

[10] CalFresh Promotion Pilot Project: A Peer-Led Nutrition Education and SNAP Project Evaluation Report, 2011; Share Our Strengths' Cooking Matters Lead Partner Report, 2011; The Mothers Taking Action Pilot Project: An Evaluation of 2010-2011 Activities, 2011; and Second Harvest/Nutrition Ambassadors Survey of Community Participants, 2011.

The Three Squares/Cooking Matters evaluation data also track changes in knowledge about diet and nutrition via a pre/post survey administered before and after trainings. The findings indicate that community based peers show gains in knowledge comparable to professional volunteers. Peers displayed a 70% increase in knowledge about diet and nutrition as a result of the training, compared with a 72% increase in knowledge among professional volunteers. These findings indicate that the training can successfully transmit knowledge to community members with no professional food-related background.

Table 8 shows that for most of the food/beverage consumption behaviors, a greater percentage of participants in peer-led courses reported positive behavior changes than participants in expert-led courses. Results were mixed for food budgeting practices and the application of nutrition knowledge. Also, there was a 97% graduation rate among participants in the peer-led course in Livermore, compared with a 75% graduation rate among participants in expert-led courses. However, it should be noted that the number of participants in peer-led courses was very low, compared to those participants from expert-led courses. Therefore, results are inconclusive, but do indicate possible positive effects of the peer-led approach.

Table 8. Three Squares/Cooking Matters Behavioral Outcomes

Attitudinal/Behavioral Outcomes	Professional-Led[1] Courses (n=676)	Peer-Led Courses (n=34)
Improved Behaviors*		
Ate more vegetables	79%[2]	94%
Ate more fruits	70%	91%
Ate more whole grains	71%	94%
Drank more water	69%	79%
Made a Cooking Matters recipe at home	83%	94%
Improved cooking skills	91%	97%
Food Budgeting**		
Planned meals ahead of time	52%	97%
Cooked meals instead of buying take out	20%	39%
Use of Nutrition Knowledge**		
Thought about healthy food choices	43%	70%
Used "Nutrition Facts" for food choices	91%	174%
Does 30 min. of physical activity each day	34%	49%

[1] The term "professional" refers to volunteers such as chefs and nutritionists who are employed in food-related fields.
[2] Percentages refer to increased frequency of engaging a desired behavior, e.g., "the average graduate reported a X% change in how often she uses the 'Nutrition Facts' label to make food choices."
* Percentages refer to percent of participants reporting adoption of improved behaviors.
* * Percentages refer to changes in frequency of engaging in desired behaviors from pre-test to post-test, based on a scale of "never" to "almost always." e.g., "the average graduate reported an X% change in how often she uses the 'Nutrition Facts' label to make food choices." Percentage change may therefore be greater than 100%.

Community participants and other stakeholders have provided additional feedback regarding ways the peer-led courses affected participants' lives as follows:

CalFresh Promotion

"As a result of the course, I now shop more carefully, eat better, and do physical activity daily. This course changed my life. I'm now conscious about nutrition facts and learned how to budget. This course has been a blessing. I'm paying more attention to my family's health and my budget." – Community Participant

"Parents send students to school with more nutritious snacks. On pot luck days at our monthly meetings, we see more vegetables and fruits. There has also been a change from children drinking sodas to drinking more water. At the committee meetings we have also noticed that parents are bringing and drinking more water instead of sweetened beverages." – Project Partner

Mothers Taking Action

"I enjoyed the interaction with participants…and how all the participants could openly discuss these issues. They gave everyone a chance to talk and we all felt comfortable." – Meeting Participant

"This program has helped me and my family a lot. My husband has health issues so he needs to eat healthier and increase his physical activity. We have been able to do these things as a family, which is supporting him to be healthier." – Peer Leader

Nutrition Ambassadors

"There are foods here I've never had before – I didn't even know what they were - and they showed me how to use them. And I've learned to like different foods, and also to use different types of seasoning, without using salts and sugars. And so I'm learning to eat healthier. And I'm happier. I've lost a size in my clothes. I'm able to walk and move better than I have in a long time." – Community Participant

Other examples of Nutrition Ambassadors creating change beyond their own lives:

- A woman spoke out against soda consumption in the employee break room at her workplace.
- Peer leaders attended a local city council meeting to speak out about the need to improve nutrition and health in the community.
- Peer leaders attended a statewide legislative day to advocate for policies to end hunger and malnutrition.

Three Squares

"I'm so much more aware of the healthy choices I need to make . . . It not only has affected my life, but my daughter's and all the foster children coming in and out of our home too." - Community participant

"My experience changed me – I learned to cook and how to cook healthy, which is a big change. I am able to share this information with friends and the community. I also learned how to cook for kids and talk about healthy food that I am cooking." – Peer Leader

Impacts on Peer Leaders

In addition to impacts on community members, peer-led programs can have profound effects on the peer leaders themselves, who often noted that they feel they have received more from the programs than they have given. Many peer leaders note improvements in their own habits since participating in the program, including consuming more fruits and vegetables, drinking more water and fewer sugar sweetened beverages, reading nutrition labels, making shopping lists, planning menus and getting more exercise. Peer leaders with children often indicated that their children ate more nutritious foods and engaged in more physical activity with their families. One peer leader who owns a restaurant reported changing the menu as a result of participation in this program.

"We like the respect we get from the community and my supervisors. We appreciate the feeling of being part of the agency."

Peer leaders also reported increased self-esteem and self-confidence as a result of participation in the program. For many, it is the first time they have been in a position of leadership, which has been empowering. One participant said that becoming a Nutrition Ambassador had changed her perception of herself, noting that *"no one ever asked me to be a leader before."* Another peer leader explained that, *"We really enjoyed the opportunity to teach. I feel empowered to speak to groups of people and act as a resource on nutrition."*

Professional development knowledge, facilitation skills and connections to program staff are seen as significant benefits of participation as a peer leader. For many, this was the first time they have been part of a larger organization, and it has been gratifying. *"We like the respect we get from the community and my supervisors. We appreciate the feeling of being part of the agency."*

Peer leader assignments can serve as a springboard to paid employment.. Peer leaders are sometimes hired directly by the agencies, or they make connections and obtain recommendations from program staff that can help them secure a paid job. Being able to add their peer leader experience to their resume is also helpful. And some peer leaders decide to further their education, aiming for advancing their careers.

What Does it Take to Make Peer-Led Programs Sustainable?

A number of institutional factors can affect the sustainability of peer-led efforts. At the most basic level, observers noted that programs and staff must have the same levels of passion and commitment that they seek in their peer leaders. As an evaluator familiar with peer-led efforts explained, *"the programs can ask for funds, but the program won't work if their heart's not in it."*

Funding

One of the largest concerns of peer-led health promotion programs is the difficulty sustaining adequate funding (HHS 2007). This issue has been successfully addressed by Three Squares, which has been able to secure partial or full funding for training peer leaders from agencies that host the classes. As a program staff member noted, *"The Community Clinic Consortium in Richmond, First 5 in Santa Clara, and the Tiburcio Vasquez Health Center in Hayward are all paying all the expenses of training promotoras at their sites. I know other organizations don't have the same partnership-based model as we do, but this method of funding has been very successful in expanding our program."*

A sufficiently long funding timeline to allow for program development and *"ramp up"* is important. Staff at Mothers Taking Action indicated that a three or four year funding timeline would allow them sufficient time for capacity building among peer leaders as well as *"building the face of the program"* in the community, both vital to success.

A longer funding timeline would also give the programs more time to assess participants' capacity. Mothers Taking Action staff noted that their model is based on the belief that "*you can turn anyone into a leader."* However, that has not always been true in practice, and more time to assess skills and fit would be valuable.

> *"It's important to get buy-in from other agency staff, since they have to support the program over time and in many ways."*

Institutional Support

Institutional support for peer leaders is critical to long term success and sustainability. As an observer noted, *"Institutional support makes all the difference."* A funder explained that one of the elements they look for in proposals is: "*A system in place to provide technical assistance for peer educators. For example, there should be someone available to meet with peer educators, provide feedback to them and be there for telephone calls. When you provide technical assistance peer educators can be more successful."*

Other elements funders look for in proposals are mechanisms to address issues such as transportation and childcare. A funder explained that concerns arise when they feel *"an organization is not committed to having certain mechanisms in place to handle travel, childcare, and public speaking training,"* which *"are ongoing issues that should be supported and addressed in proposals."*

Funders also look for mechanisms to provide peer leaders with professional skills. As a funder explained, *"For many peer educators this is their first job, so they may not be familiar with the structure of timelines, rules, and requirements. We also look to see that there is someone that will take responsibility for accountability. This is usually a staff person within the organization."*

Buy-in from other agency staff is another important element of sustainability. Ancillary staff may shoulder burdens such as additional telephone calls, data collection or working after hours to clean up and close meeting spaces. As an observer explained, "*It's important to get buy-in from other agency staff, since they have to support the program over time and in many ways*."

Shifting Responsibility to Partners

In an effort to become more sustainable, some programs seek to shift responsibility for program implementation to partner agencies over time. While that strategy may contribute to the "parent" organization's sustainability, it may be challenging for partners, who may not have the resources to assume a larger role. As a Second Harvest partner explained, *"Over time, Second Harvest provides less support for peer-led education which means our staff has to step up to the commitment of making this happen. This adds time and duty for a staff person even though we only have three paid staff at our center. I worry that less and less education will happen with this decreasing support."*

Cognizant of the high need for staff support for peer leaders, that same individual went on to say, "*Second Harvest wants to step away from us in order for us to become self-sustaining. I'm worried about that. To reduce retention issues and as new volunteers are recruited, volunteer peer educators need to be educationally supported for the long term and over time. Our center can provide and recruit new volunteers, do reminder calls and give one-on-one support as needed, but we just can't do educational support too."*

Conclusions: Lessons from the Field

Peer-led approaches play an important role in promoting improved health and should be encouraged as a means of promoting improved nutrition and physical activity in low-income and other communities. Key findings include the following:

Successes

- The four highlighted programs successfully recruited and trained peer leaders, providing complex information about health, nutrition and physical activity.
- The peer leaders successfully transmitted this information to community members, who adopted many positive changes, including greater consumption of fruits and vegetables, reduced consumption of sugary foods and beverages, improved cooking skills, increased physical activity and improved access to food assistance. Some have also begun to address community level changes to promote increased access to healthy food.
- The peer leaders experienced many positive changes as well, including increased knowledge, leadership skills and self-esteem, adoption of healthier behaviors and professional growth that served as a catalyst toward furthering education and/or career advancement. The peer leaders have become a source of social capital in their communities—an important aspect of sustaining this approach.

> *"We really enjoyed the opportunity to teach. I feel empowered to speak to groups of people and act as a resource on nutrition."*

Benefits

- Peers are members of the community with the same struggles as other residents. When community members see their peers making positive changes, they realize they can do the same.
- Peers are a constant in their neighborhoods. As a health care provider noted, *"The peer-to-peer model offers the opportunity to reach into a community at a deeper level than outside paid professionals. When professionals are gone for the day or the weekend, the promotoras are still there in the community."*
- Peers reach community members wherever they are located. As a funder explained, *"Interventions can carry into the classroom but they don't always carry into work places, homes, schools and organizations. The peer-led approach can make changes in a variety of places."*
- Peers play an important role in augmenting staff capacity, allowing programs to reach many community members with limited resources.

> *"When professionals are gone for the day or the weekend, the promotoras are still there in the community."*

Lessons Learned and Recommendations

- Set clear expectations from the outset during recruitment.
- More formal recruitment processes can help programs identify people with the desired skills, especially in the case of programs where peers work individually.
- Team-based approaches allow peers with a variety of skills to contribute, while increasing social capital in their communities.
- A high level of staff support is essential. Adequate staffing levels are needed to provide peers with needed support. Adding training in the skills needed to successfully self-organize peer leaders' time and activities is recommended.
- Locating meetings and trainings in the neighborhoods where peers live is important. Consider also providing other support such as childcare and transportation.
- Sufficient training on outreach, community engagement and presentation is essential, as is ample practice time to hone presentation skills. An awareness of adult learning styles can help peers more effectively transmit information.
- As with most volunteer programs, retention is an ongoing issue. Close ties with staff can help peers feel more part of the program as can other gesture of inclusion, such as receiving personal business cards. Programs may need to over-recruit to compensate for attrition. Exit interviews may help identify ways to increase retention.
- There do not appear to be any "right" or "wrong" approaches regarding compensation. The programs use a variety of models, which work fairly well. This is an area that would benefit from additional research.
- Peer-led approaches can require a fair amount of time to create a strong foundation, particularly in the early stages. Consider adequate length of funding to accomplish this.
- Including peers in evaluations can provide more accurate results than outside evaluators.[11] Israel *et al* (1994) outline core principles that can be applied to including peers in health education evaluations:
    - Design evaluations that enhance participants' capacity.
    - Involve stakeholders in all phases of the process.
    - Strengthen collaboration among participants through the process.
    - Use clear language and constructive communications.
    - Follow the norms of partnership: mutual respect, recognition of participant capacities and open communication.
    - Include context, process, impact and outcome.
- Integrate the use of qualitative and quantitative methods.

[11] A description of an approach for actively engaging peer leaders in program evaluation can be found in the California Institute for Rural Studies (CIRS) evaluation of the *Poder Popular* program (2008).

Appendix A: References

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Appendix B: Key Informant Interviewees

Interviewee	Organization	Type of Interview
CalFresh Promotion		
Nestor Martinez *Health Program Specialist*	California Department of Public Health Project LEAN	Funder
Katherine Hawksworth *Health Program Specialist*	California Department of Public Health Project LEAN	Funder
Dolores Franco *Community Outreach Worker*	Newark Unified School District	External Stakeholder
Dario Hunter *Project Coordinator*	Alameda County Department of Public Health, Nutrition Services	Staff
Rafael Cortez *Project Coordinator*	Alameda County Department of Public Health, Nutrition Services	Staff
Dale Murai *Project Coordinator*	Alameda County Department of Public Health, Nutrition Services	Staff
Luisa Guerrero *Peer Leader*	CalFresh Promotion Project	Peer Leader
Patricia Miranda *Peer Leader*	CalFresh Promotion Project	Peer Leader
Teresa Cortez *Peer Leader*	CalFresh Promotion Project	Peer Leader
Cooking Matters		
Marianne Balin *Community Benefit Manager*	Kaiser Permanente, Diablo Area	Funder
Barbara Lee *Director, Campus Catering*	Livermore Valley Joint USD	External Stakeholder
Maria Ortiz-Padilla *Community Wellness & Prevention Program*	Contra Costa Health Services	External Stakeholder
Maria Reyes *Community Health Education Manager*	La Clinica – Concord	Partner
Sarah Nelson *Executive Director*	Three Squares	Staff
Ana Villalobos *Health Educator*	Kaiser Permanente	Staff
Belia Martinez *Parent Coordinator*	Livermore Valley Joint USD	Staff
Alicia Ruiz *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Claudia Arreola *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Elvia Hernandez *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Isabel Guerra *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Javier Toscano Bernal *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Joel Vazquez *Peer Leader*	Cooking Matters - Livermore	Peer Leader

Interviewee	Organization	Type of Interview
Juan Vega *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Lisha Hernandez *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Luisa Villegas *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Manuel Fuentes *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Maria Morillon *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Margarita Toscano *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Norma Garcia *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Raquel Bianco *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Rocio Ayala *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Ruth Calderon *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Ana Moctezuma *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Cecilia Sanchez *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Clayton Johnson *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Constanza Humphrey *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Elva Lorena Cruz *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Elvia Estrada *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Gloria Martinez *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Isabel Gutierrez *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Laura Nieto *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Liz McCoy *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Maria Cristina Restrepo *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Norma Rocha *Peer Leader*	Cooking Matters - Livermore	Peer Leader
Nubia Switzer *Peer Leader*	Cooking Matters - Livermore	Peer Leader

Interviewee	Organization	Type of Interview
Mothers Taking Action		
Rosanne Stephenson *Chief of Network Program Development Section*	*Network for a Healthy California*	Funder
Vicki Sanderford–O'Connor *Development Specialist in Training & Technical Assistance*	*Network for a Healthy California*	Funder
Larry Bye *Senior Fellow*	NORC at the University of Chicago	Evaluator
Armando Nieto *Executive Director*	California Food and Justice Coalition	Partner
Christina Spach *Program Coordinator*	California Food and Justice Coalition	Partner
Silvia Lopez-Navarro *Chronic Disease Prevention Program Director*	Ventura County Health Care Agency	Staff
Blanca Arias-Velasquez *Project Leader*	Ventura County Health Care Agency	Staff
Carmen Tello *Peer Leader*	Mothers Taking Action	Peer Leader
Miriam Audino *Peer Leader*	Mothers Taking Action	Peer Leader
Project: Nutrition Ambassadors		
Robert Kennedy *Chief of Public Health in Santa Cruz County*	Santa Cruz County Health Services Agency	Funder
Terry Garner *Nutrition Programs Manager*	California Association of Food Banks	External Stakeholder
Gary Ball *Pastor*	Church of the Nazarene	Partner
Erika Hearon *Program Director*	Davenport Resource Center	Partner
Brooke Johnson *Chief Operations and Programs Officer*	Second Harvest Food Bank, Santa Cruz County	Staff
Teresa Moran *Nutrition Programs Manager*	Second Harvest Food Bank, Santa Cruz County	Staff
Kevin Heuer *Senior Grants and Evaluation Manager*	Second Harvest Food Bank, Santa Cruz County	Staff
Eva Holt-Rusmore *Nutrition Programs Coordinator*	Second Harvest Food Bank, Santa Cruz County	Staff
Angeles Sanchez *Peer Leader*	Second Harvest Food Bank, Santa Cruz County	Peer Leader
Carolina Gomez *Peer Leader*	Second Harvest Food Bank, Santa Cruz County	Peer Leader
Delmy Cardoza *Peer Leader*	Second Harvest Food Bank, Santa Cruz County	Peer Leader
Eva Mendoza *Peer Leader*	Second Harvest Food Bank, Santa Cruz County	Peer Leader
Sara Zambrano *Peer Leader*	Second Harvest Food Bank, Santa Cruz County	Peer Leader

Interviewee	Organization	Type of Interview
Poder Popular Case Study		
Ellen Braff-Guajardo *Program Officer (former)*	The California Endowment (former)	Other
Mario Gutierrez *Director for Agricultural Worker Health Initiative (former)*	The California Endowment (former)	Other
Martin Diaz *Project Coordinator (former)*	Golden Valley Health Centers (former)	Other
Cesar Hernandez *Project Manager (former)*	Ventura Cause (former)	Other
Julia Hernandez *Project Coordinator*	Proteus	Other
Brief Profiles		
Alma Torres-Nguyen *Program Coordinator*	Kaweah Delta Medical Center	Other
Audrey Roderick *Program Director*	Urban Sprouts	Other
Ignacio Romero *Manager*	California Department of Public Health *Network for a Healthy California*	Other
Maria Lemus *Executive Director*	Visión y Compromiso	Other
Maria R. Lemus *Program Administrator*	The Education and Leadership Foundation	Other
Susie White *Executive Director*	Soul Food Program, NextCourse	Other
Other Stakeholders		
Eddy Jara *Assistant Professor*	Loma Linda University School of Public Health	Evaluator
Monica Blanco-Etheridge *Executive Director*	Latino Coalition for a Healthy California	Other

Appendix C: Brief Profiles of Additional Peer-Led Efforts

The following are brief profiles of additional peer-led efforts to promote improved diet and physical activity. These are examples of other promising and innovative approaches.

