FINAL REPORT, FFY 2011

October 1, 2010 – September 30, 2011

For

Supplemental Nutrition Assistance Program—Education

In Cooperation with
California Department of Social Services,
CalFresh,
California Department of Public Health,
Network for a Healthy California
and,
University of California, Davis
Food Stamp Nutrition Education Program

Sacramento, California

Binder 1 of 3

FFY 2011 Final Report
Table of Contents

Binder 1 of 3

I. SNAP-Ed Program Overview
a. *Network* SNAP-Ed Narrative Annual Report
b. UC-FSNEP SNAP-Ed Narrative Annual Report
c. Combined CA narrative, UC + FSNEP
d. Combined UC/ Network EARS report

II. SNAP-Ed Administrative Expenditures
a. *Network* Administrative Expenditures
b. UC-FSNEP Administrative Expenditures

III. SNAP-Ed Evaluation Reports Summary Chart
a. *Network* Evaluation Reports Summary Chart
b. UC-FSNEP Evaluation Reports Summary Chart

IV. SNAP-Ed Planned Improvements
a. *Network* Planned Improvements
b. UC-FSNEP Planned Improvements
c. Combined UC/ Network EARS report

V. SNAP-Ed EARS Feedback
a. *Network* EARS Feedback
b. UC-FSNEP EARS Feedback

VI. Appendixes
1. Network Evaluation Reports (See Summary Chart)

i. *Network Impact Outcome Evaluation Report- State Aggregated Data FFY 2011*

Binder 2 of 3

ii. Individual Local Contractor Impact/Outcome Evaluation Reports

Binder 3 of 3

iii. *Network* EARS Report
iv. 2010 Benchmark Report Executive Summary
v. Strengthening HOTM: Results of a Survey of California Teachers
vi. Network for a Healthy California Large Store Intervention
vii. Study Shopper Intercept Survey
vii. Food Stamp Office Resource Kit (FSORK), Use of Revised FSORK2 Kit in Food Stamp Offices

viii. Communications Report FFY 11
ix. African American Beauty Salon Supply Store Formative Evaluation Final Report
x. Network Combined Optional Appendixes:

1. Combined Staff Partner Training
2. Conference presentations and journal publications
3. Curriculum development/Adaption
4. Partnership activities
5. Awards
6. Supporting Documentation Regional Trainings
7. Work Products, Nutrition Education Materials (List w/ copies available upon request)
8. Attached PDF Published Journal Articles (1-18)

2. UC-FSNEP Evaluation Reports

   i. UC-FSNEP Optional Appendices

3. Section B: UC-FSNEP SNAP-Ed Reports

SECTION 1: California SNAP-Ed Program Overview-Executive Summary

Directions- Provide a one page (not more than 500 words) **executive summary** of SNAP-Ed activities during the reporting Fiscal Year (FY). Please include the following as applicable:

- ***Progress in Achieving Overarching Goal(s):***

  - The UC-CalFresh Nutrition Education Program (UC-CalFresh) exceeded its program goals by 22%, reaching 140,000 very low-income persons with direct education and over 1.3M more indirectly, resulting in 5M contacts. Of these, 60% were likely eligible or participating in CalFresh. Sustained, positive change occurred in 42% of all measured behaviors. Nutrition behaviors improved in more than half (sugar-sweetened beverages, lower fat milk, fruits and vegetables), resource management in about 80% (saving money on food, food ads, simple meals at home) and over 70% intended to comparison shop. Among children/youth, 95% could identify healthy food choices, 90% tried new foods, and 75% planned to ask for healthier food at home.

  - The *Network for a Healthy California (Network)* analyses (1997-2009) showed a plateau in FV gains by adults between 2007-09, except for very low-income adults, African Americans, and Latinos, whose reported intake continued rising; SNAP participants reached the statewide average of 5.2 servings for the first time. Physical activity trended upward in SNAP adults and some children, but declined in teens. Statewide FV intake by low-income children 9 to 11 years and adolescents was essentially flat. In contrast, local impact/outcome evaluations (FFY10) showed a 5% gain in FV consumption and 14% increase in physical activity for children/youth, and a 22% increase in FV by adults, suggesting that interventions were effective but insufficient in reach to secure statewide improvements. Reported consumption of sugar-sweetened beverages and fast food declined in all SNAP-Ed groups, while upward rates of obesity appeared to continue in adults, diminish in all but African American youth, and plateau in most groups of children, ages 9-11 years.

    EARS reports that contain complete demographic data showed over 1.1M persons receiving direct education and 7.6M contacts in over 2,000 community sites. For the Children's, Latino and African American campaigns and the Worksite Program (where complete EARS demographics could not be obtained but duplicated counts would be rare), an additional 1.8M individuals received nutrition education totaling almost 3M persons statewide. About 6.8M shoppers in qualifying food stores were exposed to *Network* messaging and materials. The *Regional Networks* reached 108% of the 3,500 planned community sites. About 7.8M persons received messaging in mass media and community events.

    Compared to FFY 10, the total reach or volume of *Network* impressions grew 39%, with direct contacts impressions increasing to 22M impressions, compared to almost 16M in FFY 10. Similarly, there was a 29% increase in indirect impressions, reaching 117M in FFY 11, compared to 91M in FFY 10. These numbers are provided in the *Network's* Semi-Annual Activity Reports and do not include paid or earned media.

- ***Number of New Projects implemented during the reporting year by primary approach (Direct, Indirect, and Social Marketing):*** Please see *Network* and UC-CalFresh reports.

- ***Number of ongoing Projects that were operational during the reporting year by primary approach (Direct, Indirect and Social Marketing):*** Please see *Network* and UC-CalFresh reports.

- ***Major Achievements (not already addressed:*** A cornerstone of UC-CalFresh is its family-centered approach where parallel education reaches parents and youth. Significant progress has been made; 47% of adults were associated with youth sites. Youth education grew 38% to reach 124,000 young people in: youth sites (47%), family homes (13%), job training sites (13%), county welfare offices (9%), shelters/community centers (4%), senior centers (3%), and other locations (13%).

  The *Network* completed its unique 18-article compendium, *Evaluation Results of Multi-Level Nutrition Education through SNAP-Ed,* published in the peer-reviewed *Journal of Nutrition Education and Behavior*. New mid-year funds allowed expansion of *ReThink Your Drink* for statewide roll-out and preparation to begin SNAP-Ed in 22 new local health departments and local welfare departments in FFY 12. Both implementing agencies began revising materials to use the stronger MyPlate messaging and visuals.

  In view of anticipated changes in federal guidance, planning for stronger public health approaches, for in-kind to help maintain local effort as the State Share requirement ends, and for simplified contract requirements and processing also were begun.

- ***Major Setbacks, if any:*** Please see *Network* and UC-CalFresh reports.

  The Great Recession in California continued to be severe, with the number of people eligible for SNAP-Ed rising from 10.3M to nearly 12M (2009). USDA statistics for 2009 showed that food insecurity rose, while rates of SNAP participation remained very low. Both factors reduce the chance of achieving SNAP-Ed behavioral changes.