Choose Health Project – The Education and Leadership Foundation

Choose Health is an adult education and parent training program promoting improved nutrition, CalFresh outreach and physical activity. Started by the Migrant Education Program, the Choose Health Program began by delivering health education to migrant farmworker families exhibiting high blood sugar, cholesterol and BMI (body mass index). In 2011, the program moved to the Education and Leadership Foundation and continues to partner with the Migrant Education Program. With funding support from the *Network for a Healthy California* through the Local Food and Nutrition Education funding mechanism, the program expanded beyond migrant farmworkers to serve all eligible parents and adults in six rural communities in Fresno County (Coalinga, Firebaugh, Kerman, Mendota, San Joaquin and Tranquility).

In 2011, Choose Health implemented "Champions for Change,"[12] a peer-led component in which leaders in each of their six communities are trained as health advocates. The goal of the program is to encourage parents to modify family diets and increase regular levels of physical activity. By adding the health advocate piece they aim to ensure that the message of eating healthy and increasing physical activity resounds within each community. Leaders are typically parents or community members who want to see healthy changes in their communities. These individuals are recruited from classes and sessions offered through the Education and Leadership Foundation. This year there are three Champions in each community. The 5 training sessions integrate lessons from the Networks' *Toolbox*[13] in addition to *PowerPlay*[14] curriculum materials. At the trainings the leaders are taught the tools and skills to teach other parents in their own communities. Once trained, the Champions for Change deliver presentations and work one-on-one with other parents. They also provide summer school activities for children. Additionally, most of the communities host community events at which health advocates present these healthy eating and physical activity messages. Other parents have started walking groups in their communities. As the parents become "Champions for Change" they become leaders and empower other parents to do the same. For more information on this program contact Maria R. Lemus (marialemus@education-leadership.org).

The Network for a Healthy California - Latino Campaign and the "Champions for Change" Brand

The *Network for a Healthy California—Latino Campaign* is a public health initiative reaching 1.7 million Latinos annually through a combination of culturally and linguistically appropriate community-based and social marketing approaches. Introduced in 1994, the primary goal is to encourage low-income Latino adults and their families to consume the recommended amount of fruits and vegetables and to engage in physical activity every day. The fruit, vegetable and physical activity goals are designed to reduce the risk of chronic diseases, especially cancer, heart disease, type 2 diabetes and obesity. *Latino Campaign* is currently operating in nine regions in California under the leadership of six regional agencies.

[12] http://www.cachampionsforchange.cdph.ca.gov/en/index.php
[13] http://www.network-toolbox.cdph.ca.gov/en/index.asp
[14] http://www.cdph.ca.gov/programs/cpns/Pages/ChildrensPowerPlayCampaign.aspx/

Community-level interventions with Community Health Leaders (CHLs) are a key element of the *Latino Campaign*. Each region employs one Latino Campaign Manager and teams of three to five trained CHLs, who are typically a mix of Spanish-speaking parents, *promotoras* and college students. Since the program's inception, approximately 250 CHLs have participated in hands-on trainings using materials from the *Toolbox for Community Health Educators* and specialized trainings with physical activity specialists. The CHLs educate Latino families at venues such as festivals targeting the Latino population, farmers' and flea markets, community clinics, nonprofit organizations, supermarkets and corner stores. The *Campaign* also supports and trains a cadre of over fifty bilingual spokespeople, known as "Champion Moms," who speak at events, appear in ads and influence the direction of the campaign at the local level.

In addition to the Community Health Leaders and "Champion Moms," the *Campaign*'s social marketing component sponsors Spanish and English television and radio advertisements, outdoor advertising, a pilot program on healthy text messaging and a family theatre program called "*Aventuras con Verduras*" ("Adventures with Vegetables"). Over the years, the *Network--Latino Campaign* has won numerous awards, including the 1999 Gold Cindy Award for Outstanding Educational Video, the Public Relations Society of America's 2000 Prism Award for Ethnic/Multicultural Program of the Year, the 2001 National Public Health Information Coalition Award for Excellence in Public Health Communications, and the 2001 International Mercury Award for Public Health Awareness Campaign. For more information on the program contact Ignacio Romero (iromero@cdph.ca.gov).

Soul Food Program of Nextcourse

Nextcourse designs food and cooking education programs to teach people of all ages and backgrounds how to buy, cook and eat healthier foods that are locally produced and minimally processed. Soul Food, located within the San Francisco Sheriff's Department Women's Resource Center (WRC), is one of Nextcourse's premier programs; it aims to heal, nurture and promote the health and wellness of formerly incarcerated women as part of WRC's transitional support services. In 2008, the program initiated cooking and nutrition education classes at WRC, and since then has worked with approximately 500 women who were formerly incarcerated or survivors of domestic violence.

Every year, Soul Food offers internships to 4 women who demonstrate dedication to a healthful lifestyle and interest in diet and physical activity. The goal of the internships is to offer program participants an opportunity to further develop their passion for nutrition and the culinary field, while empowering them to deepen their leadership, course facilitation and peer-to-peer training skills. Internships are personalized to meet interns at their skill level and to help them expand their personal and professional interests in the field, while supporting their ongoing recovery treatment program.

Internship training includes curriculum development, program management, course facilitation, presentation skills, feedback integration, sustainable agriculture and the local food movement. After receiving training, interns lead activities with other formerly incarcerated women, including cooking classes highlighting affordable, healthy recipes, guided food shopping trips to farmers' markets, and nutrition classes using curricula that empower participants with knowledge to support their substance abuse recovery goals.

Soul Food interns serve as visible community role models, demonstrating the benefits of a commitment to a healthier lifestyle and bringing an authentic voice and sense of vitality to the program. Individual and community level outcomes evaluations indicate that the Soul Food program has resulted in improvements in nutrition knowledge and healthy eating behaviors of participating women. The WRC program collaborators now prioritize health and well-being as an important component to successful community integration. For more information on Nextcourse's Soul Food program, email info@nextcourse.org.

Salud es Vida (Health is Life) Program—Kaweah Delta Health Care District

Salud es Vida (SEV) was a 3-year health intervention in Tulare County focused on Latino children and youth facing high rates of overweight and obesity. The program was developed and managed by the Community Outreach Department of Kaweah Health Care District in partnership with 22 diverse organizations including healthcare agencies, school districts, local government, CBOs, insurance agencies, the Tulare County Nutrition Network, the Family HealthCare Network, youth organizations and University of California Cooperative Extension agencies. The heart of the program involved nutrition and physical activity educational workshops led by a team of 4 paid *promotoras* to reach underserved youth and their families. Additional program objectives included integrating Mexican indigenous cultural traditions into the activities, enhancing collaboration among the partnering organizations, improving partner organizations' screening and referral processes, and refining the Latino cultural competencies of partnering staff.

Promotoras were local community members with an interest and knowledge in the area of nutrition and physical activity. Job announcements were printed in English and Spanish and *promotoras* were recruited through non-profit organizations. *Promotoras* were selected for skills such as being bilingual, knowing the communities and resources, nutrition knowledge and presentation skills. They received training in nutrition education concepts and resources, diabetes prevention, and data collection information for evaluation purposes.

The Salud es Vida Program received referrals from partnering clinics, family resource centers, and schools. The *promotoras* team recruited potential participants for educational workshops via telephone calls and home visits. Workshops provided instruction to groups of adults and children in physical activity and nutrition, including lessons on food groups, portion sizes, label reading, and healthy cooking methods. Each year the *promotoras* delivered 10-12 group workshops that were 10 weeks long and included the whole family. Childcare was made available for very young family members to facilitate attendance. *Promotoras* also administered evaluation measures to monitor the program's impacts and referred participants to local services and resources depending upon individuals' needs. Average annual workshop attendance was 183 participants; the majority of participants were children and women. In addition to the workshops the program hosted support groups (4 per year), weekly physical activities classes (10 per year), and homework activities.

A unique element of the program was the Cultural Renewal Program, which integrated Mexican indigenous values and traditions. Activities included planning meetings and advocacy for adults, youth arts, crafts, dance and cooking, as well as a community garden. Upon completion of the program, children showed statistically significant decreases in BMI, waist circumference and heart rate reserve. The Salud es Vida Program successfully adopted the *promotoras* model involving the whole family and integrating cultural competency across the entire program. To learn more about this program, please contact Alma Torres-Nguyen at altorres@kdhcd.org.

Urban Sprouts

Urban Sprouts is an experiential garden-based learning and skills-building program serving low-income, ethnically diverse middle school students in San Francisco. The aim is to use garden-based nutrition education to increase the consumption of fruits and vegetables in low-income communities. The idea for Urban Sprouts came from a doctoral project based on a garden education program at an urban middle school in San Francisco. The youth development program, which consisted of hands-on, garden-based education, was such a success that it was integrated into the school's core curriculum. Over the last decade the program has expanded to reach 4,500 middle school youth, serving 4 middle schools throughout San Francisco.

In 2008, Urban Sprouts created a family involvement component as a means of extending food and health messaging beyond the school and into the students' homes and communities. Each year, three cohorts of eight parents receive a training and develop outreach plans to disseminate health information. Outreach activities include distributing health information at farmers' markets, teaching family cooking lessons, hosting dinner parties

featuring healthy recipes, conducting cooking demonstrations at the weekly Mission Community Market, advocating for healthy school lunch and creating opportunities for parents to talk about what healthy eating means to their families. The majority of parents speak Spanish and all are SNAP-eligible or SNAP recipients. Parents are recruited through the 4 partnering schools as well as through community partners. Participants in the family involvement program complete a 2-day long training (total of 6 hours) focused on basic health and nutrition information, food justice, community organizing and public speaking. Since the start of this family involvement program 42 health and nutrition outreach workers have provided education to over 2,000 community members.

Studies demonstrate that low-income parents face barriers, especially time constraints, to meaningful participation in their children's schooling. To address this problem, Urban Sprouts has adapted their approach to meet the needs of parents by hosting a combination of workshops and activities in conjunction with previously scheduled parent meetings and school-wide events. Urban Sprouts has also enhanced the family integration component with a family "Farmers-in-Residence" program that encourages interested school families to grow their own food in the school garden. For more information about the Urban Sprouts program, please contact Audrey Roderick at audrey@urbansprouts.org.

Visión y Compromiso (Vision and Commitment)

In 2000, Visión y Compromiso (VyC) was established as a California-based network supporting *promotoras* and community health workers through diverse services including trainings, workshops, conferences, public policy advocacy and technical assistance. The organization's mission is to provide *promotoras* and community health workers with the skills and resources needed to improve health outcomes in the underrepresented and predominantly Latino communities that they serve. One of their goals is to show how the *promotora* model can be integrated into a range of health promotion efforts. Based on the theory that *promotoras*/community health workers are culturally competent and thus capable of expanding the reach of healthcare services to underserved communities, VyC trains medical professionals and health departments to work with them more effectively.

The VyC network is comprised of 13 regions, each with a regional coordinator. The regions are San Diego County; Coachella Valley; the Inland Empire (San Bernardino and Riverside Counties); Orange County; Los Angeles; San Fernando Valley; Oxnard, Santa Barbara and Ventura Counties; the Central Valley; Bakersfield; Stanislaus County; Marin and Napa Counties; Redwood City, Santa Clara County and San Francisco; and Northern California.

In addition to the ongoing regional work, the network hosts an annual conference that offers over 40 workshops to approximately 1,000 *promotoras*; it also contracts with organizations looking to enhance their programming with the *promotoras* model. VyC has contracted with the Santa Clara County Public Health Department to train *promotoras* involved in the Bay Area *Latino Campaign*[15] using materials from the "Toolbox" and a form of dance therapy known as *Bailoterapia*. Further, in 2011 VyC coordinated the Healthy Hearts, Healthy Families Program to raise awareness of health behaviors that decrease the risk of cardiovascular disease, stroke and diabetes among the Latino communities of 5 Bay Area counties. The program included 12 *promotoras* who taught over 350 health classes to 11,630 Latinas/os. At the end of the program, the percentage of participants that were overweight and obese decreased from 72.4% to 58.7%.

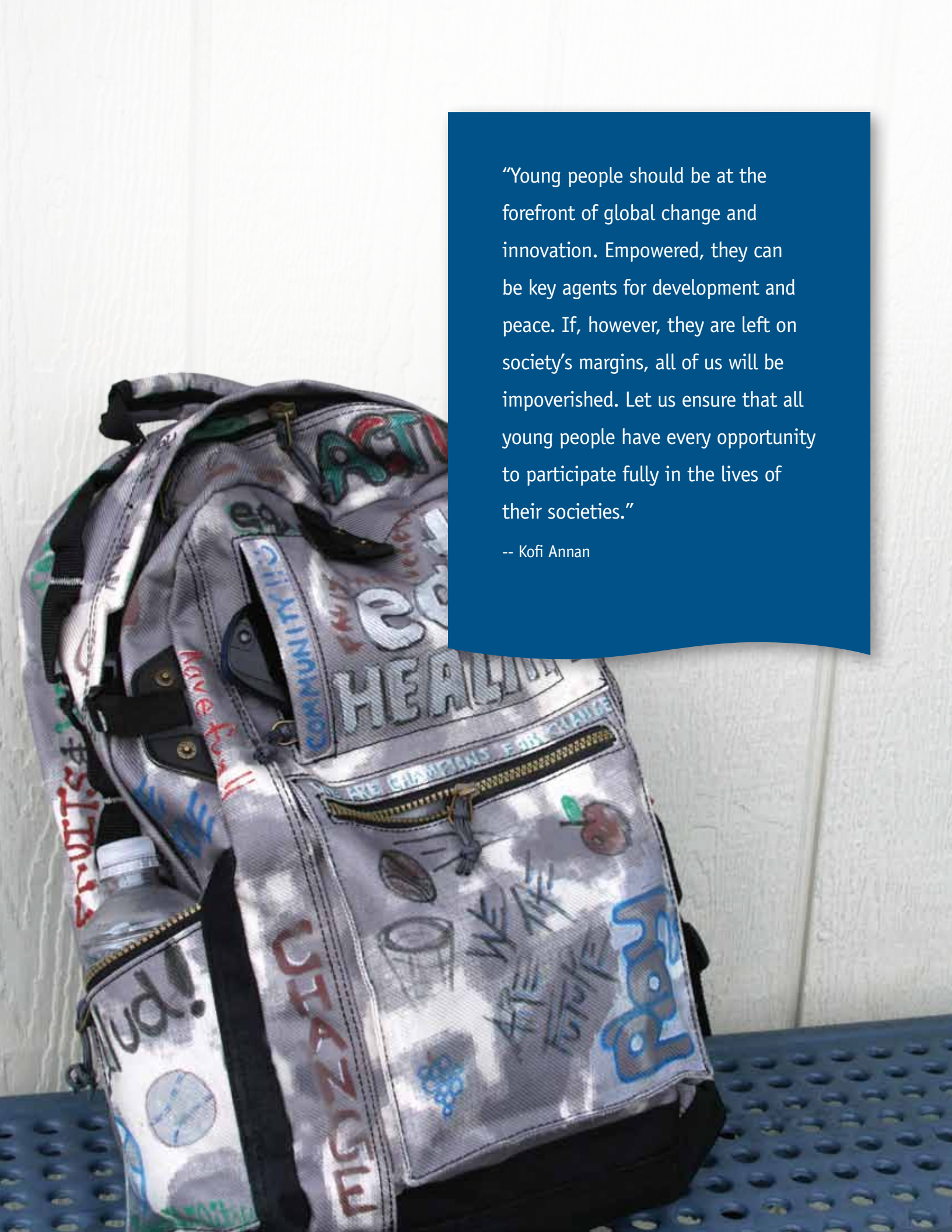
In 2009, the California Assembly declared October "Promotores Month," and recognized Visión y Compromiso's role uniting thousands of individuals and hundreds of organizations together as one voice behind a Visión of a dignified and healthy life for all. To learn more about Visión y Compromiso, contact Maria Lemus at mholl67174@aol.com.

[15] See the *Latino Campaign* profile starting on page 70 for more details on this program.

Network for a Healthy California

Inspiring Youth, Growing Change

Nurturing Strong Minds for a Healthy Community



"Young people should be at the forefront of global change and innovation. Empowered, they can be key agents for development and peace. If, however, they are left on society's margins, all of us will be impoverished. Let us ensure that all young people have every opportunity to participate fully in the lives of their societies."

-- Kofi Annan

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We would like to express our heartfelt gratitude and respect for the hundreds of youth who made the commitment to improve health in their communities. Your commitment, creativity, and passion are contributing to making California a model for youth-led obesity prevention efforts.

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Glenda Martin Robinson, project coordinator

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Deborah Kravitz, project coordinator

Mountain View Middle School, Lamont School District, Lamont
Manuel Ramirez, adult ally
Yolanda Ramirez, project coordinator

Orange High School, Orange Unified School District, Orange
Patty Maize, adult ally
Kat Soltanmorad, project coordinator

Santiago Creek Day School, Orange County Department of Education, Santa Ana
Kat Soltanmorad, project coordinator

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Leah Mowery, adult ally

Zane Middle School, Humboldt County Department of Health and Human Services, Eureka
Marianne Hutchins, adult ally
Colleen Ogle, project coordinator

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Inspiring Youth, Growing Change

Report Objectives

The *Network for a Healthy California* (*Network*) initiated this report to learn more about the impacts, successes, and challenges of the Youth Engagement Initiative (YEI), which began in 2006. A primary goal of this report is to document changes resulting from the local projects, from the youth in the project to the built environment. This information will also inform continuous improvements as the program evolves. While this report is not intended to be a full-scale YEI evaluation, our goal is to share ideas, lessons learned, and reflections with others who are interested in engaging youth to improve health and well-being.

This report seeks to capture an understanding of themes that can inform future health promotion and youth development work. Common patterns and unique experiences gleaned from interviews with key project staff help to tell the YEI story. The successes, challenges, and changes described begin to paint a picture of trends, impacts, and implications of this work. There is great interest in this work and in expanding this initiative. The lessons learned demonstrate that young people can be a key part of implementing solutions to our most pressing health and nutrition concerns.

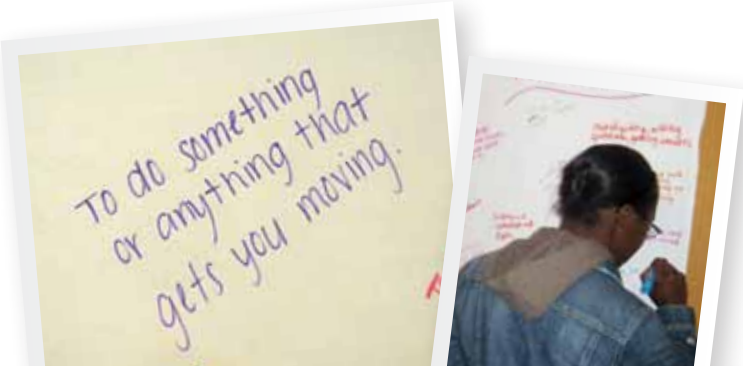
A primary goal of this report is to document changes in youth eating and physical activity habits, which resulted from the local projects.

WHAT DATA INFORMED THIS REPORT?

Key informant interviews with adult allies and project coordinators from local project sites are the primary basis for the findings in this report. An independent consultant interviewed 13 adult staff from seven project sites, along with four State *Network* staff.

The YEI project sites profiled in this report were selected based on longevity and geography. Our intention was to capture impacts and lessons learned from projects with the most experience in the initiative, supplemented by reflections from a few newer sites. Projects are located in urban and rural communities throughout California. Due to logistical and resource limitations, the youth voice is not directly represented.

During guided conversations, interview participants answered a series of questions about their experiences. We asked key informants to describe results from the youth research projects, along with their initial expectations; challenges, surprises, and lessons learned; and their hopes for the future. A complete review of program materials such as culminating reports, youth survey results, training curricula, and Internet research also informed this report.



LOCAL PROJECT SITES INTERVIEWED FOR THIS REPORT

Youth Research Teams	Project Start Year	# of Youth Leaders Involved	Grade Range	Project Coordinator	Adult Ally
CHANGE, Del Norte High School, Del Norte County	2009	15–20	9th–12th	Deborah Kravitz	Johanna Dantzman
Fresh Crew, San Lorenzo High School, Alameda County	2006	15	9th–12th	Chris Boynton	Leah Mowery
Humboldt Health, Zane Middle School, Humboldt County	2009	8–12	7th & 8th	Colleen Ogle	Marianne Hutchins
Lunch Bunch, Orange High School, Orange County	2006	10–12	9th–12th	Kat Soltanmorad	Patty Maize
SASH, Mt. View Middle School, Kern County	2006	12	7th & 8th	Yolanda Ramirez	Manuel Ramirez
Youth Team, Santiago High School, Orange County	2008	10	9th–12th	Kat Soltanmorad	Cyndie Borcoman
Youth Teams, San Bernardino, San Bernardino County	2006	14	6th–12th	Glenda Martin Robinson & Traci Burnett	Matthew Douglas

ABOUT THE *NETWORK FOR A HEALTHY CALIFORNIA*

The mission of the *Network* is to create innovative partnerships that empower low-income Californians to increase fruit and vegetable consumption, physical activity, and food security with the goal of preventing obesity and other diet-related chronic diseases.

Since 1997, the *Network* has led a growing statewide movement of local, state, and national partners collectively working toward improving the health status of 7 million low-income California parents and children. Multiple venues are used to facilitate behavior change in homes, schools, worksites, and communities to create environments that support fruit and vegetable consumption and physical activity.

With support from the United States Department of Agriculture (USDA) Supplemental Nutrition Assistance Program (SNAP), the *Network* funds nearly 150 public and non-profit agencies. USDA requires that *Network* programs and funding target only SNAP recipients and those with similar low incomes.

What is the Youth Engagement Initiative?

The *Network* launched the Youth Engagement Initiative (YEI) in October 2006 as part of the overall goal to increase consumption of the recommended daily amount of fruits and vegetables and participation in daily physical activity among low-income families. During the pilot year, six youth engagement sites throughout California worked with low-resource, middle and high school youth (ages 12-18) to conduct a youth-led participatory action research (PAR) project. The projects provide youth with the opportunity to engage in leadership, critical thinking, problem-solving, service learning, and strategizing skills to address and promote nutrition and/or physical activity issues. Since its inception, the YEI has expanded to 20 local project sites.

> Empower youth to create community change such as installing hydration stations to provide clean drinking water, or making healthy food choices the easy choice in schools.

THEORY, METHODS, AND FRAMEWORKS

The desire to engage youth at the center of this initiative is based on evidence from a wide variety of social learning, health promotion, popular education, and youth development theories. In this context, a "youth-led" approach is grounded in the following key principles.[1]

- Youth opinions are solicited, respected, and applied.
- Youth identify their own issues, problems, and possible solutions.
- Youth initiate project ideas, carry out planning, and goal setting.
- Youth drive the process and are involved in all stages of decision-making.
- Youth teach other youth.

Local projects utilize a youth-led PAR framework. PAR is an inquiry process that includes critical thinking, information gathering, analysis and logical problem solving while building networks and strengthening authentic voice to address issues that contribute to childhood obesity. The steps taken are:

1. Identify the issue or problem of greatest interest and relevance to the youth team.
2. Define what is known about that issue or problem.
3. Identify what additional information is needed to understand the issue.
4. Determine what methods and approach will be used to collect information and then work together as a team to accomplish this.
5. Use the information for education, understanding, strategic action, and/or community change.

Because community conditions, relationships, and players vary, no two PAR projects will look the same. However, by emphasizing work within marginalized

communities, this approach seeks to address the underlying causes of inequality while also finding solutions to specific community concerns.[2]

This is especially relevant when seeking to improve population health, because though overall mortality rates declined and life expectancy rose in the United States during the 20th century, our country nonetheless faces an increasing level of inequity in the health status and mortality of those with less material resources, particularly in communities of color.[3] In California, one in every nine children, one in every three teens and over half of adults are overweight or obese. While this epidemic affects nearly all people, the rates are highest among Californians of Latino, American-Indian, African American, and Pacific Islander descent, Californians from lower-income households, and those with disabilities.[4]

Though people often think that health is about individual behavior and lifestyles, health care or developments in medical research, these represent only a small part of the strategies needed to eliminate health disparities. Instead, major advances in health status historically have resulted from broad social reforms such as labor laws that govern workplace health and safety,[5] increases in the standard of living and improved sanitation, housing, and food safety. Health professionals, policy makers, academics, and advocates increasingly acknowledge that societal conditions play a primary role in determining people's health status, and the inequitable differences for some groups.

Obesity rates and the associated health consequences also are subject to societal forces and policy choices that shape our environment. Neighborhoods offer an abundance of cheap, low-nutrient, high calorie food but limited access to fresh fruits and vegetables. Research shows that rural, low-income, and minority communities generally have less access to supermarkets. Children are less likely to walk or bike to school due to distance, crime or traffic danger while unsafe parks and streets limit outdoor, active play.[6]

INITIAL HOPES AND ANTICIPATED OUTCOMES

The goal of the YEI was to demonstrate that Youth-led PAR is a viable approach to empowering young people and achieving environmental changes that impact health and nutrition.

The initial hopes of most local project staff interviewed for this report can be summarized into two primary desires:

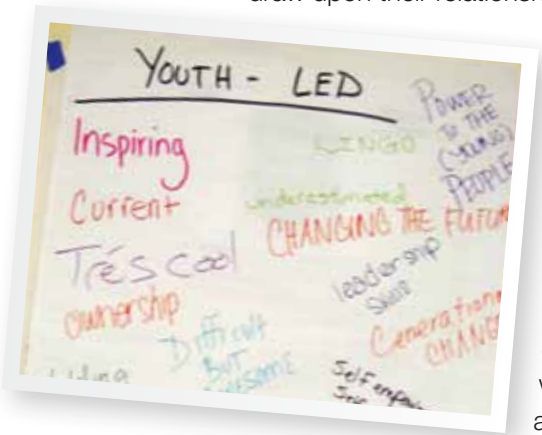
1. Foster peer leadership and educate youth about nutritious and active lifestyles.
2. Empower youth to create community change such as installing hydration stations to provide clean drinking water, or making healthy food choices the easy choice in schools.

Who Participates?

Network-funded projects are eligible to participate in YEI. Though primarily schools, they also include health departments, parks and recreation departments and non profits. Each site is responsible for recruiting an adult ally and a youth team to carry out the scope of work.

STAFFING THE YOUTH ENGAGEMENT INITIATIVE

Each local project site is staffed by a project coordinator, adult ally, and a team of youth. At the State level, one part-time staff manages the program and provides technical assistance. *Network* leaders and a part-time administrative assistant also support the YEI.

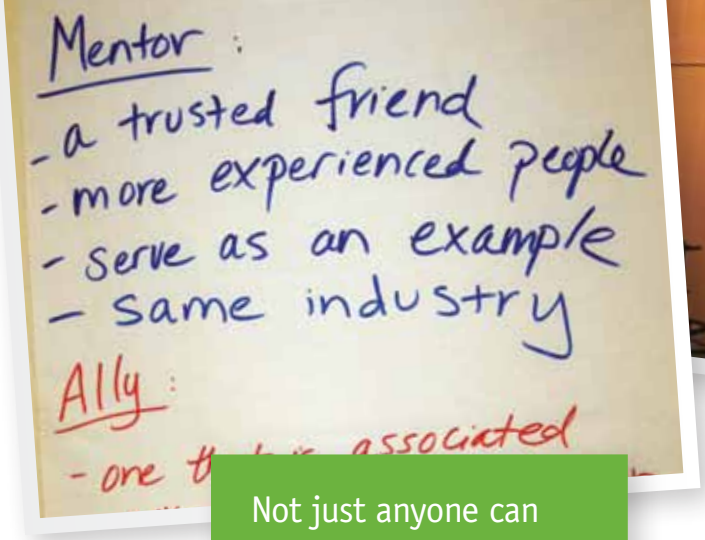


The project coordinator has less direct involvement with the youth. They usually are responsible for coordinating multiple aspects of nutrition education, recruiting and coaching adult allies, completing paperwork, connecting the youth team with other community resources, troubleshooting unexpected challenges, and maintaining a vision for the effort. An ongoing responsibility is ensuring the project remains youth-led, adheres to youth development principles, and stays within the parameters of *Network* funding requirements. Project coordinators regularly meet with adult allies and periodically communicate with *Network* staff to keep the projects on track and help problem-solve.

The primary role of the adult ally is to mentor, coach and facilitate the youth team. They are tasked with engaging young people in activities that enable them to discuss and understand issues related to food systems, nutrition and physical activity, select a focus area, research method and question, make meaning of the results, and develop an action plan to advocate for change. Often they are called upon to help smooth the way by coaching students on how to approach adults without putting them on the defensive or blindsiding them with complaints. They draw upon their relationships with school personnel to gain in-kind support such as classroom meeting space, use of school vans for transportation, and assistance with distributing surveys.

Not just anyone can be an effective adult ally. In addition to their skills in working with youth, adult allies possess qualities such as a big heart, caring, commitment, a willingness to "go the extra mile," and the capacity to let go. They are adults who view young people as assets to their communities. Several describe this as a natural ability to connect with young people. Other qualities include an outgoing personality, charisma, passion, and enthusiasm.

Because results and activities can vary depending on the skill level and interests of the adult allies, selecting the "right" adult ally is an important factor in project success. "There are certain people who just automatically connect with kids. They enjoy it, it's not



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even work to them, it just comes naturally and they don't have to force it," explains Traci Burnett, coordinator of adult allies at the San Bernardino Parks and Recreation Department.

Other project coordinators also advise to choose the adult ally well. Adult allies come from a wide variety of professional backgrounds such as public health nursing, history or science education, youth development and film production, among others. Some are parents and have experience with afterschool programs, coaching, or leading youth groups such as 4-H clubs or Girl Scouts. Skills such as meeting facilitation, knowledge of nutrition education, and connections to other community groups also are desirable. Adult allies with skills to navigate school and government bureaucracies are especially advantageous. They can translate complicated policies and procedures to the students as well as negotiate with system administrators on behalf of the youth.

One project coordinator believes it is important to select an adult ally who is comfortable with cultural and demographic differences including ethnicity, age, and income. Adult allies who have personal experience with being marginalized may more easily identify with the youth, see them as equals and therefore, have more successful working relationships. In contrast, adults who bring a more privileged perspective and view the youth as poor and disadvantaged may unintentionally cause tension. One adult ally explains, "I was also a disaffected youth. It allowed me to see the youth as powerful people who need to learn skills, not as people I need to boost."

So what motivates an already busy professional to take on a potentially time-consuming, challenging project with youth? Often, YEI goals and principles are compatible with their existing job or organizational mission. In addition, the project offers something fun and a new way to connect with young people.

Several local project staff say that the YEI is one of their favorite aspects of their job. "If I could just work full-time with youth I'd be happy as a clam. It's my favorite objective in the whole scope of work," says project coordinator, Deborah Kravitz. Several adults described the desire to make a bigger impact not only on youth, but in the wider community. "I wanted to help the whole community become more nutritious conscious," says Manuel Ramirez, adult ally at Mountain View Middle School.

Why Engage Youth?

The youth themselves are a primary reason why adults have such a positive experience working in this initiative. Young people bring a different perspective and a fresh approach. They're creative, innovative, technologically savvy, fearless, and energetic. They are unafraid to question the status quo. Most importantly, when youth speak, people listen.

The power of youth voice often is underestimated. Given the opportunity, support, and a platform, young people are able to impact their communities in powerful ways. Adults involved with YEI repeatedly described the power of youth voice to affect not only their peers, but adults and the wider community. They have influenced eating and physical activity habits, school health policies, and the built environment. "The freshness that youth bring if they are helped to be articulate can be very refreshing. They see the world in a different way and it can remind you of your own optimism and that you really can change the world." says Sue Foerster, *Network for a Healthy California*.

> "Youth have so much potential; they're the next generation. They appeal to policy makers and are old enough to articulate, debate, and frame the issues."
>
> Valerie Quinn,
> *Network for a Healthy California*

Young people are a tremendous resource. When they make a presentation, people listen differently than they might to a teacher or parent. This seems especially true for their peers, who may be more willing to listen to health messages, try new foods or engage in physical activities if the ideas are presented by people closer to their own age. "The students reach out to their peers and relate to them in a different way than I can as an adult," says adult ally, Marianne Hutchins. "It's very powerful."

Once engaged in learning and problem solving, given a chance to be "at the table" and lead, young people can actively shape their communities. Though their experience with systems, institutions, paperwork, and process is limited, this can actually be of benefit. Their imagination, innocence, optimism, and vibrancy are just a few of the unique qualities that allow young people to apply a "fresh lens" to creating solutions. Free-spirited and less encumbered by responsibilities than adults, youth are in a unique position to be authentic ambassadors for obesity prevention programs.

The young participants in this initiative also experience the consequences of environments that all too often don't support healthy choices. Neighborhoods that lack grocery stores but offer plenty of fast food, mobile vendors and liquor stores; unsafe streets, parks and walking trails; bike lanes and sidewalks that are non-existent or in disrepair – all contribute to obesity, diabetes, and other health problems that increasingly impact youth.

RECRUITING YOUTH

Opinions about the best age at which to engage youth vary considerably among local project staff interviewed for this report. Some maintain that teens in middle school are easier to work with because they appreciate structure and are less distracted by the desire to simply hang out and socialize with friends. Others prefer working with high school age youth because they are more mature and need less guidance.

> "They're using their own voice and talents to get the work done in a way that makes sense so the end product is relevant."
>
> Kamaljeet Khaira,
> *Network for a Healthy California*

Whatever their age, interested young people typically are found through existing youth groups, announcements in a school's daily bulletins or recommendations from classroom teachers. Most sites have some type of application process for prospective team members. Acceptance is often based on interest and responses to an interview or essay – some look for youth who "want to do something." Others keep an open door approach and accept any youth who want to participate. Some local sites advise recruiting a diverse group of youth so that young people learn to appreciate different viewpoints and are able to break free of their usual cliques.