  USDA targeting requirements also imposed new barriers. The *Network* was forced to withdraw interventions from over 100 low-wage worksites, while local contractors for both implementing agencies prepared to redirect services in line with the new American Community Survey which reduces the number of eligible census tracts for FFY 12 by almost half, from about 2,380 to fewer than 1,300. CDPH delays in processing State contracts again disrupted the planned timing of local interventions and some State-level projects. The 11-month lapse in the *Network* media contract resulted in no paid advertising being conducted in FFY 11; a pre-buy in FFY 11 will resume advertising early in FFY 12.

Overall Assessment: For population-wide dietary and physical activity changes among California's nearly 12M SNAP-Ed eligible residents, the infrastructure remains strong although the barriers to success have risen in line with the declining economic situation for families, for safety net programs, and for the institutions that deliver nutrition education services. State surveys show mostly positive trends for adults and some improvements for children and youth. While there were in-state challenges plus uncertainty about the pending federal regulations, UC-CalFresh and the *Network* were able to meet their planned objectives in FFY 11 and work with CDSS to lay the groundwork for a transition to SNAP NEOP. More, stronger and different approaches are clearly needed for children and youth, including increased access to healthy food, especially fruits and vegetables, along with increased promotion of under-used nutrition assistance programs, especially CalFresh.

H: FFY11 Annual Rpt, short form ES, 1-10-12

I. SNAP-Ed Program Overview

a. *Network* SNAP-Ed Narrative Annual Report

SECTION 1: Network SNAP-Ed Program Overview-Executive Summary

Directions- Provide a one page (not more than 500 words) **executive summary** of SNAP-Ed activities during the reporting Fiscal Year (FY). Please include the following as applicable:

- ***Progress in Achieving Overarching Goal(s):*** The *Network for a Healthy California (Network)* aims to increase fruits, vegetables and physical activity by establishing a multi-level infrastructure of diverse partner organizations that provide targeted education, social marketing, and other support to California's 7 million SNAP-Ed qualified parents and children.

Statewide Outcomes: Contrary to flat or downward national trends, California surveys analyzed in FFY11 showed that the three unprecedented trends for California adults from 1997-2007 were sustained in 2009, but not significantly increased:

- An increase in the proportion of very-low income (90%), African American (78%), and Latino (43%) adults meet the 5-serving minimum for fruits and vegetables (FV), and,
- A 37% daily increase, eating Fruits and Vegetables,
- A significant upward trend in physical activity among low-income adults.

Impact of Local Interventions: In FFY11, 42 local contractors with Federal Share budgets representing over $52 million conducted outcome evaluations, just over half of the *Network's* federal funding. Of the 10,232 SNAP-Ed participants (N=42), aggregate analysis revealed highly significant increases (p>.001):

- 5.3 percent increase in FV consumption by children,
- 14.1 percent increase in 60 minutes of physical activity by children
- 14.2 percent increase in 30 minutes of outdoor play by children
- 22 percent increase in FV by adults.

With the continuing recession and largely negative dietary trends for children, these results are especially noteworthy.

Network Reach: The EARS system requires age, gender, race/ethnicity and income demographics that are unobtainable for all settings, and the total number of volume of service is reported only with complete demographics

EARS Reporting Category	Low-Income Individuals	Total Persons Reached
Total Persons Receiving Direct Education (LIAs, NIAs, LFNE)	748,526	1,112,857 (Not Available for those of whom have missing demographics)
Total Persons Receiving Social Marketing		
Advertising	na	na
Latino Campaign	504,771	919,699
African American Campaign	171,545	337,511
Power Play! (9-11 year olds)	336,479	504,165

Worksite Program (updated value)	17,842	28,611
Retail Program	2,390,119	4,451,000

Community Locations: *Network* estimates in the state plan Needs Assessment were that interventions would be offered in about 4833 sites; EARS demographics were reported for 2033 of such sites; those LIA/NIA/LFNE sites that are delivering Direct Education and can provide demographic information.

- ***Number of new Projects implemented during the reporting year by primary approach (Direct, Indirect, and Social Marketing):***
  Direct Education: 2 (1 LFNE, 1 LIA)
  Indirect: 2 (1 LFNE, 1 LIA)
  Social Marketing: 3 (*Harvest of the Month*, *ReThink Your Drink* signature initiatives by LIAs, NIAs and *Regional Networks*)

  Note: Many projects reported direct and indirect data.

- ***Number of ongoing Projects that were operational during the reporting year by primary approach (Direct, Indirect and Social Marketing):***
  Direct Education: 94 (local projects)
  Indirect: 99 (88 local projects; 11 Regional Networks, for activities not direct or social marketing)
  Social Marketing: 12 (State and 11 *Regional Network* campaigns and programs)

- ***Major Achievements (not already addressed)***:
  - The *Regional Network* contractors reached 108 percent of the 3,500 sites targeted for FFY11, exceeding the goal.
  - Publication of a supplement to the Journal of Nutrition Education and Behavior featuring 18 articles on Network evaluation findings.

- ***Major Setbacks, if any:***
  - Lack of EARS IT database.
  - Statewide rise in food insecurity continued through FFY 11;
  - State budget deficit continued in FFY 11and there were indirect impacts on *Network* contractors and partners.
  - Due to the delay in the approval of the state media contract, the "What's Harder" media campaign was not aired and strategic planning for the new media campaign was deferred to FFY 12.
  - As with other CDPH contracts, processing of many *Network* contracts was significantly delayed; it appears however, that most deliverables were accomplished.
- ***Overall Assessment:*** FFY11 was contractually challenging but also the most productive year ever for documenting evaluation results of a hugely successful program.

II. SNAP-Ed Administrative Expenditures

a. *Network* Administrative Expenditures

2. CA Department of Public Health SNAP-Ed Administrative Expenditures
Directions- To help FNS better understand your State SNAP-Ed administrative expenditure costs; provide the percent and dollar value of administrative expenses used for **each** Implementing Agency (I.A.) in your State for each of the following categories. **To estimate the % of total administrative expenditures, use the data you compiled for question 10 on the EARS report.**

NOT FINAL – BASED ON REPORTINGS THROUGH INVOICE #CPNS10-008

Type of Administrative Expense:	**Name of IA: Ca Department of Public Health**	
	% values	**$ values**
Administrative Salary	67%	$3,604,891
Administrative Training Functions	0%	
Reporting Costs (identify % related to EARS, if possible)	4%	$239,140
Equipment/Office Supplies	1%	$73,431
Operating Costs	21%	$1,101,951
Indirect Costs	7%	$347,750
Overhead Charges (space, HR services, etc.)		
TOTAL		**$5,367,163**

Note:

1. **Administrative costs are for state staff only except for total in Reporting Costs line.**
2. **For Reporting Costs, EARS, only state and Public Health Institute (PHI) costs for time spent on EARS are reported here Local contractors' information is not available**

III. SNAP-Ed Evaluation Reports Summary Charts

a. *Network* Evaluation Records Summary Chart

Section III. A. *Network* Evaluation Reports Summary Chart						
Project Name	**Key Project Objective(s)**	**Target Audience**	**Check all Evaluation Types for which Reports Are Included***			
			FE	**PE**	**OE**	**IE**
Network EARS Report	By September 30, 2011, collect data needed to report standardized, mandated Network population and activity elements to USDA.	USDA		✕		
Network for a Healthy California Impact/Outcome Evaluation Project (Statewide Aggregated Data)	By September 30, of each year, a sample of youth and/or adults will report 1) an increase in fruit and vegetable consumption (mandatory) and 2) an increase in one more factors related to fruit and vegetable consumption, such as knowledge, preferences, outcome expectations, and self-efficacy (optional).	Adults & Youth			✕	
ABC Unified School District - Combined report w/ Hawthorne and LATTC: (Southwest LA Workgroup - Caught Eating Healthy)	By September 30, 2011, a sample of students will report an increase in fruit and vegetable consumption and an increase in one more factors related to fruit and vegetable consumption, such as knowledge, preferences, outcome expectations, and self-efficacy.	Youth			✕	
Alameda County Office of Education (Coalition) Hayward Unified School District (Champions for Change Program)	By Sept 30, 2011, a sample of 80 high school grade students who participated in ACOE 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. By Sept 30, 2011, a sample of 80 high school grade students who participated in ACOE Champions for Change will report increased physical activity. By Sept 30, 2011, a sample of 80 high school grade students who participated in ACOE Champions for Change will report increased Hope Scale scores.	Youth			✕	
Alameda County Health Care Services Agency (Healthy Living Champions for Change Council)	By Sept 30, 2011, a sample of parents who participated in Healthy Living Champions for Change councils will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Adults			✕	
Alameda County Health Care Services Agency (Healthy Kids...for Life)	By Sept 30, 2011, a sample of 100 4th,5th,and 6th 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.	Youth			✕	
Alhambra Unified School District (part of Healthy Valley Group report, Healthy Parents, Healthy Community)	By Sept 30, 2011, a sample of 200 Parents who participated in 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	Adults			✕	
Alisal Union School District (Nutrition Education)	By Sept 30, 2011, a sample of 200 grade students who participated in Alisal Union 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.	Youth			✕	

Berkeley Unified School District (Parent Nutrition Education Cooking Classes)	In FFY 11, a sample of 50 Parents who participated in Parent/Family Nutrition Education Classes will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Adults			✕	
California State University, Chico Research Foundation, SCNAC (K-6 Fruit and Vegetable Survey and Selection)	By Sept 30, 2011, a sample of at least 200 K-12 5th and 6th grade students who participated in SNAP-Ed approved activities, like HOTM will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption	Youth			✕	
Compton Unified School District (Team Up at Home)	By Sept 30, 2011, a sample of 267 4th and 5th 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.	Youth			✕	
Contra Costa County Health Services (Promotora-Led Nutrition Education)	By Sept 30, 2011, a sample of 101 SNAP-eligible Hispanic women who participated in at least five Promotora-led nutrition education sessions will report statistically significant increases in fruit and vegetable consumption and/or improvements in related factors, such as knowledge of physical activity and fruit and vegetable consumption recommendations, self-efficacy and/or other factors, as measured by matched pre-post tests.	Adults			✕	
Del Norte Unified School District, elementary school	By Sept 30, 2011, a sample of 100 elementary (4th & 5th) grade students who participated in Del Norte USD Elementary will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption	Youth			✕	
Del Norte Unified School District, High school	By Sept 30, 2011, a sample of 100 9th grade students who participated in Del Norte USD High School will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	
East Los Angeles College	By Sept 30, 2011, a sample of 215 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.	Youth			✕	
El Monte City School District (Parent Nutrition Education/Parent SNAP-Ed) (part of Healthy Valley Group report, Healthy Parents, Healthy Community)	By Sept 30, 2011, a sample of 200 Parents who participated in 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	Adults			✕	
Fresno County Office of Education (Youth Impact Nutrition Education Program)	By Sept 30, 2011, a sample of 100 - 5th grade students who participated in FCOE Youth Survey will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	

Hawthorne School District-Combined report w/ ABC and LATTC: (Southwest LA Workgroup - Caught Eating Healthy)	By September 30, 2011, a sample of students will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption, such as knowledge, preferences, outcome expectations and self-efficacy.	Youth			✕	
Health Education Council (Healthy Choices Cyclebration)	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.	Youth			✕	
Humboldt County Office of Education (Power Up! with Harvest of the Month)	By Sept 30, 2011, a sample of 125, 4th and 5th grade students who participated in Power Up! with 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.	Youth			✕	
Huntington Beach Union High School District (9th Grade Health Series-Nutrition Lessons)	By Sept 30, 2011, a sample of 120 9th-12th grade students who participated in Westminster High School will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	
Long Beach Unified School District	By September 30, 2011, a sample of 184 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.	Youth			✕	
Long Beach, City of, Department of Public Health (Jr. Beach Runners)	By Sept 30, 2011, a sample of 3rd-6th grade students who participated in Long Beach Jr. Beach Runners will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption. By Sept 30, 2011, a sample of 3rd-6th grade students who participated in Long Beach Jr. Beach Runners will report increased daily physical activity from the pre-test to the post-test. By Sept 30, 2011, a sample of 3rd-6th grade students who participated in Long Beach Jr. Beach Runners will report increased knowledge of the amount of sugar in and health effects of drinking sugar sweetened beverages.	Youth			✕	
Los Angeles County Office of Education (Evaluation of *Network for a Healthy California* - LACOE Coalition's Harvest of the Month Tasting Trios Program)	By Sept 30, 2011, a sample of (200) 5th grade students who participated in Network for a Healthy California - LACOE Coalition's Harvest of the Month and Tasting Trios Program will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	
Los Angeles Trade-Technical College- Combined report w/ ABC USD and LATTC: (Southwest LA Workgroup - Caught Eating Healthy)	By September 30, 2011 a sample of students at three intervention sites (one per year) will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption, such as knowledge, preferences, outcome expectations and self-efficacy.	Youth			✕	

Los Angeles Unified School District (Student Impact Evaluation)	By Sept 30, 2011, a sample of 3rd, 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.	Youth			✕	
Marin County, Department of Health and Human Services (Bahia Vista Elementary School Third Grade Nutrition Education Project)	By Sept 30, 2011, a sample of at least 75 3rd grade students who participated in Bahia Vista Elementary School Third Grade Nutrition Education & 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.	Youth			✕	
Marin County, Department of Health and Human Services (Bahia Vista Elementary School Third Grade Parent Nutrition Education Intervention)	By Sept 30, 2011, a sample of at least 50 parents who participated in Impact Evaluation Bahia Vista School will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Adults			✕	
Merced County Office of Education (Merced County Office of Education's Harvest of the Month)	By Sept 30, 2011, a sample of 827 4th and 5th grade students who participated in Merced County Office of Education's 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.	Youth			✕	
Monrovia Unified School District (Harvest of the Month Cooking in the Classroom), Youth program	By Sept 30, 2011, a sample of 150 3rd grade students who participated in HOTM Cooking in the Classroom Lessons will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	
Monrovia Unified School District (Parent Education Intervention) (part of Healthy Valley Group report, Healthy Parents, Healthy Community)	By Sept 30, 2011, a sample of 200 Parents who participated in 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.	Adults			✕	
Monterey County Health Department (Harvest of the Month)	By Sept 30, 2011, a sample of 200, 4th grade students who participated in Monterey County Health Department will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	
Montebello Unified School District (Harvest of the Month)	By Sept 30, 2011, 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.	Youth			✕	
Newport-Mesa Unified School District (part of Nutrition Institute report with Orange County Coalition)	By Sept 30, 2011, a sample of 100 parents 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.	Adults			✕	
Orange County Health Care Agency (Healthy Meals, Healthy Families)	By Sept 30, 2011, 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.	Adults			✕	