While some sites strive to maintain consistent membership on the youth research teams there is variation in approach. At Mountain View Middle School, an equal number of seventh- and eighth-graders are accepted onto the team each year. This allows continuity from the remaining students when the eighth-graders graduate. Students are required to write an essay on nutrition, which is evaluated by a three-person adult team. At Orange High School, adults targeted freshman and committed to working with them for four years. Students on this team were all at the same grade level so adults didn't have to worry about losing people at different times.

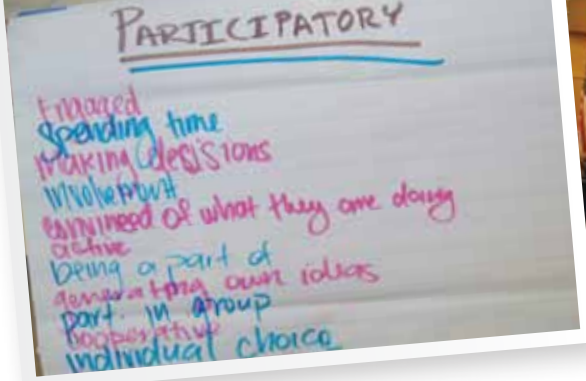
The Del Norte site allows youth to join the project at any time in the process. They set criteria that must be met in order to receive a financial incentive, which is based on a percentage of meetings attended. Deborah Kravitz, project coordinator in Del Norte County, explains, "Some kids come once to a meeting and then don't come back so I really don't have to worry about them being there for the wrong reason. Even if they're there for the compensation, they've been there every week, so they've earned it."

TECHNICAL ASSISTANCE, TRAINING, AND OTHER SUPPORT

Project sites almost unanimously identify three primary supports that are most effective in implementing the YEI: the *Network's* annual training and binder materials created by Youth in Focus, the *Network's* technical assistance provided by Youth Initiatives Staff, and local community support.

The *Network's* technical assistance, which is provided by one part-time staff person, is commonly described as "invaluable" and "indispensable." Regular e-mails, check-in phone calls, and site visits are the foundation of technical support, supplemented by webinars to complete the offerings. The *Network* staff for this initiative prioritizes time in the field. Some adult allies report that these local site visits make a positive impression on the youth leaders, because it shows that their opinions and activities are highly valued.

Each year, the *Network* sponsors a training workshop for project coordinators and adult allies. Using simulated exercises, participants practice the activities through role-plays and experience the curriculum as if they were the youth. The activities, templates, and materials "make sense" and are "designed to



> "The training in Sacramento was invaluable. It gave me the framework to let the kids shine."
>
> Patty Maize, adult ally
> Orange High School

get you organized," says one project coordinator. In addition to teambuilding activities and processes to undertake community research, the binder also includes information for planning and launching the project locally, such as materials to set up meetings with school district personnel, approach partners, and recruit students.

The "Ideal Versus Real" activity is one especially effective part of the resources, identified by several adult allies. Students are guided through discussion about what a healthy school or community might look like if nutritious food and physical activity were abundant and compare that to their actual (real) circumstances. As a result of this exercise, youth discuss what changes are needed in their communities or school and identify who has the power to make decisions about these changes.

Community mapping is another effective activity mentioned by almost all project sites. Youth learn how to use mapping as part of the research process and begin to assess available food, recreation opportunities, and other elements of the community that impact nutrition and physical activity. From these maps, youth identify issues in their school or community related to nutrition, physical activity, and the built environment.

Other training materials include guidelines for developing research questions and methods, sample surveys and interview guides, instruction on how to create a photovoice presentation, exercises to analyze and make meaning of the data, tips for preparing presentations, and sample forms for recruiting youth researchers. This comprehensive training appears to have accomplished its goal of preparing adults to facilitate local projects. "When we left the training, we had everything we needed," says one project coordinator. "The process just flowed from introduction all the way to developing a tool to the actual research and analysis," says another.

YEI training has changed in format over the years. Training is offered on an annual basis rather than staggered throughout the year. "Veteran" participants attend a separate session to brainstorm and problem-solve together. Several of those interviewed say that these opportunities to share what works and how to overcome challenges provide new ideas and encouragement to move forward. Project coordinator Colleen Ogle says, "It's more than networking, it's more like corporate brainstorming. I'm so embedded that I can't think of other approaches. When I talk to other people, I get ideas that I haven't tried before."

Local support from school administrators, teachers, and community partners cannot be underestimated as an essential element for success. Adult allies who can navigate the school system, principals who offer youth additional incentives and approve release time, food service staff who meet with youth and support changes to school menus, teachers who lend classrooms and allow students class time to complete surveys are all examples of how local support can help youth attain project goals. Administrators can ensure that the principles of a youth-led effort are adhered to while local project staff help keep lines of communication open by sharing the youth researchers' progress at staff meetings. In-kind financial assistance to cover food and transportation costs help as well.

Impacts of Youth Research Projects

Each of the sites interviewed for this report identified multiple impacts related to the YEI. Changes and outcomes resulting from the youth research projects generally fall into the following categories:

- Eating and physical activity behavior changes among youth, their peers, and families.
- School and community changes that increase the availability of fruit, vegetables, and clean drinking water.
- Students acquire new skills and exposure to new experiences.
- Successful projects expand to include more sites, new partners, receive additional funding, media attention, and other health improvement efforts.

A "RIPPLE EFFECT" OF CHANGE IN EATING AND PHYSICAL ACTIVITY BEHAVIORS

Staff from the local sites observed changes in the eating habits of students that participate in YEI. Five sites also report that the youth work has influenced the eating and physical activity habits of their peers, family members, and the wider community. Students were observed eating healthier snacks such as fruit and trail mix, drinking water instead of soda or juice, and consuming more salads and vegetables.

Most of the projects incorporate other nutrition education programs such as *Harvest of the Month,* and several adults report that students are more willing to try new foods. Additionally, a few project staff report that the effects of nutrition education are becoming visible in middle and high school students. They say that youth exposed to nutrition education programs earlier in their education may be more likely to engage in YEI and sustain changes in their eating and physical activity habits.

The willingness to try new foods or engage in physical activity is enhanced when young people observe their peers experimenting and having fun. Several adults described this as a "ripple effect" or "tipping point." For example, Matt Douglas, adult ally at the San Bernardino Parks and Recreation Department, explains, "Other kids see our youth leaders involved and active, and decide that they would like to become involved and join in. It's kind of like the domino effect. If one person does it, then others will too."

Adult ally, Leah Mowery observes a similar trend with the "Fresh Crew" in the Bay Area. Some of the youth who also were involved in drama wanted to have salad for an afterschool snack. They took the initiative and put it together. She says, "Other students saw the salad, got excited, and ate it all up. That would not have happened two years ago. Students are a lot more open to trying new things and actually eating things that have vegetables. I think it has a lot to do with student promotion. They see their own peers offering healthy foods and so they are more trusting. They try it, kind of like it, and then they're more trusting the next time around. Overall there is more openness and enthusiasm. We wouldn't have seen that before."

Johanna Dantzman, adult ally and teacher at Del Norte High School concurs. She says, "Kids know that drinking water is important more than ever. They are making better choices nutritionally because of the [*SNAP-Ed*] funding that exposes them to fruits and vegetables. Once a month when they get fruits and vegetables, like persimmons; some have never seen it before, but they try it. If it's there, they'll try it."

Adult ally, Manuel Ramirez reports a similar story. "It's surprising that in our area most of the students

had never tasted persimmons. So we brought in two different types of persimmons, did a lesson, and provided a healthy version of persimmon cookies. Students in the high school come back and ask when we're going to make another batch. So, introduce them to foods they don't normally get, especially with the Hispanic diet."

Staff at the San Bernardino and Lamont project sites report that students also influenced their families' behavior. For example, parents make changes to food purchases and preparation after participating in nutrition education and receiving recipes. Project coordinator, Yolanda Ramirez says, "Every team at the end of the year, you can tell that they've made changes and their families made changes. They say we watch what we buy, we go out and play more together and walk more." One prominent example is that youth in Lamont encouraged their families to participate in the South Kern Building Healthy Communities 100-Day Challenge, which is part of a ten-year health improvement initiative funded by The California Endowment.

Changes in Physical Activity

Changes in physical activity habits appear to be less frequent than nutritional change but some youth teams are making progress. For example, the Fresh Crew from San Leandro High School, learned through their survey research that biking to school was not likely to be a popular option because the majority of students did not own bicycles. However, students were more receptive to walking so they hosted a "Walk to School" Day to promote healthy transportation alternatives.

Youth from San Bernardino and Lamont participated in challenges to complete "virtual walks." They determine how many steps are needed to complete a mile, and how many miles each student must walk in order to reach their desired destination. Youth in Lamont walked the entire length of the Pacific Crest Trail from Mexico to California while San Bernardino youth walked from their city to Universal Studios and back. In addition to walking, students learn and apply new skills in using pedometers, Geographic Information Systems (GIS), and Excel spreadsheets.

In San Bernardino, youth calculated a total of 68 miles for each student and walk around the Community Center three times a week to accumulate miles. Some were so enthusiastic they extended their trip all the way to New York City. The enthusiasm appears to be contagious. Other youth who are not part of the research team often join in the weekly walks. Some of the youth are developing a brochure to ensure that people in the community are informed about affordable physical activities.

One of the original pilot sites in San Bernardino engaged the Westside Steppers Drill Team and Drum Squad, an existing youth group devoted to healthy activities to help keep kids "off the streets." They combined their focus on physical activity with nutrition education, health promotion and research, which resulted in a novel approach to regional sport competitions and State-wide recognition of their work.

SCHOOL AND COMMUNITY CHANGES

Changes to a school or community environment appear to be some of the most challenging for student researchers to achieve. Whether it's changing school menus and cafeterias, or improving parks and streets,

these goals can take years to come to fruition. This requires a great deal of perseverance on the part of both youth and adults. However, these types of changes extend the reach of the YEI by potentially impacting an entire school or community.

> "It's surprising that in our area most of the students had never tasted persimmons."
>
> Manuel Ramirez, adult ally
> Mountain View Middle School

Students enrolled in alternative education in Orange County are investigating the food environment around their "school," which is located in an otherwise empty storefront. By identifying external eating cues, examining food access and talking with neighborhood leaders, they are developing recommendations for more affordable, healthy food options.

In Lamont, Stay Alive, Stay Healthy (SASH) youth helped establish a food pantry in their community. Each month they do a community service rotation there. They also created a photovoice presentation to highlight community conditions that make physical activity more challenging. As a result, Kern County roads engineers worked with them to improve streets, sidewalks, and trails in their area.

School Cafeteria Upgrades and Menu Changes

Three sites, including two original pilot projects, report that the youth research teams have initiated changes in school cafeterias and menus. Overall, this has resulted in an increase in the availability of fruits and vegetables, healthy snacks, culturally diverse foods, and water.

By opening a dialogue with food services staff, youth at Tennyson High School in Alameda County were able to see some of their suggestions implemented. For example, this pilot site's cafeteria now offers a diversified menu along with satellite stations that are located throughout the school and offer healthy options.

At another pilot site, the student research project resulted in a completely remodeled cafeteria. Officials at Orange High School named the cafeteria "Lunch Bunch Café" in their honor. In addition, healthy vending machines were installed due to the student's research project and action.

At Zane Middle School in Humboldt County, one outcome of the student work is that the school now offers a second breakfast during the morning break. Adult ally Marianne Hutchins says that although this was a different outcome than what students were working toward, it represents an important change. By raising awareness of nutrition and food access issues, administrators became more aware that many students reported being hungry by third period. Students often went without breakfast or were eating foods without a lot of nutritional value. Other students experienced "basic food insecurity" at home.

Hydration Stations Increase Access to Clean Drinking Water

Youth in two communities in Northern California decided to investigate the issue of access to clean drinking water in school. In both cases, students discovered water fountains in disrepair and problems with water quality. Due to the students' efforts, Zane Middle School became the first public school in Humboldt County to install a hydration station so that students have access to affordable, clean drinking water. Students at Del Norte High School also are advocating for this solution.

Youth Inspire Changes in Foods Offered at School and Community Events

Raising awareness of healthy, nutritious options is a focus for many of the youth research teams. During school and community events such as an annual chili cook-off, sports team competitions, health fairs, Cinco de Mayo celebrations, and Earth week, youth offer taste tests in combination with *Harvest of the Month* or other *Network*-funded nutrition education activities.

YOUTH LEARN VALUABLE SKILLS, GAIN EXPOSURE TO NEW EXPERIENCES, AND RECEIVE RECOGNITION

All of the sites interviewed for this report say that youth learn valuable skills as a result of YEI participation. Moreover, they gain exposure to new experiences that they otherwise would not have access to in their low-resource communities. From trying new foods to engaging in community service, this initiative provides a variety of "first time" opportunities for youth participants. For example, it may be the first time they've undertaken research, delivered a public presentation, served their community, tasted persimmons, or been listened to and asked their opinion. Leaving their neighborhood to make a presentation, attend a conference or take a field trip to observe how other places implement solutions can be a life changing experience for youth participants.

In fact, some adults believe the skill development and exposure to new experiences are some of the most important aspects of the research projects. "It gets kids educated on healthy living and helps them prepare for college, a job and life," says adult ally, Matt Douglas. Adults repeatedly say that youth respond positively to this initiative because they learn that "they can make a difference," "be part of something bigger," and "have an impact." Project coordinator, Chris Boynton says this sense of empowerment is "huge for a student in an underperforming school. It's the first time anyone's ever asked their opinion and said to them, 'You know your environment and you're the expert, tell us what you want.' To act and be well-supported is so powerful."

Adults identified a variety of new skills and knowledge acquired by youth and applied to healthy eating and active living issues including:

- Public speaking, report writing, and grammar
- Preparing presentations using PowerPoint and photovoice
- Research methods, survey design, and data analysis
- GIS technology and community mapping
- Video production (VideoVoice) and developing public service announcements
- Community outreach
- Event planning
- Relationship and teambuilding skills such as diplomacy, listening, and cooperation
- Goal setting, prioritizing, and developing an action plan
- Navigating bureaucracies
- Cooking, gardening, and preparing healthy snacks; better understanding of nutrition, food preparation, and food systems.
- Better understanding of the importance of regular physical activity

Participation allows youth to develop leadership capacity and confidence that can contribute to their future success.

Some youth researchers are involved in providing nutrition education to peers, younger students or the community-at-large. For example, SASH participants in Lamont lead groups of adults in physical activity exercises and present information on *Harvest of the Month* for families that access the food pantry. Through their participation, youth can overcome their fear of public speaking. "That's what they're most afraid of," reports one project coordinator. They say, "I had to stand up in front of my friends to talk about what they should and shouldn't eat. I was terrified." But afterwards, when their friends approach them to ask questions, the students understand the value. A project coordinator reflects, "The most important lesson for me is that getting youth involved is a really good way of making messages go that much further. When the kids speak, you can tell they have 100% attention. Youth have the power to get the attention of adults or other young people."

Public presentations to adult decision makers are one of the culminating activities that result from the youth research. These events give youth a platform to use their voice and "shine." Their presentations are often enhanced by photos and videos to emphasize key points. "It's evident people love listening to the kids when they present," says one adult ally.

Youth leaders are "presenting all over." They've shared their research results with *Regional Collaboratives*, The California Endowment's *Building Healthy Communities* groups, administrators, and staff at County Health and Human Services and City Parks and Recreation departments. Some have presented at statewide conferences. For example, at the 2011 California Childhood Obesity Prevention conference in San Diego, youth from three *Network* sites were featured panelists in breakout sessions. They also met with the U.S. Undersecretary of Agriculture. Project coordinator, Deborah Kravitz says, "They were a hit and put Del Norte County on the map."

Youth participants have also received recognition for their healthy eating and active living promotion efforts. For example, the Central California Regional Obesity Prevention Program (CCROPP) honored SASH youth researchers at an annual awards dinner for their food pantry work. The Humboldt Health team received an award from the Northcoast Nutrition and Fitness Collaborative for contributions to the *Water Woes* publication.

Participation allows youth to develop leadership capacity and confidence that can contribute to their future success. Several adults report that youth researchers become more involved in other school and community activities, an effect that can outlast their participation in this initiative. A few report that the youth remain active in health promotion and community service even after they leave the program. Clearly, the experience of participating in community change efforts creates the potential for youth to develop into life-long advocates for a healthy lifestyle.

Results also suggest that academic performance may be positively affected. In two cases, all the youth participants attained honor roll status or went on to college, outcomes that adult allies believe were influenced by their YEI participation. In one case, the project coordinator believes the positive impact on youth is gaining notice in the school system and wider community. This in turn creates more support

for the program and its approach. "It's so accepted because of the change in the kids. All of the kids who participated are on the honor roll. They didn't start there," she explains.

PROJECT EXPANSION

As a whole, YEI grew from six pilot sites to more than three times its original size in just four years. There are now over 20 programs throughout California. In some communities, success with one youth engagement project has led to the establishment of others. For example, in San Bernardino, after successfully piloting the initiative at one community center with an existing youth group, the project expanded to include six community centers and any interested youth.

There are now over 20 programs throughout California. In some communities, success with one youth engagement project has led to the establishment of others.