Orange County Superintendent of Schools- Coalition (part of Nutrition Institute report with Newport-Mesa USD)	By Sept 30, 2011, a sample of 100 parents 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.	Adults			✕	
Pasadena Unified School District (Adult SNAP-Ed)	By Sept 30, 2011, a sample of 100 Parents who participated in Skilled Based Nutrition Education Workshops will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Adults			✕	
Riverside, County of, Health Care Services Agency (Sunny Sands Elementary School)	By Sept 30, 2011, a sample of 339 4th and 5th grade students who participated in Power Play! and Harvest of the Month Taste Tests Trios will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption	Youth			✕	
Rosemead Unified School District (part of Healthy Valley Group report, Healthy Parents, Healthy Community)	By Sept 30, 2011, a sample of 200 Parents who participated in 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	Adults			✕	
San Bernardino Superintendent of Schools (Power Play!)	By Sept 30, 2011, a sample of 150 4th and 5th grade students who participated in PowerPlay! will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	
San Francisco Unified School District (NEP Student Impact Evaluation)	By Sept 30, 2011, a sample of at least 150 matched pairs of fourth and fifth grade students who participated in Student Impact Lessons will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	
San Gabriel Unified School District (part of Healthy Valley Group report, Healthy Parents, Healthy Community)	By Sept 30, 2011, a sample of 200 Parents who participated in 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.	Adults			✕	
Santa Ana Unified School District (Empowering Youth & ReThink Your Drink)	By Sept 30, 2011, a sample of 293 grade students who participated in Santa Ana Unified 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.	Youth			✕	
Shasta County Health and Human Services Agency, Public Health Branch (SCPH Eat Well & Keep Moving, Harvest of the Month)	By Sept 30, 2011, a sample of 4th and 5th grade students who participated in Impact Evaluation using Eat Well and Keep Moving will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.	Youth			✕	
Shasta County Office of Education (Harvest of the Month and PowerPlay! At Boulder Creek Elementary)	By Sept 30, 2011, a sample of 150 4/5th graders grade students who participated in Harvest of the Month and PowerPlay! at 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.	Youth			✕	

Tulare County Office of Education (Harvest of the Month)	By Sept 30, 2011, a sample of at least 150 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.	Youth			✕	
Ukiah Unified School District (Harvest of the Month)	By Sept 30, 2011, a sample of 4th-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.	Youth			✕	
University of California, Cooperative Extension of Alameda County (Community Nutrition and Mobilization Program)	By Sept 30, 2011, a sample of 50 Parents 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.	Adults			✕	
Ventura Unified School District (Ventura Unified School District Healthy Schools Program)	By Sept 30, 2011, a sample of sixth grade students who participated in DeAnza Middle School 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.	Youth			✕	
Annual Benchmark Survey -- Media Campaign -- 2010 Tracking Survey Summary of Results (April, 2010 Report)	By November/December 2010 a combination of telephone and in-person interview will be conducted with 1000 SNAP recipient mothers, 1000 SNAP eligible mother and 460 low-income mothers with incomes in the 130-185% FPL range. The main objective of the survey is to assess improvements in the target population in the following areas: the rate of recall of campaign advertising, the extent of target audience exposure to other interventions promoting healthy eating and physical activity, levels of basic knowledge about healthy eating and physical activity as well as social normative and other relevant beliefs, and, the proportion of audience members adopting Network dietary and physical activity-related behavioral recommendations as well as those related to championing change in family and community environments.	Adults			✕	
***Network for a Healthy California* Large Store Intervention Study: Shopper Intercept Survey: Final Report**	By September 30, 2011, 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. Stratified randomization was used to assign grocery stores to Cooking Demonstration and Merchandising Materials, Merchandising Materials Only, or Control status. 1000 English- or Spanish-speaking female shoppers purchasing at least six items at the store were interviewed.	Adults				X

Social Network Analysis of Local and Regional Partners	By September 30, 2011, Conduct a follow-up analysis for social network data through Sept 30, 2010. This analysis is a continuation of the Gregson et al 2011 manuscript in JNEB. For the data year 2010, an additional analysis with EARS program data was conducted, looking for statistically significant associations between program activity and Network partnerships but no significant results were found. The partnership variables changes Fragmentation and Density have been stable since 2007.	Organizations			✕	
Strengthening Harvest of the Month: Results of a Survey of California Teachers	By September 30, 2011, conduct formative research with teachers working in schools served by Network for a Healthy California and funded by school-based contracts. . Data were collected through a web and mail survey implemented in the spring of 2011.	Teachers	✕			
Harvest of the Month:	By Sept. 30, 2011, document consumer impressions generated through paid advertising and public relations. In FFY 11 there were 53,750,651 impressions generated through public relations and none through advertising, down from 825 million advertising impressions and 182.4 public relations impressions in FFY 10.	English and Spanish-speaking low-income California adults		✕		
Food Stamp Office Resource Kit (FSORK): Use of Revised FSORK2 Kit in Food Stamp Offices through Evaluation with Food Stamp Office Coordinators	By the end of FFY 2010, use an online survey to solicit responses from 71 Social Services Office Coordinators who coordinate multiple offices in 50 counties, asking about the use of the kit and elements most liked by clients.	Social Service Office service providers		✕		
Beauty Salon/Supply Store Channel Development: Final Report (September 2011)	By September 30, 2011, conduct formative research in two regions of California to explore the feasibility of partnering with beauty salons, beauty supply stores, and hair stylists to promote increased fruit and vegetable consumption and physical activity for African American women who are low-income and between the ages of 18-54. Conduct key informant interviews with at least five project staff who have conducted other health promotion/intervention projects in beauty salons or similar venues, at least 30 hair stylists who primarily serve African American women, and at least 10 beauty supply store management staff from at least three different stores in each of the two regions. Focus groups (8) will also be done with approximately 64-96 low-income African American women between the ages of 18-54 to examine perceived barriers to getting the recommended levels of physical activity and fruit and vegetables, and the feasibility of receiving health promotion materials and education in beauty salons and beauty supply stores.	Low-income African American women 18-54, beauty salon staff working with these women, beauty supply store owners, and key informants who have conducted interventions in beauty salons and supply stores	✕			

IV. SNAP-Ed Planned Improvements

a. *Network* Planned Improvements

4. SNAP-Ed Planned Improvements for FFY 12

Directions-Describe any modifications you plan to make in the next fiscal year to improve the effectiveness of specific SNAP-Ed projects and/or to address problems experienced during the past year. Please identify the specific project (s).