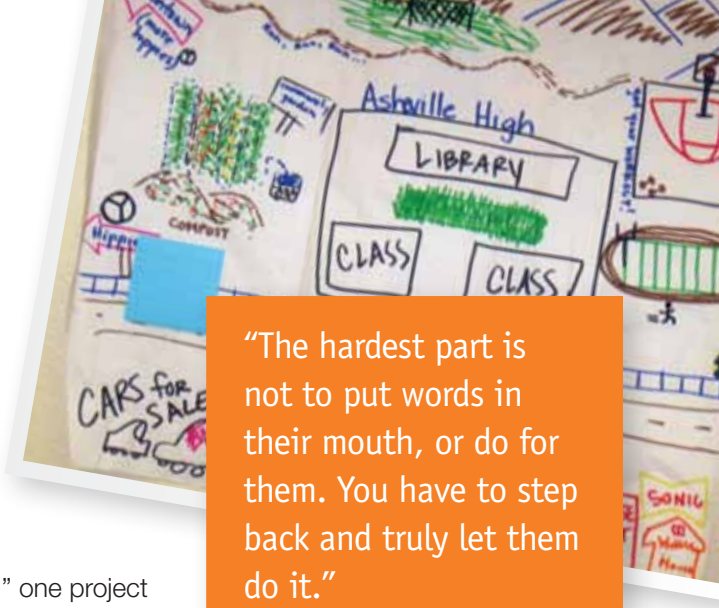
The potential and positive results are gaining notice on a local level and as a result, attracting new partners and resources. As word of the youth projects spreads, young people are recognized as "ambassadors" for a healthy lifestyle and their school. "It really helps with the school's image," says one adult ally.

Youth Researchers Partner with The California Endowment's Building Healthy Communities initiative

Three YEI communities participate in *Building Healthy Communities* (*BHC*), a 10 year place-based health improvement initiative funded by The California Endowment (TCE). YEI and the *BHC* effort share some similar goals and due to this synergy, project staff and youth in the counties of Del Norte, Kern, and Orange are exploring ways to partner. One benefit to these partnerships is that youth research teams have been invited to participate in additional trainings, conferences and projects sponsored and funded by *BHC*.

In Del Norte County, staff from TCE and the local *BHC* hub coordinator, The Wild Rivers Foundation, initiated a meeting to learn more about CHANGE. "They were impressed with the Youth-led Participatory Action Research model," project coordinator Deborah Kravitz says. "*BHC* uses a similar community building model and the Youth-led PAR method is a great supplement." Both approaches engage community members to identify important issues and mobilize action. Several CHANGE youth are active *BHC* members and serve on the youth implementation team. This summer when Del Norte *BHC* hired 30 youth to conduct community mapping throughout the county and adjacent tribal lands, several CHANGE members gained employment.

In the Central Valley, SASH youth participated in the 100-Day Challenge, the local *BHC* kickoff event. Meanwhile, Orange County's *Network* project coordinator is working with the Santa Ana *BHC* to find ways to partner and to schedule youth from Santiago Creek to present their research findings.



> "The hardest part is not to put words in their mouth, or do for them. You have to step back and truly let them do it."
>
> Patty Maize, adult ally
> Orange High School

Implementation Challenges

Trying anything new involves some risk, experimentation and challenges. Common challenges experienced by youth engagement sites include the following:

TIME PRESSURE

Time pressure may be one of the most common challenges and was identified by six of the seven local sites. Youth often are active in other afterschool activities, which limits their availability. For example, several sites report that they only are able to meet weekly during 40 minute lunch periods, supplemented by occasional afternoon or weekend sessions. The time it takes to implement activities in the curriculum is more than what some expect. Finally, adult allies and project coordinators usually have other responsibilities so they too may find that making time for the YEI is a stretch. Cuts to schools, parks and health department budgets frequently result in staff taking on additional job duties, which leaves less time for participating in optional activities like the YEI.

GAINING ADULT BUY-IN

While YEI emphasizes the principle of being "youth-led", this doesn't mean adult support isn't needed. In fact, it's essential whether it's recruiting adult allies, asking teachers to use classroom time to conduct surveys or convincing school district administrators to approve a field trip. Yet, gaining buy-in from adult leaders presents a variety of challenges.

Within schools, while health and nutrition are important, administrators may need to prioritize activities that they believe more directly link to academic success. "The focus is on bringing up test scores, academics and curriculum rather than special projects," one project coordinator explains.

Some teachers continue to offer snacks that are high in fat and sugar as incentives and rewards. Donuts, cookies, hot chocolate, and hot dogs are among the foods cited as enticements. Several sites report that these types of foods are still routinely offered at school events and continue to be sold at school fundraisers. At one school district, junior high students report that some elementary school teachers withhold recess or physical education as a disciplinary technique.

Convincing adults that a youth-led effort is a valuable and viable approach can itself be a challenge. Adults have their own ideas about effective strategies and find it difficult to resist imposing these. "Some have a reticence to give control to the youth," says one project coordinator. Others may not understand the underlying principles of a youth-led approach. "You've got to let them go. It's going to be messy, they won't always get it right, and it won't be linear," explains one project coordinator.

One local site discovered this after the youth designed and distributed a survey that one teacher took exception to. A misunderstanding of both the intent of the survey and YEI resulted in the teacher's refusal to distribute the survey and ultimately affected the overall response rate. "We adults would do it differently but that's not the point," the project coordinator says. "We're trying to make sure they take the lead. It's a group of students motivated to make change and do something different."

> "It's hard not to say anything. You want the kids to come to the conclusion on their own; not me telling them what the conclusion should be. Adults need to guide them but not make the decisions for them. Let the students do it because when they own it, they'll believe in it."
>
> Johanna Dantzman, adult ally
> Del Norte High School

MAINTAINING MOMENTUM: MOTIVATING PARTICIPATION & ENSURING A YOUTH-LED APPROACH

Several conditions contribute to the challenge of keeping youth enthused. First and foremost, if youth are not trusted and allowed to lead, their participation will wane. Unlike school, YEI participation is not mandated; it's voluntary. Kids get "bored," they encounter obstacles or projects require more time and work than they realized. Other activities divide their attention; their attention span may be short. They may have challenges at home or conflicts with siblings or friends who are also involved. The project doesn't seem "cool." Sometimes they don't really have much interest at the start – their "hearts are not really in it" and they "don't take ownership." From year-to-year, young people change schools, graduate or move out of the neighborhood. Undocumented youth face unique challenges that limit their ability to receive compensation or travel. For all these reasons and more, adult allies and project coordinators say it can be challenging to keep youth engaged.

Challenges at home can influence youth's motivation and ability to participate. While nutrition and physical activity are important concerns, they may not always be the priority. Project coordinator Glenda Martin Robinson explains, "Some of the kids participating last winter lost their home and we would see them really cold, sitting outside and coming into the center to stay warm." Several other project staff note that youth from low-income families sometimes go without food. Additionally, transportation costs for bus passes or gas for the family car can become a barrier.

The process of change takes time and the slow pace may discourage young people. Project coordinator Deborah Kravitz is proud of the CHANGE students for sticking with the two year process to address clean drinking water. "Change takes time. Things take longer and you have to be patient," she says. Adult ally Johanna Danzman emphasizes that understanding the process of change is an important skill the students learn through their work. "You can't sustain change unless others see a problem too. If you just go and do something, then people aren't on board. They don't understand the issues. The concerns are not relevant."

So what helps counter these conditions and keep youth engaged? Incentives, making it fun and worthwhile, an adult ally who "gets it" and empowering youth to lead are a few effective strategies. One project coordinator explains, "They don't like to be told what to do. They're more likely to participate if they have a say. They need to feel important." The idea of doing something that can make a difference is powerful motivation. Reframing how youth see themselves also may shift their perspective of their own importance and increase buy-in.

Allowing youth to lead is both a strategy to maintain participation and a challenge because it may seem easier for adults to do it themselves. This can be especially true if working with middle school youth who are younger and may need more guidance. Ensuring the projects remain youth-led can be a real struggle for adults – especially if they are goal-oriented, time pressured, feeling overwhelmed

or lack training. “The tendency is to lecture, present or step in,” says one project coordinator. “That’s the traditional teaching model.” She says it took a few years for staff to get trained and really understand the purpose. “Building capacity doesn’t happen overnight.”

There is a great deal of agreement that adults need to “let go.” “Adults need to learn to step back and let the youth decide,” says project coordinator Yolanda Ramirez. Project coordinator Chris Boynton also advises, “Until you see the power of it, you’re not sure you can let go. We have parameters from the *Network* but you have to let go. The more you can let them do it, the more they’ll go with it. Allow them to take control.”

STAFF TURNOVER

As difficult as it is to contend with inconsistent participation among youth, maintaining consistent adult leadership can prove equally challenging. Five of the seven sites report challenges with staff turnover, which occurs not only among project staff, but with school personnel as well. Youth and their adult allies may spend a great deal of time building relationships with key school administrators, teachers and food service staff only to realize they need to start all over as positions shift. “This year we discovered there was a new principal, teacher, and front office staff. I didn’t know anybody and they didn’t know me,” says one adult ally.

“Getting any change to the school district is really challenging,” says another adult ally. Staff turnover makes it more so. Retirements and budget cuts are commonly cited reasons for the staff shuffle. When people leave their jobs, they often are not replaced. Job responsibilities are reassigned, sometimes to people who are already overwhelmed by other tasks.

The consequences of staff turnover are multiple. Background, history, and forward momentum are lost. New staff requires training. Time is needed to build relationships and understand the process. When adult allies leave, that also creates challenges for keeping youth engaged. “At one site, we’ve had three different adult allies due to a maternity leave, hiring delays, and budget cuts,” the *Network’s* Youth Initiatives Consultant Kamaljeet Khaira says. “In one case, the adult came to the training and then left his job a few weeks later. The youth team didn’t have an adult to work with them.”

NAVIGATING BUREAUCRACY

There is a long line of agencies involved in administering funding and decisions that govern young people’s access to nutritious food and safe places to exercise. “It’s a process of working with nested bureaucracies to get something done,” explains one project coordinator. From the layers of the USDA at the federal level to the California Department of Public Health, funds eventually make their way to the local level and typically pass through the County Office of Education, to a school district or health department, and then to a school site. Learning how to navigate bureaucracy is a skill necessary for all participants in this initiative.

Some adult allies described challenges associated with understanding how the school system works. At times, simply making a request to partner with students from other classes requires this know-how as does gaining permission for student release time from class, distributing surveys, hosting school nutrition education events or taking a field trip.

> "Putting nutrition into the minds of kids this age, make them advocates for nutrition and will yield huge dividends in the future. Making them conscious at a very young age really did work. I see kids at the high school and it's really affected their eating and health habits….In high school, they remain active in community and youth groups."
>
> Manuel Ramirez, adult ally
> Mountain View Middle School

EVALUATING AND SHARING PROGRESS

At the end of each year, youth research teams write a final report or create a presentation to summarize their project process and outcomes. The *Network* periodically conducts other types of evaluation activities, such as surveys, key informant interviews, and training assessments. Several adults interviewed expressed interest in collecting more information from youth participants, teachers and other involved adults.

Evaluating how changes occur on an individual and community level can be complicated. "Sometimes these things are so hard to measure; it's hard to know what other things helped to cause the domino effect," an adult ally explains. Like other YEI activities, program evaluation provides an opportunity to engage young people.

Next year, Project EAT hopes to initiate evaluation activities that can help determine YEI's "reach" by examining students' social networks. The design involves asking youth to identify five other people they think they've affected through their nutrition education projects. They plan to contact those individuals to determine project impact, and if possible, continue to identify other students who may have been affected by the project. Part of the goal is to develop a better understanding of how the nutrition education messages and behavior change spread. "You don't know the connections until you start to ask," explains project coordinator Chris Boynton.

Another area that may be interesting to explore is the long-term effect of nutrition education programs offered in elementary school or middle school. Some evidence appears to indicate that these early experiences have far-reaching impact on students' continuing involvement with health promotion activities and sustained changes in health habits. For example, adult ally Patty Maize recalls that when recruiting for the youth research team, "Some of the Lunch Bunch had been involved in grade school with nutrition education. They remembered it and it made them want to participate."

Adult ally Manuel Ramirez also observed changes among high school youth who participated in Mountain View Middle School's youth research team. He says, "Putting nutrition into the minds of kids this age make them advocates for nutrition and will yield huge dividends in the future. Making them conscious at a very young age really did work. I see kids at the high school and it's really affected their eating and health habits….In high school, they remain active in community and youth groups."

Evaluating how YEI partnerships are established and contribute to change also presents a rich opportunity for research. Currently, partnership building may primarily occur during a back-and-forth process between the adult allies, youth research team, and prospective partners. The interests of the youth are communicated to others within the adult allies' professional network, perhaps through a casual conversation over lunch or within a more formal setting like the *Network* Regional Collaboratives.

These discussions may result in some kind of connection, opportunity or idea that the adult ally then brings back to the youth team. The youth then decide how to move forward.

One project coordinator explains that in this approach, "the adult ally provides opportunities for the kids to connect with other groups." She speculates that adult allies who are successful social connectors also will have more successful action research projects. While this presents a compelling research question for the future, there also is potential for investigating how to shift that role to the youth. "The important social node is the adult ally. How do we move from the adult ally being that connecting node to the kids being the connecting node?"

TECHNICAL ASSISTANCE CHALLENGES

While participants almost unanimously praise the Youth Engagement Program, some identified a few challenges. Most often, finding the time to implement the activities is the biggest hurdle. A few also report that more training time is needed. Because the training has been consolidated over the years, it feels more like "a refresher course rather than a full training," says one project coordinator. Our newer sites will require more technical assistance and support, as our veteran sites can serve as mentor sites to these newer sites.

Some adults who are unable to attend training until months after they've begun their projects, due to scheduling conflicts, appear to encounter challenges implementing the YEI. They may be unaware of the activities available to support their efforts or of content issues such as how the built environment can influence food choices and physical activity.

One year, early in the initiative, teams from all the pilot sites attended a Youth Forum in Sacramento. Several adults report that this experience had a positive impact on both adults and young people and provided youth an opportunity to meet with their peers from around the State to learn and strategize together. Currently, opportunities for both adults and youth to connect with each other in person, to share successes, and lessons learned are limited. Several participants interviewed expressed interest in participating in more shared learning opportunities.

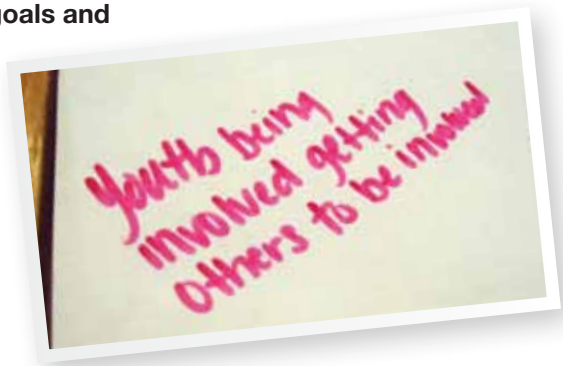
In a few cases, staff or youth may find the program a bit overwhelming or lacking some content. For example, some youth who participate at their local community center say the activities feel too much like school. So the adults have found ways to present the curriculum differently. Rather than engaging youth in the activities classroom style, they talk and walk. At another site, adults and youth needed more step-by-step instructions to transition from research to action. To solve this dilemma, they found other resources such as a *Network*-approved training conference that youth could attend. Adults from two sites report that more nutrition education materials appropriate to the high school level are needed.

A few sites also indicate that there is a "readiness" factor to consider when implementing the curriculum with youth. It can be challenging to engage youth in research if they first do not have basic information about nutrition, food systems, and the built environment. One site addressed this issue by dividing the project into two phases. The first year students learn about nutrition, gardening and how to prepare recipes. Once they have acquired this basic knowledge, they are better prepared for action research.

Advice from the Field

This "top ten" list is a compilation of advice adult project staff have for anyone interested in launching a Youth-led Participatory Action Research Project.

1. **Choose your adult ally wisely.** Ensure they are passionate about working with youth, trained and supported.
2. **"Let go" to keep the project youth-led.** Adults need to provide guidance rather than making decisions for youth.
3. **Offer youth incentives to participate.** In addition to compensation, special rewards or privileges, make it fun and offer the chance to try new, healthy foods.
4. **Recruit a diverse group of youth who are interested in health and community improvement.** Make sure they want to be there and understand the commitment.
5. **Devote time for both adults and youth to participate in regular trainings and unexpected opportunities.**
6. **Work with youth to identify their goals and establish a project timeline.** Share examples and options to help give them ideas about what's possible.
7. **Establish a positive rapport with school staff, administrators and community partners.** Start project planning early and discuss expectations, logistics, processes and procedures to avoid misunderstandings. Communicate your intentions and be upfront about the goals and principles of the initiative and the changes youth are seeking.
8. **Evaluate as much as possible.** Collect feedback from youth and adults about what worked and what can be improved. Use a mix of quantitative and qualitative methods.
9. **Share successes within the *Network* and with the wider community.** Capture and broadcast the stories of youth and community change.
10. **Be patient and stay the course – change takes time.** Follow the process and make time for youth to find their voice, and for decision makers to be ready to listen and respond.



Where to Next? Hopes & Potential Directions for the Future

Most project staff hope that the YEI continues to thrive, grow and receive funding and support. As they envision the future, some hope the projects will be "bigger and better," involving more youth and community members.

Ultimately, there is the hope that youth continue to contribute to their communities as health advocates whether in high school, college or as adults and that eventually, the issues driving this work will be resolved.

Other ideas for future directions include the following:

- Offer more training and technical support to local sites. For example, establish more opportunities to connect YEI project sites across the initiative to enhance learning and sharing or include more school personnel in training.
- Provide more opportunities to "blend" or "cross-over" with other *Network* programs and activities, such as *CX*[3] and *Harvest of the Month*.
- Encourage youth to take more ownership and leadership of the YEI. For example, train youth to mentor and educate other youth on the "how-to's" of Youth-led PAR or create avenues for YEI program Alumni to continue their work as health educators and advocates.
- Explore the use of social networking as tools for youth to educate and activate each other. Conduct evaluation research on the role adult mentors play in establishing social connections on behalf of the youth and how youth can become the central "social node."
- Standardize the Youth-led PAR approach into schools by working with the California Department of Education to integrate this technique in educational content standards.
- Partner with compatible organizations to develop toolkits and resources that can be used with other issues and funders.
- Fund other types of organizations beyond schools to undertake YEI projects.
- Obtain funding on the local level to further implement action plans.
- Conduct longitudinal evaluation to better understand long-term effects in schools and communities with student leaders.