Network for a Healthy California (Network)

This section will highlight modifications planned for FFY12 that are intended to improve the effectiveness of SNAP-Ed projects and/or address problems experienced during FFY11. It will follow the sequence of nine SMART objectives in the FFY11 annual state plan.

Fruit and Vegetable Consumption in Key Target Audiences

For low-income adults statewide, *Network* surveys from the 1997 baseline through 2007 show a highly positive upward trajectory, a 50 percent increase in low-income adults who met the 5-daily serving minimum and a 37 percent increase in the reported amount of fruits and vegetables they consumed. Preliminary data from 2007-09 appear to show continued similar consumption levels with little change; baseline (1997) to 2009 remain significant increases. In view of the continuing severe impact of the national recession on California, it is essential to sustain intensity of *Network* interventions through: direct education; advertising, and organizational changes that stimulate consumer demand and make eating fruits and vegetables more front-of-mind and easier. In particular, advertising needs to be reinstated to levels of reach from FFY 10 and prior years, countering the lack of advertising which was not possible in FFY 11 because of organizational problems processing contracts

Statewide surveys for teens since 2000 and children from 1999 on reveal generally flat trends in reported FV consumption, though meta-analysis of the impact studies with local partners show that elementary students exposed to the *Network's* local interventions -- *Power Play!* and *Harvest of the Month* – report significant increases. As strategic planning for SNAP-NEOP progresses, the *Network* will continue to intensify its local and regional efforts; expand the use of youth empowerment approaches, especially for older children; and continue to extend the comprehensiveness of *HOTM* to parents, afterschool, retail, worksite, faith, and retail audiences, similar to the approach long-employed by the *Network's* social marketing campaigns. Efforts to resume the use of children's mass media will be explored. Two new projects targeting middle school and high school, *Nourish* and *HealthCorps,* are being tested to determine their impact. If effective, these programs would be expanded in future years.

The *Network* will continue to support CDSS on re-branding of California's Food Stamp Program as CalFresh, thereby focusing on nutrition and health as a reason for families to participate in SNAP/CalFresh.

SNAP-Ed to NEOP Transition Planning: During FFY 2011 a series of stakeholder meetings were held to get input on the overarching question—"How can the *Network*/CDPH maximize our impact to benefit California's low income population using the opportunity created by changes to SNAP-Ed?" An Obesity Prevention Think Tank

was convened in May to recommend priority areas of focus and strategies. Over 250 people participated in three July regional meetings and three September webinars, with roughly an even split between those funded by the *Network* (123) vs. not funded (129). In FFY 12 a three-year transition/implementation plan will be finalized to align with the new USDA SNAP-NEOP regulations anticipated in December. Planning to implement public health approaches for obesity prevention by the *Network* and local contractors is underway. Changes in program administration will be easier to implement, since future *Network* activities will be grant-based. CDPH/*Network* will continue to do as much as possible to prepare the field for programmatic and administrative changes.

Physical Activity in Key Target Audiences

For low-income adults statewide, *Network* surveys show a significant upward trend from 2001 through 2007, and in 2009 SNAP participants continued to increase significantly. For children, 9 to 12 years, the SMART physical activity objective was met, with the exception of children from homes using SNAP/CalFresh. Physical activity trends in teens are not available for this time period due to survey methodology changes.

The annual Benchmark Study of adults for 2010 provides warning, however, that a significant decrease in self-efficacy for physical activity has occurred among low-income women. Therefore, collaborative efforts with CDPH will increase to further promote physical activity through *Network* interventions. By filling the long-vacant manager position dedicated to statewide physical activity integration and leadership, the *Network* will be able to increase its state-level outreach and program development.

Sugar-Sweetened Beverages in Key Target Audiences

Formalized for the first time as an objective in FFY 12, the *Network* will mobilize effort in all its organizational units and complete development of materials suitable for all age and race/ethnic groups in FFY 12. This includes *ReThink Your Drink (RYD)* advertisements, posters, interactive lesson plans and teaching aids, and other educational materials. *RYD* interventions have continued in the *Regional Network* scopes of work and been added into the contracts for all renewing health departments and schools and to the 22 expansion health departments. Analyses of the three biennial surveys show decreases in consumption by children and teens starting in 2001-2003, but no improvements in adults. On a positive note, the Benchmark Study shows high awareness of the *ReThink Your Drink* message among all three *Network* audiences, with a majority reporting recall of the message, far more than the quarter of higher income mothers who do so. This will set the stage for the planned more intense SNAP-NEOP sugar sweetened beverage (SSB) reduction efforts. The new 10-lesson SSB reduction curriculum developed by *Network* will be implemented by high school contractors to accelerate downward trends and reinforce reduced consumption observed in this population since 2000.

Direct Contacts. An elaboration of *Network* experience with EARS relative to unduplicated estimates and total contacts is provided in section V of this Annual Report. A preliminary compilation by State staff using the *Network's* existing system shows some under-reporting in school settings of state share contacts, although not of

unduplicated estimates, but there continues to be a major undercount of unduplicated estimates in community venues because the detailed demographics were either not readily available or infeasible to collect in community settings. At the same time, for the *Regional Networks,* we estimate that 3.4 million unique low-income individuals were reached in FFY11, compared to 2.4 million in FFY10.

Accompanying this project to improve reporting systems will be the updating of population estimates in line with the 2010 U.S. Census and the 2005-2009 American Community Survey (ACS) and exploration of the Census Bureau's new Supplemental Poverty Measure which shows California as having much higher rates for both children and elders than the current method. The ACS data will replace 2000 U.S. Census statistics. We will increase our geo-coding of de-identified, means-tested low-income households on the *Network* Geographic Information System (GIS), including CalFresh and WIC. We hope to link with other geocoded data bases such as USDA's new *Food Atlas.* By updating socioeconomic data, these improvements should expand the number of community locations in which SNAP-Ed services may be conducted to reach more SNAP-Ed individuals, provide better factors to use in estimating intervention exposure by ethnicity and income, and possibly identify new metrics that could be used to track program success. These new statistics also will provide a better picture of California's total and low-income populations which increased significantly since 2000. Recent USDA data show that food insecurity increased about 50 percent and very low food insecurity increased about 70 percent between 2005-07 and 2008-2010, while SNAP/CalFresh participation increased 93 percent between 2006 and 2011.

In spite of these demographic changes, in identifying sites for FFY 12, *Network* contractors have been hampered by a lack of census tract and census block-level race/ethnic ACS data identifying persons living in households less than or equal to 185 percent of the Federal Poverty Level. The Census Bureau has indicated that the data will be available in the early spring, but in the meantime, contractors have significantly fewer census tracts in which they are able to conduct their activities. The *Network* is preparing a white paper with recommendations for other data-driven approaches to targeting.

Mass Communications

The new three-year media contract with Runyon, Salzmann and Einhorn was executed on August 24, 2011 delaying implementation of all media and public relations activities for 11 months. The *Network* was able to encumber funds prior to September 30, 2011 to purchase advertising for February through July FFY 2012 using the "What's Harder" Campaign spots in all major media markets.

The 2010 Benchmark Study was conducted and analyzed in October, 2010, by Field Research under separate contract. To maintain these efforts, the results of the Benchmark Study (October 2011) and focus groups to be conducted in early 2012 will be used by the *Network* to adjust the content of interventions during FFY12. New media planning for the next wave of advertising will begin once strategic planning has been completed.

It expected that as SNAP-Ed shifts to SNAP-NEOP, the content and approaches to media may expand to include children's and social media. Messaging will align with strategic priorities identified during the strategic planning sessions indicated above:

1) access to fresh, whole foods,
2) reduction of consumption of sugary beverages, and
3) increased access to physical activity.

To help coordinate comprehensive intervention efforts as the *Network* support for local health departments increases, state-level leadership for the State Nutrition Action Partnership will be shifted from WIC to the *Network* starting in FFY 12. It is expected that the five departments which run USDA-funded interventions will continue to participate, e.g., CDPH, CDSS, CDE, UC Davis, and CDFA. A simplified planning process will be conducted to set priorities for collaboration among the agencies, possibly focusing on the 3 priorities listed above.

Materials for evidence-based interventions that were produced in FFY 11 for statewide use are listed in Appendix X, Section 7. As always, these materials will be made available first for all funded projects and, to the degree that planning permits, free to other SNAP-Ed eligible entities and at-cost to those which are not income-eligible.

Training

Professional education activities were maintained through the *Network* Statewide Collaborative (formerly the *Network* Steering Committee, or NSC); programmatic trainings for the *Regional Networks*, local health departments, LIAs, NIAs, LFNE projects and FAN-Out (Food Assistance, Nutrition and Outreach) stakeholders; EARS webinars for local contractors continue in lieu of an online system. *Regional Networks* conducted skills-building trainings for local contractors within their regions. Administrative and more generalized technical training on other intervention methods and techniques fell somewhat short of expectations in FFY11 due to difficulty filling state-level training positions and travel prohibitions. The *Network's* statewide conference is being planned for March 2012. A staff member dedicated to training is starting with the *Network* in December, thus filling a long-vacant position.

In FFY 2012, training needed for SNAP-NEOP will be designed as the implementation requirements of USDA become clearer after the federal regulations are released by January 1, 2012. This is anticipated to allow a greater focus on "evidence-based interventions" that are part of comprehensive, multi-level community and public health approaches with a wide variety of partners, including those funded by the U.S. Centers for Disease Control and Prevention (CDC), along with those proven-successful through SNAP-Ed.

Contracts

The *Regional Network* contractors reached 108 percent of the 3,500 sites targeted for FFY11. In FFY 2012, the *Regional Networks*, continuing school and health department contractors, and the 20 new Local Health Departments (which are paired with 20 local

social service departments overseen by CDSS) will operate under templated Scopes of Work that have been modified to provide more standardization, specific objectives and address the limitations of the American Community Survey census data, which has significantly reduced the total number of eligible census tracts within California.

Due to continued changes in State contract requirements, a number of *Network* partners experienced delayed execution of their new contracts, so invoices for many State contracts also were delayed. For the most part, however, contractors appeared able to maintain their effort and meet their deliverables. Until year-end local reports are reviewed and invoices processed, it will not be known to what degree spend-rates might have gone down or program services modified. For all contractors, a priority was to maintain and continue to document non-federal State Share contribution from local, non-profit and State sources in order to maintain services to the low-income public.

For FFY12, CDPH is making a concerted effort to streamline contract, budget, human resource, and accounting processes so as to avoid past delays, execute new contracts and contract amendments promptly, shift to a new grant-funded mechanism for SNAP-NEOP, and maintain local- and state-level services at current levels without disruption.

Surveys and Evaluation

This Annual Report contains highlights from 56 *Network* evaluations conducted at the local and state levels, and it reports how using capacity-building evaluation with local partners was successful in helping local partners to rigorously evaluate their own interventions. As local contractor funding will switch to a grant-based, SNAP-NEOP program in FFY 13, it is an expectation of the impact-outcome evaluation team that the capacity for evaluation built since 2004 will carry over into SNAP-NEOP. Evaluation staff will expand current Impact-Outcome (I-O) evaluation resources to SNAP-NEOP activities as they become allowable, and be prepared to providing training on assessment instruments suitable for diverse audiences and settings, technical assistance to help local partners design their studies, and continued personal support for evaluation. The Evaluation Specialist position was vacated in FFY10; it is expected that this position will be filled in FFY 12 and be an integral leadership component for this work.

Significant progress was made in FFY11 to update analyses for the *Network's* three biennial surveys of adults, teens and children, ages 9-12 years. The 2011 CalCHEEPS Formative Evaluation provided the *Network* with key findings regarding the best sampling and recruitment techniques among CalFresh homes that apply across all three surveys. In addition, new dietary recall methods were pilot tested among children that incorporate data collection from English- and Spanish-language households not previously surveyed in CalCHEEPS. These findings will be applied in future evaluation/surveillance efforts.

The *Network* is on track for maintaining deliverables for departmental and program reports, scientific presentations, and publications in FFY12. Two additional I-O manuscripts are currently under peer review, a third I-O evaluation is planned, and

publishing manuscripts on multiple topics is expected to continue. Publication approval procedures that were first instituted in FFY 10 by CDPH will be continued.

A validation study is being completed on self-efficacy questions for personal behavior and family change behavior related to fruit and vegetable consumption and physical activity. Questions will be used on future adult surveys such as the Benchmark Study and the African American Evaluation Study. Quantitative survey responses from Harvest of the Month participating and non-participating teachers pointed out implementation challenges related to time and equipment/ingredients and indicated teachers want grade-appropriate student activity worksheets and top priority placed on health/physical education subject areas. Findings provided new directions that are being addressed with HOTM revisions and development during the FY12 year.

Reporting Systems

An upgraded temporary electronic reporting system (Activity Tracking Form, or ATF) was implemented in FFY11 while a mandatory Feasibility Study Report (FSR) was written to implement the information technology elements of the final EARS web-based system. The FSR is now in the approval stage. This process includes procuring a California Multiple Award Schedules (CMAS) vendor to modify an acquired, web-based, no cost Commercial-off-the-Shelf (COTS) solution. As stated by USDA, the EARS system provides uniform nutrition education data and information that will inform management decisions, support policy initiatives, provide documentation for legislative, budget and other requests, and support planning at the federal level. In addition, the *Network* will augment this system to provide information needed by State and local stakeholders.