"When the project is over, it doesn't end there. They carry it with them. It can last their entire lives and may influence their choice of college, career path or volunteer activities."

Marianne Hutchison,
adult ally
Zane Middle School

[1] Adapted from: McCall, Douglas S. and Mary M. Shannon. *Youth Led Health Promotion, Youth Engagement and Youth Participation*: A Research Review. Canadian Association for School Health, June 1999. http://www.safehealthyschools.org/Youth%20Engagement%20Research%20Review.pdf

[2] Brydon-Miller, Mary. "Using Participatory Action Research to Address Community Health Issues." (Chapter 11) in *Health Psychology Practice*

[3] Hofrichter, Richard. Health and Social Justice, ed. San Francisco: Jossey-Bass, 2003.

[4] *2010 California Obesity Prevention Plan: A Vision for Tomorrow*, Strategic Actions for Today. Sacramento (CA): California Department of Public Health, California Obesity Prevention Program, 2010.

[5] Hofrichter, Richard. *Health and Social Justice*, ed

[6] *2010 California Obesity Prevention Plan: A Vision for Tomorrow, Strategic Actions for Today.*

Case Studies

In this next section, we have highlighted youth-led efforts throughout the State, in order to share local stories and demonstrate what young people can accomplish. In some of these examples, youth overcame substantial obstacles and worked together to accomplish their goals.

Recruiting for CHANGE

(Del Norte High School, Del Norte Unified School District)

At the beginning of the school year, students at Del Norte High School applied their creative talents to the task of recruiting more youth to their research team, which is called CHANGE. They created a video that played in all the classrooms. They included metaphors of change and set the video to David Bowie's song "Changes" to invite students to join the CHANGE team.

Each SASH member made a personal commitment to change a health habit for 100 days.

SASH Inspires Others to Join *Building Healthy Community's* 100-Day Challenge

(Mountain View Middle School, Lamont)

To participate in the South Kern *Building Healthy Communities* (*BHC*) 100-Day Challenge, each SASH member made a personal commitment to change a health habit for 100 days and encourage their families to join the challenge. Some youth gave up drinking soda or eating chips. Others chose to limit portion sizes, for example consuming 6 ounces of juice daily instead of drinking it all day long. Adult ally Manuel Ramirez observes that this has "made kids more conscious of what they're putting in their bodies."

As a team, they decided to walk 10,000 steps a day. They are mapping their progress to achieve the equivalent of walking the Pacific Coast Trail across California from the Mexican to Oregon borders. They track their steps on a spreadsheet, converting every 2000 steps to 1 mile. Seventeen staff from the Family Resource Center and school district joined SASH in the virtual hike and even the *BHC* program officer got involved!

Project EAT's Fresh Crew Sponsors a Walk-to-School Day

(San Lorenzo High School, Alameda County Office of Education)

The Fresh Crew at San Lorenzo High School is comprised of 15 students who participate in two-year, afterschool internships to train in health issues, gardening, and food preparation. In the initial year, interns learn the basics of nutrition and food systems through hands-on activities such as harvesting, composting, and cooking. In year two, they carry out participatory action research projects.

Project EAT staff tailored the program to student needs after they learned that 51% of students were either in charge of the family food purchasing or preparation. This was a 13% rise from the previous year; a jump that they speculate is due to the economic downturn. "Parents work more and therefore, rely more on their older children," explains project coordinator Chris Boynton. "We realized kids are the gatekeepers for nutrition in their households."

This year, the Fresh Crew divided into three issue groups to develop their research questions which focused on how to encourage students to choose healthier food, how to encourage students to walk or bike to school, and how to change food served in the school cafeteria.

The Fresh Crew designed a survey to learn more about student attitudes and behaviors about transportation to school. They thought concerns about safety might prevent students from biking or walking to school. However, youth researchers discovered that perception of distance rather than safety was the key barrier. They also learned that not many students owned bicycles but did report a willingness to walk to school.

So the Fresh Crew decided to host a Walk-to-School day during Earth Week to promote walking as a healthy transportation alternative. They asked English teachers to make announcements in all of their classes and asked students to pledge to participate. They arranged for volunteers to provide juice and snacks at all the entrances to the school. Kaiser Permanente and the Sheriff's Department were among the partners they recruited to donate prizes.

About 300 students signed in to their event that day. The Fresh Crew students had a "great experience out of the whole process," says adult ally Leah Mowery. "They learned a lot about planning an event and reaching out to the community." Next year, the school's Green Academy will coordinate Earth Week activities and the Fresh Crew plans to participate again. Leah is encouraging them to develop a planning toolkit to make it easier to replicate their efforts.

Project EAT staff tailored the program to student needs after they learned that 51% of students were either in charge of the family food purchasing or preparation.

Youth now are investigating people's awareness of free or low-cost physical activities that are available in the community. To ensure the information is distributed, they are developing a brochure.

Stepping Out Childhood Obesity: Westside Steppers Win Award for Their Efforts

(San Bernardino Parks and Recreation)

The City of San Bernardino Parks and Recreation Department operates six different centers, one of which served as an original YEI pilot site. Beginning with an existing group of teens called the Westside Steppers Drill Team and Drum Squad, their original research question centered on how physical inactivity affects African American teens. Program coordinator Glenda Martin Robinson recalls that when the team started to discuss the question they realized, "This is not just an African American thing, it's a people thing." So they broadened the issue and the group by involving another community center that primarily serves a Latino population. Youth now are investigating people's awareness of free or low-cost physical activities that are available in the community. To ensure the information is distributed, they are developing a brochure.

The Westside Steppers have achieved a variety of accomplishments but one stand out is an event called "Stepping Out Childhood Obesity." The youth invited drill teams from around the region to compete and offered water and fresh fruit to every team after they completed their routine. They also offered a food tasting of healthfully prepared collard greens at the concession stand. The greens were prepared without fatback and tasters reported positive feedback. In recognition for their work, the Westside Steppers were selected as gold medalist winners of the Spotlight Award by the California Governor's Council on Physical Fitness and Sports in 2009.

Santiago Creek Youth Explore the Food Environment

(Santa Ana, Orange County Department of Education)

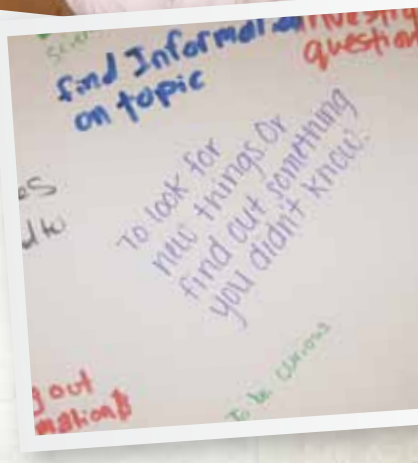
The Santiago Creek Youth Research Team meets weekly to research and learn more about food environments. Their educational program is located in an otherwise empty building; a storefront with blackened windows, situated in what's known as a "food desert." School meals are not offered, so most students bring food from home or rely on what's available in the neighborhood. "Convenience stores and fast food are available more than any other food establishments. This limits their choices and opportunities to eat healthy especially when they take the bus and don't bring something from home. They are identifying that it's not always their choice," says project coordinator Kat Soltanmorad.

Students decided to focus their research on identifying external eating cues and examining issues such as access to fresh fruit and vegetables, availability of food at grocery stores, nutrient dense foods, and food marketing. Using the USDA-produced guide called Empowering Youth with Nutrition and Physical Activity, students mapped the neighborhood to learn what foods are available and those that are not. With this information, they met with local restaurant owners to discuss ideas for healthier and less expensive menu options.

The students plan to present their findings and recommendations to the City Council and will invite members of the National Restaurant Association to attend. They will present to the Santa Ana Building Healthy Communities collaborative, which is part of a statewide initiative funded by The California Endowment. In addition to their research, students also teach homeless children in elementary school. Using the *Harvest of the Month* tools, they conduct taste testing and lead a physical activity lesson. Partly based on the youth leaders' work, the school received a $1000 grant from UnitedHealthcare to address childhood obesity in Santa Ana.

Ms. Soltanmorad says that this project is an excellent fit for the students at Santiago Creek and really resonates with them. "The best way to engage young people is with hands-on, direct learning; almost following adult learning principles, especially since the traditional learning was not working with them." Students at this alternative high school have been transient or homeless; others have been expelled for a long period of time. "Giving them this type of responsibility to go out in the real world and apply what they're learning promotes self-esteem and leadership skills," she adds.

Students decided to focus their research on identifying external eating cues and examining issues such as access to fresh fruit and vegetables, availability of food at grocery stores, nutrient dense foods, and food marketing.



Their research focused on how a new policy to close the campus during lunchtime would affect student food choices.

Overachievers Update: Cafeteria Changes

(Tennyson High School, Alameda County Office of Education)

The "Overachievers" were the original youth group at Tennyson High School. Their research focused on how a new policy to close the campus during lunchtime would affect student food choices. About 1600 students lined up daily during one lunch period in a cafeteria built to accommodate 400 students. Due to long lines, there was often not enough food or time to eat. The students approached food services staff with suggestions for improving food options. In response, the school cafeteria diversified their menu and established "satellite stations." These are "essentially a food cart or a closet that's converted into a food storage space," explains project coordinator Chris Boynton. "They serve Chef or Cobb salads in enclosed containers." This is based on youth research that found high school students don't like salad bars because they don't trust their peers to not contaminate the food.

The Lunch Bunch Café: Four Years of Persistence & Perseverance Pays Off

(Orange High School, Orange Unified School District)

Beginning their freshman year, a dozen Orange High School students worked together for four years to obtain healthier food choices at their high school. Because the students were involved in other activities, after school meetings weren't feasible. So, in honor of their weekly, 40-minute lunch time meetings, they dubbed themselves the Lunch Bunch.

The only Title I high school in the district, 2200 students attend school in a building designed to hold half that number. Lunchtime meant long lines in the cafeteria that had too few serving areas. Student athletes looking for fuel for sports practice after school did not find many healthy options. As the students discussed these issues, they decided to narrow their goal to have healthy food in vending machines. Their next question was, "What if no one buys them?" So the students worked with the food service staff and conducted taste tests. Afterwards, they tallied and reported on the most popular items.

Adult ally Patty Maize recalls that they learned about alternative vending machines from a nearby school district. “In San Diego, they bought all new vending machines, stocked them, and got the profit from them,” she explained. So the Lunch Bunch took a field trip to learn how Vista High School had procured healthy vending machines. Because *Network* funding does not allow for transportation costs, the food services department paid the expenses and allowed the Lunch Bunch to use school vans.

After the second year, the school’s *Network* funding ended and consequently, students no longer received compensation. “We continued working together even after the funding was gone,” Patty says. “That’s how committed the kids were.” The principal was very supportive and offered students more units and scholarship opportunities based on their work. They spent two years “mostly just trying to move forward and not let it die,” says Patty. Students made presentations to the district’s nutrition committee and at the annual *Network* conference in Sacramento. They persevered through staff turnover including the project coordinator, principal, three food services managers and the Assistant Superintendent in charge of buildings. Eventually even Patty’s position was eliminated due to budget cuts.

Ultimately, Orange High School was the first school in the district to install a healthy vending machine, which Patty says is due to the students’ activities. In their senior year, the Lunch Bunch assessed different vendors. “By the time they graduated, we finally got new vending machines.” Over the course of the four years, the California state legislature passed laws to regulate food in school vending machines, which Patty says helped the students’ cause. But the changes didn’t stop there.

Six weeks before the end of their senior year, the new Lunch Bunch Café held its grand opening. Members of the Lunch Bunch signed a banner that hangs over the remodeled cafeteria and kitchen, now painted with bright colors and named in their honor. “The whole cafeteria is upgraded with more fruits and vegetables,” says Patty. They commonly run out of salads at the point of service, a sign that this type of food is in demand and students are eating more fruits and vegetables.

“To have kids be in a leadership capacity and see them shine is one of the most important results of this project that Patty has observed. “Everyone knew who the Lunch Bunch was by the time we ended the process.” Patty says she’s most proud that “They’ve left a legacy at the school.”

Orange High School students worked together for four years to obtain healthier food choices at their high school.

At their presentation to the Health Department, the Humboldt Health students learned about hydration stations, an insert in the wall that dispenses water into refillable bottles using infrared sensors.

Humboldt Health Helps to End "Water Woes" at Zane Middle School

(Zane Middle School, Humboldt County Department of Health and Human Services)

In just two years, the Humboldt Health team from Zane Middle School made great strides in raising awareness of student nutrition and physical activity habits. Some of the group focused on increasing access to drinkable water. Last year, they participated in activities to assess drinking water with the Northcoast Nutrition and Fitness Collaborative, the *Network*'s regional group with a membership of more than 50 health, nutrition and physical activity professionals.

Students conducted a 20-question survey to understand the status of drinking water in their school. Based on the findings, they prepared a PhotoVoice presentation and presented it to health education specialists at the County Public Health Department. The Humboldt Health students also contributed to Water Woes, a report produced by the Collaborative.

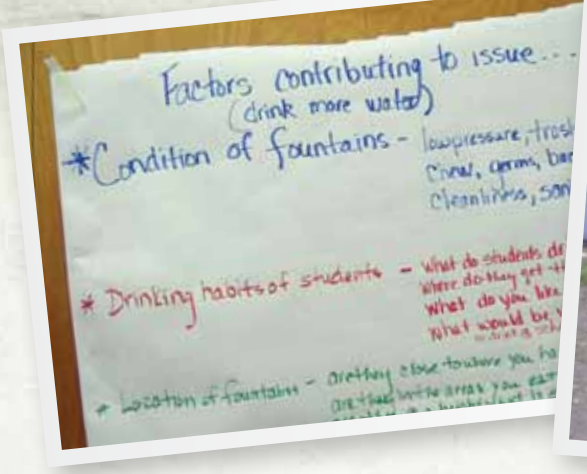
The next year, the Humboldt Health team created a second survey, this time with just five questions to learn more about student attitudes about water. They learned that their peers don't like to drink out of the fountains because they're "dirty and the water tastes bad." Some students indicated that they would drink more water if they had a cleaner source.

At their presentation to the Health Department, the Humboldt Health students learned about hydration stations, an insert in the wall that dispenses water into refillable bottles using infrared sensors. "There's no touching so it reduces germs," says project coordinator Colleen Ogle. Additionally, hydration stations reduce the cost and waste associated with bottled water. The school's Site Council agreed to pay the approximately $2000 cost to purchase and install this new water distribution mechanism. As a result, Zane Middle School became the first public school in the County to install a hydration station.

CHANGE at Del Norte High School: Ready for a Water Revolution

(Del Norte High School, Del Norte Unified School District)

About 15 to 20 students regularly attend weekly lunchtime meetings of CHANGE, a student-invented acronym that stands for Creating Healthy and Nutritional Goals Everywhere. Following the Youth-led Participatory Action Research curriculum step-by-step, they conducted teambuilding activities, community mapping, and other activities to learn about conditions that impact health and develop their research question. After a lengthy discussion of their school's nutrition and physical activity issues, students decided to tackle the problem of access to clean drinking water. Water trumped other issues of concern such as the quality of cafeteria food because students believed they could successfully address water.



Explaining why students need a special project to obtain clean drinking water in school, adult ally Johanna Danzman says, “You don’t think that in the United States access to clean drinking water would be an issue. That’s like a Third World country problem.” She believes it’s in part a matter of finances, old plumbing and priorities. “Sometimes when you turn on the faucet, rusty water comes out,” she explains. Despite the conditions, fixing the water fountains is not a top priority because other issues such as playground safety and building code compliance take precedence.

CHANGE research focused on the question that asked fellow students, “Would you drink more water if you had access to clean, fresh water?” To begin raising awareness, the students developed a video and presentation to share with the School Board. “They did interviews, took pictures and set it to music to summarize their activities,” says project coordinator Deborah Kravitz. Because it was a special meeting, there were more than 100 teachers in attendance along with a reporter from the local newspaper who published a story on CHANGE.

CHANGE research focused on the question that asked fellow students, “Would you drink more water if you had access to clean fresh water?”

Next, CHANGE created a survey titled “Is Del Norte High School Ready for a Water Revolution?” They decided to use a hand-written survey rather than an online survey because they thought “it would be taken more seriously,” Johanna explains. By working with the chair of the social studies department, every student in the school received the survey during State-required history exams. Youth researchers then entered responses from the 600 returned surveys into Survey Monkey, a Web-based program they used to analyze the data.

Their overall finding is that students would drink more water if a clean source was available. Johanna noticed that since the nutrition classroom began offering drinking water, more students take advantage of it - a change that supports these findings. “The problem in our school is not that we don’t have water fountains. It’s that they’re dirty and disgusting. People spit in them and put garbage in them and the kids won’t drink out of them,” she explains.

Now that their research is complete, CHANGE is ready to explore solutions. They are considering ideas to increase the availability of clean drinking water like installing hydration stations or modernizing water faucets. Once the students fully develop their recommendations, they’ll explore ways to make action happen such as writing grants, making presentations to local service clubs, and working with the School Board to meet their goal. They are first on the agenda for the first School Board meeting in October 2011.

The Fresh Crew targeted people in charge of school events to ask them to encourage tastings of healthier food.

The Fresh Crew Encourages Healthier Foods at School Events

(San Lorenzo High School, Alameda County Office of Education)

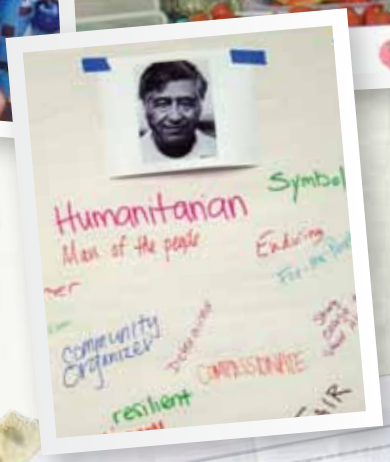
After the school eliminated home economics as an elective due to budget cuts, the kitchen was not being used. Adult ally Leah Mowery decided to take action so she cleaned and restocked it. Now the kitchen is available for teachers to use with classes to prepare recipes that fit their curriculum along with Project EAT activities. During Earth week, Fresh Crew students used the kitchen to host an event with a fruit and vegetable tasting table and a smoothie station. “The kitchen is now becoming a multipurpose, whole school resource rather than for one elective,” says Leah.

The Fresh Crew’s healthier food options group also has generated changes at the school. “There are a lot of spinoffs, things that happen indirectly,” adult ally Leah Mowery explains. “When you have a more intensively trained, core group of students, this creates a ripple effect.” She’s observed that the students take more initiative to participate in school culture. As a result, the desire for healthier food has extended to other school clubs and activities. The Fresh Crew’s involvement with “Sign and Dine” is one example. Youth were mobilized to organize the menu, provide food samples, and recruit volunteers to prepare and serve nutritious food. Youth also received training from qualified professionals in food safety and food handling.

The Fresh Crew decided to target school events to encourage healthier food options. They tried to introduce alternatives by offering tastings, but faced challenges with only five team members and the need to leave class early. They also realized they needed more help to develop their action plan. After attending a *Network*-approved training, they learned how to identify people who have access to or influence over others and recruit them to their cause.

With their newly developed strategy, the Fresh Crew targeted people in charge of school events to ask them to encourage tastings of healthier food. For Cinco de Mayo, they recruited a student club to host a food tasting each day during the week. They approached the Black Student Union Club who agreed to do a tasting. They brought healthy food from different cultures to meetings of the Student International Club.

Next year, The Fresh Crew plans to continue to focus on school events and will present their research results to school staff. After learning that some teachers still serve cookies as an after-school enticement to study, the youth plan to ask teachers to serve healthier options.



Project Expansion Results in Coordinated Research Effort and "Virtual" Walk

(San Bernardino Parks and Recreation)

Since beginning in 2006 with the Westside Steppers, an existing youth group at one YEI pilot site, the San Bernardino Parks and Recreation Department gradually expanded participation from one community center to six. Now, membership on the youth research team is no longer limited to the Westside Steppers and includes any interested youth. Last year, youth at each center conducted independent research projects. But this year, they took a different approach. All the centers are working on the same research project but are responsible for different parts.

Their overall research question is: Does the community get the recommended daily amount of fruits, vegetables, and exercise? Different centers are investigating how much fruit and vegetables, people eat and how much they exercise. The Phoenix East Center youth are compiling a written survey while teams at Lytle Creek and Ruben Campos are developing teen-friendly brochures on the availability of fruits, vegetables, and free or low-cost physical activities in the community. At the Rudy Hernandez Center, youth are working on a Video Voice project to interview adults and youth throughout the community about their nutrition and physical activity habits.

Youth teams from each center also conducted a "virtual" walk from San Bernardino to Universal Studios and back, about 68 miles for each young person. One ambitious team decided to extend their walk to the Big Apple. The youth team at the Nicholson center measures and tracks the number of steps. "One of the staff took a Geographic Information Systems (GIS) class and taught it to the youth. They used that to figure out the length around the park and now they know how many steps it takes for each lap and they don't have to wear pedometers," explains Traci Burnett, who coordinates all six sites. The video team filmed some of the kids walking and will include this in their project report.

Project coordinator Glenda Martin Robinson recalls that when the adults asked, "Where is the nutrition aspect?" the youth developed a unique response. Youth began to map out restaurants along the walking route to identify food choices and asked people what they chose to eat. Once the youth have completed their project, they will present their findings to the City Council and the quarterly Parks and Recreation directors meeting.

Youth began to map out restaurants along the walking route to identify food choices and asked people what they chose to eat.

To get involved. To do something that everyone else is doing. To be part of a group.

They learned that the majority of the students were eating only 3 to 4 fruit and vegetable servings a day instead of the recommended 7 to 9.

Mountain View Motivators' Pilot Partnerships to Eat Right, Be Active

(Mountain View Middle School, Lamont)

Lamont, California is a rural farming community in the Central Valley and home to Mountain View Middle School, one of the original pilot sites for the Youth Engagement Initiative. Twelve students, six from each grade, participate annually in the well-known youth team (now called SASH). To participate, these seventh and eighth graders complete an application that includes a nutrition essay, teacher recommendations and a commitment to attend weekly meetings.

The initial project of the Mountain View Motivators surveyed students about fruit and vegetable intake and family shopping habits. Two findings from their research stood out. First, they learned that the majority of the students were eating only 3 to 4 fruit and vegetable servings a day instead of the recommended 7 to 9. Additionally, students reported that their families traveled a long distance to buy fresh produce. Students wanted to increase the availability of fruits and vegetables in the community and thought establishing a farmers' market would be a good solution. However, they discovered through their research that this might not be the best strategy for their area so they began to explore other possibilities.

Michael Figueroa, program manager for Kern County Superintendent of Schools, School-Community Partnerships, learned about the Mountain View Motivators and invited them to partner with migrant education students in a service learning project to encourage healthy eating. They created the Eat Right, Be Active campaign, modeled after a similar effort in Mexico.

The students made lawn signs and started knocking on doors at 10 a.m. to ask people to attend a health fair at Lamont School later that day. The health fair offered health screenings, cookbooks, brochures on physical activity and healthy eating, and taste tests with *Network* recipes. Through their work on the campaign, they developed new partnerships with the Family Resource Center and the Sheriff's Activity League that continue to add value to the youth research team's work.

SASH Partners to Establish a Student-Run Food Pantry

(Mountain View Middle School, Lamont)

Mountain View Middle School's third YEI year brought many changes: new students, a new adult ally, a new team name, new projects, and new partnerships. Because the youth team didn't really connect with the previous group's name, they worked through a series of activities with their new adult ally, science teacher Manuel Ramirez, to choose a new name: Stay Alive, Stay Healthy (SASH). Though the Mountain View Motivators changed their identity, their goal remained the same; to make more fruits and vegetables available in the community and to encourage more physical activity.

Continuing the partnership with the migrant education service learning program, project coordinator Yolanda Ramirez and Michael Figueroa approached the Community Action Partnership of Kern to explore the possibility of establishing a youth-run food bank in Lamont. Yolanda describes the work at the food pantry to promote healthy eating and physical activity as "SASH's biggest project over the last four years."

Collaboration with other community groups and organizations are central to their success. SASH developed partnerships with youth groups such as The Boys and Girls Club, the Dolores Huerta Foundation, and St. Augustine's Church so that a different youth team works at the food pantry once every 4 to 6 weeks. The Family Resource Center refers families and provides vouchers for the pantry. The SASH students make nutrition presentations, provide recipes, and offer taste testing to promote *Harvest of the Month*. As a result, their work fulfills the goals of two different, yet complementary programs. The students promote health while also learning service and the values of Cesar Chavez.

"It's had a profound effect on the kids. For many of them, this is the first time they've done community service and it stays with them. Some of the high school students are still very involved and I attribute this to their work at Mountain View," says Manuel. Their work at the food pantry, especially the presentations, also impacts the wider community. Both Yolanda and Manuel say that when the youth speak, people listen in a different way than they would if it was an adult. "We've been able to reach large groups of people with healthy messages and involve more youth than just those who are in SASH," Yolanda says.

SASH developed partnerships with youth groups such as The Boys and Girls Club, the Dolores Huerta Foundation, and St. Augustine's Church

An unsafe park, a lack of places to exercise, few sidewalks, limited access to healthy food, and an abundance of fast food and liquor stores were among the issues SASH highlighted.

SASH Seeks Improvements to Sidewalks and Trails

(Mountain View Middle School, Lamont)

The SASH (Stay Alive, Stay Healthy) team at Mountain View Middle School partners with South Kern *Building Healthy Communities* (*BHC*), a health improvement initiative funded by The California Endowment. In 2010, SASH created a PhotoVoice project and presented it at the South Kern *BHC* meeting to raise awareness about conditions in Lamont that impact health.

An unsafe park, a lack of places to exercise, few sidewalks, limited access to healthy food, and an abundance of fast food and liquor stores were among the issues SASH highlighted. Students also pointed out a flood damaged and mud-covered trail to school that made walking challenging. This caught the attention of Kern County Roads Department staff. As follow-up, engineers met with SASH members to discuss walkability issues in Lamont. The youth asked for the walkway to Mountain View to be fixed, along with other street and sidewalk improvements.

This meeting also led to the submission of a Cal-Trans Safe Routes to School application, prepared with SASH assistance. Though disappointed they didn't receive the grant, adult ally Manuel Ramirez says it was still a valuable experience. The students are now "more conscious about what it's like to work on a goal." The Kern County Roads Department assured the SASH team that they would continue to look for other funds to make the necessary repairs. "But we didn't think that would happen," says project coordinator Yolanda Ramirez.

Engineers recently informed SASH that repairs to the pedestrian pathway to Mountain View Middle School are scheduled to be complete by early fall of 2011. "We can't take all of the credit for making this happen, but we should never underestimate the power of youth. When given a voice and an audience, they have very good ideas and very important things to share with adults and sometimes those adults actually listen!" Yolanda says.

Glossary

Adult Ally: A person who does not identify themselves as a youth who acts in partnership with youth. Adult allieship is fostered in personal, cultural, social or institutional relationships through partnerships or mentoring.

Community-Based Research (CBR): A partnership approach to research that equitably involves community members, organization representatives, and academic researchers in all aspects of the research process. CBR aims to increase knowledge and understanding of what is being studied and to integrate the knowledge gained with interventions and policy changes to enhance the health and quality of life of community members.

Participatory Action Research (PAR): Collective, self-reflective inquiry undertaken by participants in communities in order to improve problems, highlight issues and identify solutions.

PhotoVoice: A participatory action research strategy by which people create and discuss photographs as a means of catalyzing personal and community change.

Popular Education: An approach to collective learning that begins with the lived experiences of participants and results in actions that reflect those experiences.

Praxis: Bringing together critical reflection and concrete action with/in a community in order to transform it.

Service Learning: Engagement in deliberate action that benefits the public good in order to develop, reinforce or strengthen learning goals.

Youth/Adult Partnerships: Intentional relationships established between young people and adults designed to foster and support youth voice.

Youth Development: A growth process occurring during teenage years. For most young people, this learning means meeting the basic personal and social needs to feel cared for and to feel safe, valued, useful, and grounded; and building character, skills and competencies that permit functioning and contribution in daily life.

Youth Empowerment: A process that strengthens and activates a young person's or a peer group's capacity to satisfy their own needs, solve their own problems, and acquire the necessary resources to take control over their life.

Youth-Led: An organization, project or process in which young people decide on what gets done and how it gets done. Youth-led does not necessarily mean "no adult involvement or role."

Youth Voice: The ideas, opinions, experiences, attitudes, knowledge, and actions of young people.

Resources

Alliance for a Healthier Generation - Empower Me
http://healthiergeneration.org/teens.aspx?id=3373

American Cancer Society
1.800.227.2345
www.cancer.org

American Heart Association
916.446.6505
www.americanheart.org

California Afterschool Resource Center (CASRC)
510.670.4561
www.californiaafterschool.org

California Afterschool Network
530.754.7422
www.afterschoolnetwork.org

California Center for Civic Participation
916.443.2229
www.californiacenter.org

California Department of Education (CDE)
916.319.0800
www.cde.ca.gov

The California Endowment
1.800.449.4149
www.calendow.org

California Project LEAN
916.552.9907
www.californiaprojectlean.org

CANFIT
510.644.1533
www.canfit.org

Center for Collaborative Solutions
916.567.9915
www.ccscenter.org

Community Network for Youth Development
415.495.0622
www.cnyd.org

Corporation for National Services
202.606.5000
www.nationalservice.org

Dairy Council of California
916.263.3560
www.dairycouncilofca.org

Do Something
212.254.2390
www.dosomething.org

The Forum for Youth Investment
301.270.6250
www.forumfyi.org

The Institute for Community Research / National Teen Action Research Center
1.860.278.2044
www.incommunityresearch.org/research/yari.htm

The John W. Gardner Center for Youth and Their Communities
650.723.1137
gardnercenter.stanford.edu/

***Network for a Healthy California* (*Network*)**
916.449.5400
www.cdph.ca.gov/programs/cpns/Pages/default.aspx

The Points of Light Foundation, Youth Outreach
202.729.8000
www.pointsoflight.org

UC Davis Center for Regional Change
530.752.3007
http://regionalchange.ucdavis.edu

USDA - Team Nutrition
703.305.1624
www.fns.usda.gov/TN

Youth Leadership Institute
415.397.2256
www.yli.org

Youth Service America
202.296.2992
www.servenet.org

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CHAMPIONS for CHANGE Network for a Healthy California

CDPH California Department of PublicHealth

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This material was produced by the California Department of Public Health's *Network for a Healthy California* with funding from USDA SNAP, known in California as CalFresh (formerly Food Stamps). These institutions are equal opportunity providers and employers. CalFresh provides assistance to low-income households and can help buy nutritious foods for better health. For CalFresh information, call 1-877-847-3663. For important nutrition information, visit www.cachampionsforchange.net.

BRO-216/Ver. 12/11

SECTION 3: Evaluation Reports

Directions- Attach evaluation reports noted in Section III

For Impact Evaluation Projects:
Name of the Project: *Children's Power Play! Campaign* Impact Evaluation Study

- **Project Goals:**

The purpose of the evaluation was to investigate the impact of the *Network for a Healthy California Children's Power Play! Campaign*.

This study implemented a standardized, integrated 10-week intervention that aimed to make eating 3-5 cups of FV and engaging in 60 minutes or more of PA the daily norm among 4th and 5th grade students attending low-resource schools in San Diego County. The intervention incorporated theory-based components to promote changes in psychosocial factors that mediate FV intake and PA and emphasized synergy within the school environment. It included nutrition and PA education activities both in the classroom and in on-site after school programs; FV promotions (*Try Something New*, *Power Your Plate*); classroom energizers and power cards for PA breaks; posters in the schools and community; and direct interactions and resources for parents (*Harvest of the Month* newsletters, food demonstration).

This study builds upon previous research which demonstrated the effectiveness of the *Campaign's School Idea and Resource Kit* alone at improving self-efficacy and outcome expectations. In line with the social cognitive theory, authors proposed that implementing the full scale *Campaign* would go beyond personal factors to improve social norms and social support which in turn would lead to increased FV consumption and engagement in PA.

Key Evaluation Impacts:
The purpose of this impact evaluation is to measure whether *Power Play!* significantly improves fruit and vegetable (FV) consumption, physical activity (PA), and related psychosocial determinants among 4th- and 5th-graders attending low-resource schools (greater than 50 percent free and reduced-price school meals). The specific goal was to determine whether *Power Play!* achieved the following results: 1) a significant increase in mean cups of FV and 2) the proportion meeting the daily FV recommendation; 3) a significant increase in mean minutes of physical activity and 4) the proportion engaging in 60 minutes or more of PA daily; and 5) a significant improvement social norms (peer/school) and social support (teacher/family) related to FV and PA, as well as knowledge of FV and PA guidelines.

- **Evaluation Design and Evaluation Participants:**

This study used a cluster randomized controlled design. Based upon reviews of the literature, the research team assumed a 5 percent type I error, 80 percent power, and an increase in FV consumption of 0.25 cups with an intraclass correlation coefficient of 0.033 and a standard deviation of the change in FV intake of 2.57. Based on these parameters, assuming 100 children participate at each school, and accounting for a 20 percent loss at follow-up, the final sample size estimated for recruitment was 44 schools. This assumed 4,400 children total (2,200 in the intervention and 2,200 in the control).

This study included English and Spanish speaking 4th and 5th grade students from low-resource public schools in San Diego County. San Diego was selected, because the *Network for a Healthy California* does not currently fund other nutrition education activities targeting children in these schools. "Low-resource'' was defined as schools where at least half of the students were enrolled in the free or reduced-price school meal program. Schools already implementing the *Campaign* or that used the *Campaign* in the previous school year were excluded. This study was approved by the institutional review board of the Public Health Institute.

Based on these selection criteria, 131 schools were eligible to participate in the study. Multi-level recruitment strategies were employed at the district and school level. Forty-four schools were recruited with a recruitment rate of 33.5 percent.

- **Assignment to intervention and control or comparison conditions**
  - **Describe the unit of assignment to intervention and control groups.**
    Random assignment to the intervention and control group was implemented using school as the unit of assignment.
  - **Describe how assignment to intervention and control groups was carried out.**
    During the 2011-2012 school year, 44 schools from four school districts in San Diego County were recruited to participate in the study. Because the majority of the schools recruited fell within the San Diego Unified School District (SDUSD), two school district clusters were created before random assignment was conducted. These were 1) schools in SDUSD (n=34) and 2) schools in the other three school districts (n=10). Recruited schools (n=44), within each school district cluster, were randomly assigned into the intervention (n=22) and control (n=22) groups.
  - **Describe how many units and individuals were in the intervention and control groups at the start of the intervention.**
    Baseline (pre-intervention) data were collected at 44 schools (22 intervention and 22 controls) in 167 classrooms (80 intervention and 87 controls) from 3,986 students (1,893 intervention and 2,161 controls). Follow-up (post-intervention) data collection activities included 3,644 students (1,893 intervention and 2,161 controls) from 167 classrooms (80 intervention and 87 controls) in 44 schools (22 intervention and 22 controls). The final matched sample of 3,463 students (1,571 intervention and 1,892 controls) included those who completed the baseline and follow-up 24-hour dietary recall and Self-Administered Physical Activity Checklist (SAPAC) with complete demographic data. For the intervention schools the retention rate was 79.3 percent on average (range 44-99%). The retention rate for the control schools was 88.7 percent (range 15-100%). The retention rate did not vary significantly by school district cluster or intervention group.