Fiscal and Administrative Integrity

The Contract Compliance Monitoring Unit (CCMU) (previously known as the Program Compliance and Review Team (PCR)) was established following the *Network's* administrative review by USDA in 2006. Its purpose was to independently verify that all required documentation, administrative and fiscal processes are in order with all funded partners and local contractors according to USDA and State level requirements. Schedules were established for site visits of all State-funded contractors in cycle 1, with priorities placed originally on agencies with larger budgets and then on those where corrective actions were needed. Cycle 1 closed administratively on September 30, 2011 (FFY 2011) with only 5 outstanding contractors of concern. These contracts are of high priority and will continue to be monitored and trained for compliance improvement in Cycle 2 until fully compliant. Cycle 2, started in 2010, was prioritized by funding channel and will be completed in FFY 2012. Cycle 2 showed great improvement over Cycle 1 visits, with 71% percent of contractors in compliance so far, inclusive of those who have dropped out in Cycle 2. We aim to have 90-95% of our current contract load, exclusive of the Local Health Department Expansion Project in compliance by the end of 2012. Processes were put in place and automated to track progress in the 14-step Program Improvement Plan process and take corrective action such as probation, withholding funds, or suspending a contract as needed. State Share and Federal Share findings were surprisingly near equal in number of priority findings since the inception of

the PCR team. For FFY12 State Share is no longer required, consequently the fiscal/administrative-only aspect of the CCMU process will be modified to accommodate new requirements of SNAP-NEOP.

In FFY12, *Network* state program staff will focus on providing a greater amount of training and technical assistance than has been feasible in FFY11. This coincides nicely with anticipated changes associated with SNAP-NEOP.

V. SNAP-Ed EARS Feedback

a. *Network* EARS Feedback

SECTION 5: Network EARS Feedback

Directions: *For this reporting year, provide FNS feedback on your State's implementation of EARS. Include the following as applicable:*

- Comments regarding any challenges you encountered in gathering and reporting data for EARS and actions taken to resolve or address these challenges: ***Directions-*** *Identify the section and item number when making comments.* ***(EXAMPLE: Comment: Question 10. It was challenging to get this information. We addressed this by providing all partners with spreadsheets and training to help them track these costs.)***

Comment: EARS Collection as a whole. The *Network for a Healthy California (Network)* in the California Department of Public Health (CDPH) continued to experience numerous challenges with gathering the data for EARS in Federal Fiscal Year 2011 (FFY11). The primary challenge continued to be collecting the detailed EARS data in the absence of an automated data collection system or database. In FFY11 there were over 100 contractors delivering services in a dozen different intervention channels. Without a database in place, the *Network* relied on the Excel-based Activity Tracking Forms (ATFs) which have been used by the *Network* to collect process data since FFY 2000. The ATFs were modified in FFY10 to include the detailed EARS data. Challenges remained with collecting and compiling the EARS data since the ATFs are independent Excel documents and not part of a cohesive system.

The *Network* continues work on finalizing a Feasibility Study Report (FSR) to submit to CDPH's Information Technology Services Division (ITSD) which would permit an independent vendor to create an online data collection system using Commercial Off-The-Shelf (COTS) software. Per CDPH ITSD standards, the database must be housed on CDPH's secure server. Therefore, the *Network* must follow stringent guidelines and procedures for information security and privacy that control the creation of any database maintained on CDPH's servers.

Another challenge faced by the *Network's* contractors in FFY11 was reporting state share activities. Historically, state share activities were documented through USDA-approved time logs and not through the ATFs, which only collected Federal share activities. Unfortunately, the time logs do not contain the detailed elements needed for EARS direct education, such as session format and use of interactive multimedia. With the full implementation of EARS in FFY10 an attempt was made to report both federal and state share activities. Had the *Network's* contractors been fully able to report their SNAP-Ed State Share activities, the number of direct education contacts would have been considerably larger.

Moving forward, California has a significant opportunity to chart its course for obesity prevention through the newly created Nutrition Education and Obesity Prevention (NEOP) grant program. With the implementation of NEOP, the *Network* expects to be relived of the challenges with reporting state share activities.

Comment: Question 3:
One continuing challenge is collecting the race and ethnicity information from our direct education (DE) participants, particularly from non-school settings.

Collecting race/ethnicity data: Race and ethnicity information is not readily available for all direct education participants in the various non-school delivery settings, such as churches and local health departments. Consequently, the *Network* developed data collection cards which allow contractors to collect the necessary elements needed to report a participant as direct education. However, contractors have reported that the data cards and the additional data entry

that result from their use are a barrier to conducting nutrition education. Therefore, some contractors report direct activities as indirect education.

Determining race/ethnicity for Hispanic/Latino participants: There is a discrepancy between Hispanic/Latino being defined as an ethnicity by the Federal government, yet being thought of as a race by a substantial number of Hispanics/Latinos in California. This resulted in participants identifying themselves as Hispanic/Latino only on the data cards and not identifying a race. The U.S. Census and American Community Survey both provide a race choice option of "some other race" if a person chooses not to self-identify with one of the standard categories. According to the 2009 American Community Survey, with that option available, 37 percent of California Hispanics selected that as their race. Many California adult Hispanic participants do not wish to self-identify as anything other than Hispanic/Latino only. With 36 percent of the California population Hispanic/Latino, it is not a satisfactory option to divert the tallies of participants who received direct education to indirect education because the ethnic identifiers do not work.

- Does FNS need to provide additional EARS training or resources? **If yes**, specify training topics and/or type of resources needed.

EARS Resource: The EARS online training module introduced by the USDA in August 2011 will be a helpful introduction to EARS for new *Network* staff; however it is not applicable to the *Network's* contractors who conduct SNAP-Ed as they need the interaction the one-on-one question and answer format the *Network's* webinar training provides so as to address their specific issues. As the *Network* suggested in FFY10, the creation of a sharing forum where states could discuss lessons learned from EARS and share data collection systems would be helpful. Sharing could result in cost savings that would otherwise be incurred in the development of customized online systems. Such training would be especially useful if it were done in partnership with the USDA so that the federal requirements could be modified to increase their usefulness by local partners and by State Implementing Agencies. This would improve the quality of reporting, feed new information back for program planning purposes, and potentially result in valuable insights about the impact and effectiveness of SNAP-Ed that could be shared with oversight agencies and Congress.

- What, if any, changes did you make in your IT system or manual data collection procedures for EARS in the prior fiscal year? If available, attach a description of **updated** IT systems and/or manual data collection procedures.

Changes made to manual data collection system: As stated above, the *Network* has been working with the CDPH Information Technology Services Division since 2008 on securing departmental approval to issue an Invitation To Bid (ITB) to allow an independent vendor to create an EARS data collection system beginning with existing COTS software.

While the approval process is taking place, the *Network* made extensive modifications to the existing ATF template, making it more user-friendly. The improvements made to the ATF in FFY11 included formulas to bypass errors, Macros to ensure frequently used functions work consistently and Visual Basic code to create the data entry screen to mimic a database (see attached screen shots). Regular webinar-based trainings occurred throughout the year to train contractors how to use the ATFs to report allowable *Network* activities they conducted. In FFY11, 32 ATF trainings were conducted for 741 participants.

- Do you plan to make any changes in your IT system or manual data collection procedures for EARS in the next FY? If yes, provide a short summary of changes planned.