- **Impact Measures:** *For each evaluation impact, describe the measure(s) used. Descriptions should indicate if the focus is on knowledge, skills, attitudes, intention to act, behavior or something else. Each measure should also be characterized in terms of its nutritional focus, e.g. low fat food preparation, number of whole grain servings consumed, ability to accurately read*

food labels. Finally indicate if impact data were collected through observation, self-report, or another method.

This study included an opt-out parent consent process. Student assent was obtained for all participants. The impact measures are summarized in Table 1 and described below. They were collected pre- and post-intervention and available in both English and Spanish. Trained data collection staff was available to assist students who expressed difficulties completing the instruments in either language. The student survey included a series of measures validated with children. Intervention and control groups completed the same impact measures.

Primary Outcomes

Fruit and vegetable (FV) intake included number of cups obtained from a diary-assisted, 24-hour dietary recall interview (Table 1). When examining FV intake, this will include fried potatoes and beans. The primary outcomes include mean cups of FV and the proportion of children meeting the 3-5 cup recommendation for FV with guidelines varying by age, gender, and activity level. Based on the *Dietary Guidelines for Americans, 2010*, the minimum recommended cups of FV are 3 cups for girls 8-10 years and boys 8 years, 3½ cups for girls 11-12 years and boys 9-10 years, and 4 cups for boys 11-12 years.[†]

Physical activity (PA) of child participants was assessed using the validated Self-Administered Physical Activity Checklist (SAPAC). The SAPAC administration was led by a trained research staff and administered at the classroom level. It measured child self-report of the number of minutes spent on each of a list of activities including sports, playing active games, active transportation (walking, cycling, etc.), physically active chores (yard work), and general activities (e.g., running, dancing, swimming, etc.). Children were asked to report how many minutes they spent doing each activity on the previous day, with separate spaces for minutes before school, minutes during school (split into classroom, PE, and lunch/ recess), and minutes after school. The primary outcomes include changes in mean minutes of PA, and proportion of children meeting the 60-minute PA recommendation.

Demographic and Secondary Outcomes

Demographic factors were measured using the subjective student survey, self-administered by children, which included age, grade, gender, race/ ethnicity (White, not Hispanic; Black/ African American, not Hispanic; Mexican American/ Latino/ Hispanic; Asian, not Hispanic; American Indian/ Alaskan Native, not Hispanic; Native Hawaiian/ Other Pacific Islander, not Hispanic; Other/ two or more race/ ethnic groups), and language spoken at home (English, Spanish, English and Spanish, and Other) (Table 1).

Psychosocial variables were assessed using the subjective, self-administered student survey (Table 1). These variables included measures related to FV intake and PA such as social norms and social support perceived by students from peers and teachers at school.

Potential Confounding Variables

[†] These amounts are appropriate for children who get less than 30 minutes per day of moderate physical activity, beyond normal daily activities.

School environment variables were collected using the Environmental Inventory Tool (EIT), a researcher administered nutrition and physical activity environmental assessment tool that combines observations and feedback from food service staff and school administrators. Classroom and cafeteria characteristics were assessed by research staff during one-on-one interviews with teachers and food service managers.

TABLE 1. Evaluation Measures in the *Children's Power Play! Campaign*

Measurement	Procedure &/ or Reference
Diet	Diary-assisted, 24-hour dietary recall interviews
Physical Activity	Self-Administered Physical Activity Checklist (SAPAC) [1]
Awareness	FV and PA recommendations [2]; FV adapted to use cups rather than servings
Social Norms/ Social Support*	FV/ PA peer norms (best friends/ most classmates) and school norms (most classmates think it's cool), PA and school norms modeled on FV social influence items from the Attitude - Social influence - self-Efficacy (ASE) model [7]; teacher social support for FV adapted from the Child Nutrition Questionnaire (CNQ) [6]
Additional Potential Confounding Variables	
School Environment	Environmental Inventory Tool (EIT)-an observational tool was used to assess food and nutrition and physical activity variables related to the school environment; Teacher interview-10-minute interview included questions about nutrition and physical activity education and practices in the classroom and school; Food Service Manager Interview-detailed nutrition information about the foods served at school (breakfast, lunch and snacks) on the day that students recorded in their diaries was provided by the district and school food service staff

*These measures ask about fruits and vegetables separately.

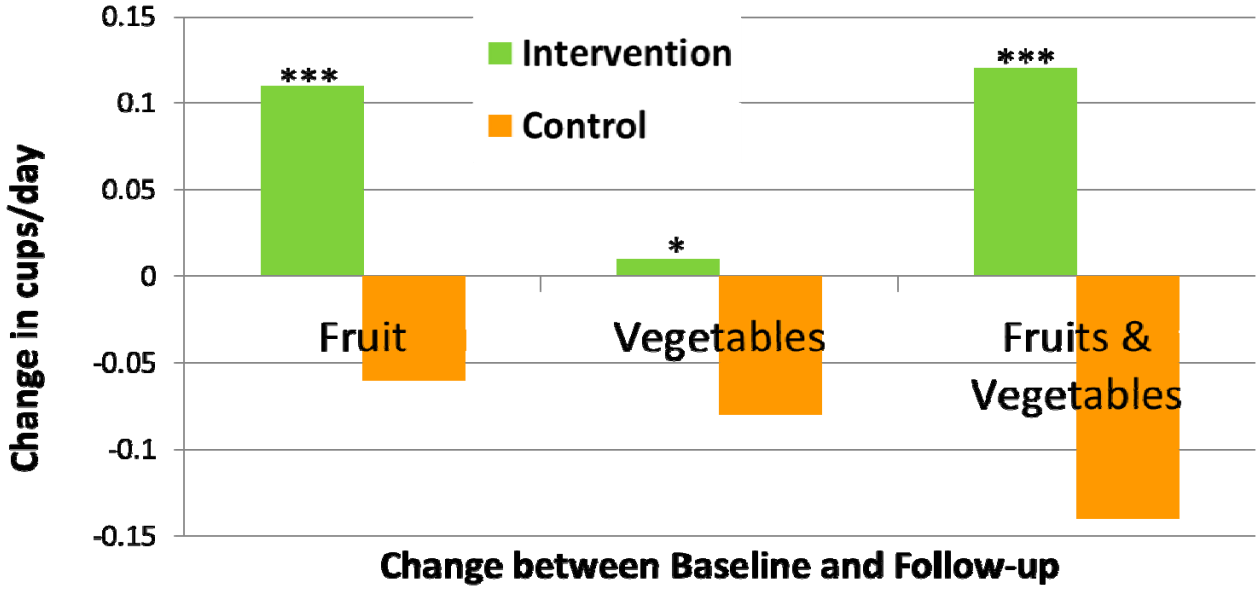
- **Describe the points at which data were collected from intervention and control group participants.**

During the 2011-2012 school year, baseline data were collected from intervention and control students at school prior to the initiation of the *Power Play!* intervention and again following the 10-week intervention. Baseline (pre-intervention) data were gathered between November 2011 and January 2012. Follow-up (post-intervention) data collection activities occurred from March to May 2012. The final matched sample of 3,463 students (1,571 intervention and 1,892 controls) included those who completed the baseline and follow-up 24-hour dietary recall and SAPAC with complete demographic data.

- **Results:** *Describe the measurement results for intervention and control or comparison groups at each point data were collected. Report the number of intervention and the number of control group participants measured at each point. Describe any tests of statistical significance and the results.*

Intake of Fruits and Vegetables: At baseline, students consumption of FV was below the amount recommended by the *Dietary Guidelines for Americans, 2010* (1.9±1.4 cups/day). Those who participated in the *Power Play!* intervention reported a significantly greater change in FV consumption (0.26 or ¼ cup/day more) at follow-up than control students, not receiving *Power Play!* (FIGURE 1). Similarly, the change at follow-up in the proportion of children eating the recommended amount of FV was significantly higher (5.1%) among children from schools implementing *Power Play!* compared to control students receiving standard instruction without the *Power Play!* intervention (TABLE 1).

FIGURE 1. Change in Fruit and Vegetable Intake



Notes: All analyses are adjusted for gender, race/ethnicity, language spoken at home, age, grade, and cluster design effects.

*P < 0.01, ** P <.001, ***P <0.0001

TABLE 1. Change in Proportion Eating the Recommended Amount of Fruits and Vegetables

	Baseline			Follow-up		Change Between Baseline and Follow-up*	
	INT	CON	P-value	INT	CON	Mean Difference	P-value
Met FV Guideline	15.6%	16.5%	0.49	16.9%	12.7%	+5.1%	0.001

*Compares change in intervention (INT) versus change in control (CON) group.

<u>Time Spent in Physical Activity</u>: PA levels among students at baseline were higher than recommended levels (118±120 minutes/day). Students in both groups gained more minutes of PA overall, but the difference was not significant. Students who participated in the *Power Play!* intervention gained significantly more PA during recess (5 minutes), but less PA afterschool than control students, not receiving *Power Play!* (FIGURE 2). In addition, the change at follow-up in the proportion of children engaging in the recommended amount of PA was not significantly higher (5.8% more) among children from schools implementing *Power Play!* compared to control students receiving standard instruction without the *Power Play!* intervention (TABLE 2).

FIGURE 2. Change in Time Spent Engaging in Physical Activity

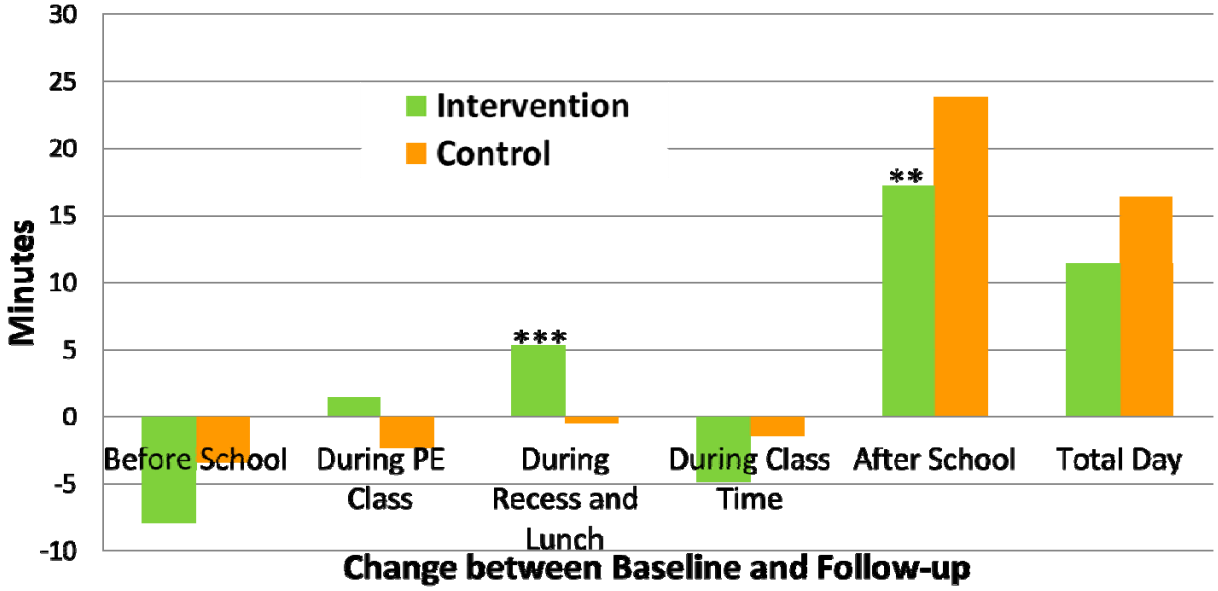


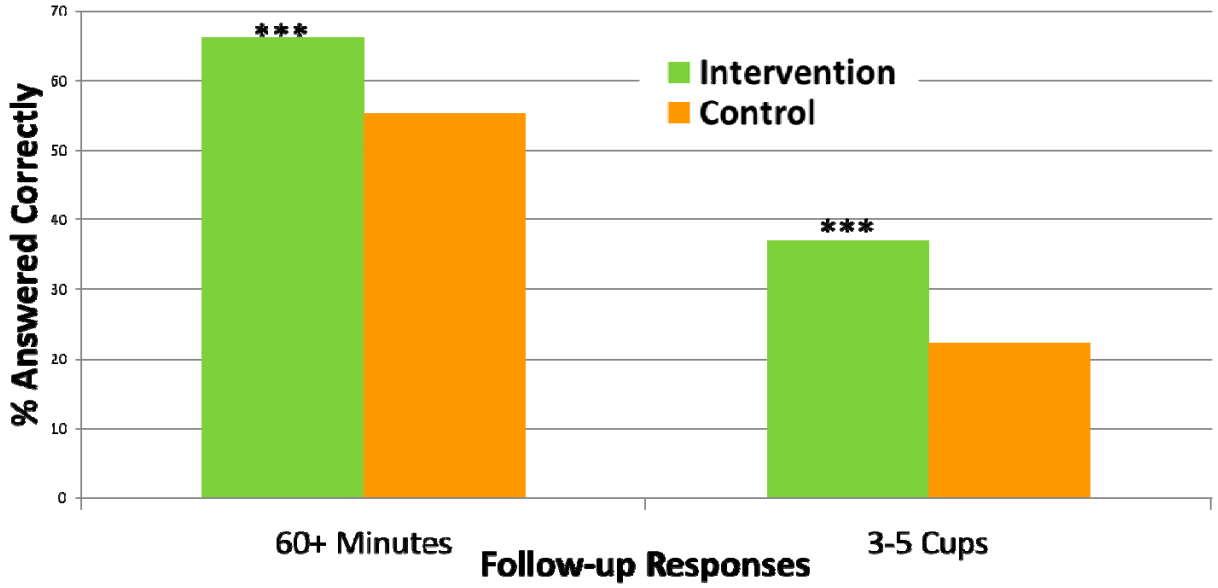
TABLE 2. Change in Proportion Meeting the Recommended Amount of Physical Activity

	Baseline			Follow-up		Change Between Baseline and Follow-up*	
	INT	CON	P-value	INT	CON	Mean Difference	P-value
Met 60+ Minutes	65.5%	67.7%	0.18	74.2%	70.6%	+5.8%	0.16

*Compares change in intervention (INT) versus change in control (CON) group.

<u>Knowledge of FV and PA Requirements</u>: At baseline less than 25 percent of all students knew the number of cups of FV recommended per day for their age group and approximately 50 percent knew how many minutes per day of PA were recommended. From baseline to follow-up, an additional 14 percent of intervention students answered 3-5 cups of FV (22% to 37%) and an additional 16 percent responded 60 minutes or more of PA (50% to 66%) is recommended daily (FIGURE 3). Students in the control group did not have similar gains in knowledge.

FIGURE 3. Knowledge of Recommended Daily FV and PA



Social Norms and Social Support for FV and PA: The proportion of children reporting improvements at follow-up in peer and school norms around eating FV as well as teacher support for eating FV was significantly higher among children from schools implementing *Power Play!* compared to control students receiving standard instruction (TABLE 3). These questions were asked separately for fruits and vegetables to examine potential differences in the impact for each; however, gains were seen in both. The changes in the proportion of children agreeing "most of my classmates eat [fruit/vegetables]," "most of my classmates think it is cool to eat [fruit/vegetables]," and "my teachers ask students to eat [fruit/vegetables]" was significantly higher among those who participated in *Power Play!* than in control students. The largest change was seen in teacher support for eating FV with over 20 percent more intervention children than control students reporting agreement from baseline to follow-up. From baseline to follow-up, no significant changes were seen in peer and school norms related to PA or family support for PA among children participating in *Power Play!* when compared to control students.

TABLE 3. Change in Proportion Reporting Positive Social Norms and Social Support for Eating Fruits and Vegetables

	Baseline, % Agree			Follow-up, % Agree		Change Between Baseline and Follow-up*	
	INT	CON	P-value	INT	CON	Mean Difference	P-value
Most of my classmates eat fruit at school every day.	52.4%	51.4%	0.77	57.1%	50.2%	+5.9%	<0.00
Most of my classmates think it is cool to eat fruit at school every day.	38.3%	36.2%	0.97	40.2%	34.9%	+3.2%	<0.00
My teachers ask students to eat fruit.	52.1%	52.3%	0.28	76.7%	53.7%	+23.2%	<0.001
Most of my classmates eat vegetables at school every day.	37.6	33.8	0.77	38.1	32.0	+2.3%	0.01
Most of my classmates think it is cool to eat vegetables at school every day.	30.6	26.6	0.97	32.5	25.0	+3.5%	<.0001
My teachers ask students to eat vegetables.	49.1	46.6	0.28	72.2	48.2	+21.5%	<.0001

*Compares changes in mean scores between the intervention (INT) and control (CON) group; Percent of agreement is displayed in the table. SCALE: Disagree a Lot=1, Disagree a Little=2, Not Sure=3, Agree a Little=4, Agree a Lot=5.

Overall, the *California Children's Power Play! Campaign* demonstrated statistically significant impacts on children by improving mean FV consumption, the proportion of children meeting the dietary guidelines for FV, knowledge about the amount of FV and PA recommended daily, and peer and school norms around eating FV, as well as teacher support for eating FV. Although there were no overall gains in total minutes of PA or the proportion of children meeting the PA recommendation of 60 minutes or more for children participating in *Power Play!*, they did report participating in five more minutes of PA during recess than children in control schools. The lack of change seen in the primary physical activity behavioral outcomes among intervention children may be attributable to the limited change in peer and school norms around PA and family support for PA. In addition, physical activity minutes exceeded the recommendation at baseline, leaving little room for improvement.

- ***Description of how evaluation results will be used:*** This study indicates that the *Network for a Healthy California–Children's Power Play! Campaign* is effective at increasing FV intake, FV social norms and support at school, and knowledge of the recommendations for FV and PA among 4th- and 5th-graders attending low-resource schools. The limited gains seen in PA will be used to inform future revisions to the *Campaign* components and materials that emphasize increases in PA, such as targeting key barriers to PA among children.

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