For FFY12, the *Network* will continue to use the ATF templates from FFY11. The *Network* will continue to work toward approval for the ITB which will allow for an independent vendor to create an online database. In May 2011 Pennsylvania's SNAP-Ed agency granted permission to share their database code (called STARtracks) with the *Network*. Currently, the *Network* plans to hire a vendor by May 2012 to modify the code obtained from Pennsylvania with the system going live by July 2013. Since the *Network* plans to use the STARtracks code as a starting point for the *Network's* database, both states plan on reciprocal sharing of enhancements to the code.

- Will all IAs report **actual unduplicated data** for EARS in the upcoming fiscal year? If no, why?

The *Network* will report estimated counts for FFY11 since reporting the actual count is not practicable factoring in the size and scope of the program. An unrealistic administrative cost would be imposed if the actual classroom counts of race and ethnicity were collected at schools, so the *Network* will continue to provide estimates using demographic data from the California Department of Education. Direct education occurring outside of the school setting will be once again under-reported due to the burden of using data collection cards to repot the required direct education demographics. When the data cards are used, the demographics are reported directly from the participant or via a visual estimate by the staff person conducting the direct education. However, due to the time and inconvenience of incorporating the data cards into events, direct education without demographics are reported as Indirect Education-Other.

- Share suggestions for modifications to the EARS form, if any. Indicate how the modification would improve EARS, i.e. the reporting process for State, data quality, etc. ***Directions-*** *Identify the section and item number when making suggestions please.* ***(EXAMPLE: Direct Ed Section, question 3, Race and Ethnicity- Consider adding a narrative field to allow IAs to make notations about the data or the collection procedures. This could help FNS understand and interpret the data more accurately.)***

Suggested modifications to the EARS form are as follows – the first 4 suggestions are maintained from FFY 10:

1) Direct Education Question 3: Modifying race and ethnicity or providing protocols to re-code participants who identify only as Hispanic/Latino and do not select a race, would improve the reporting process for California. We recommend the addition of a category "Hispanic, race unknown/some other race."
2) Direct Education Question 5: Including data elements that will enrich reporting in a meaningful way and show effectiveness will allow *Network* contractors to use the data to improve their programs. For example, knowing the session format does not help contractors enrich their programming, nor does it appear that the Social Marketing 'primary intervention channels' (communication elements) for different programs provide useful data for planning purposes or accountability.
3) Social Marketing Question 7: Modification to include number of SNAP-Ed delivery sites by type of setting, similar to Direct Education Question 4, would provide a more complete picture of the full range of community sites in which *Network* delivers social marketing campaigns and programs. We estimate that the EARS system

underestimates sites by at least 50 percent simply because the four categories of demographic data cannot be obtained in most community settings. This shortcoming loses a large proportion of process data and underestimates the services provided through large-scale, community-based and social marketing interventions.

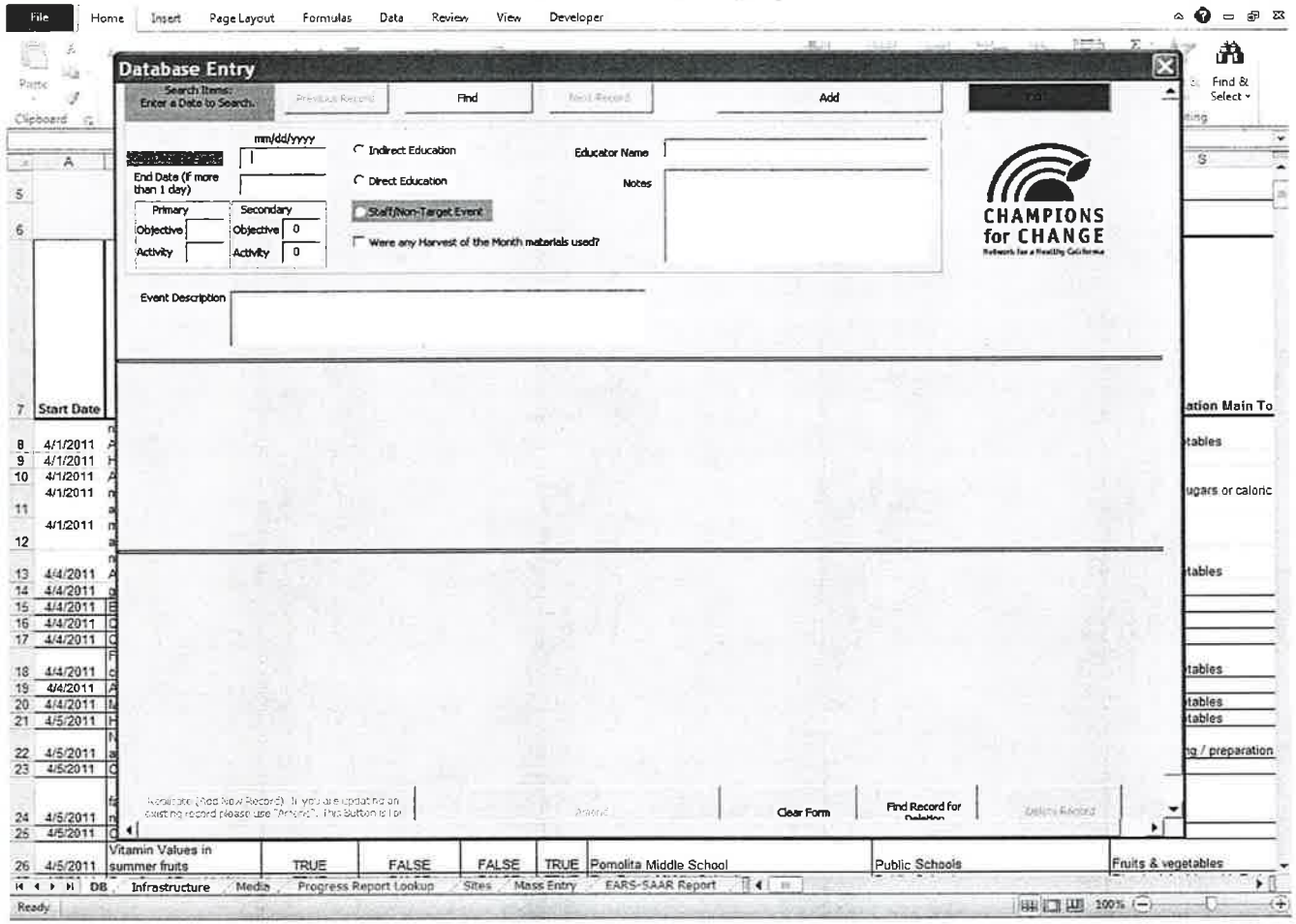
4) Indirect Education Question 8: Modification to include number of SNAP-Ed delivery sites by type of setting, similar to Direct Education Question 4, would provide a more thorough picture of the full range of sites the *Network* reaches within the State for indirect education.
5) Indirect Education Question 8: Since the Network reported all direct education without demographics as Indirect Education-Other, the data get lost with other events reported in this section. It would be helpful to distinguish the indirect education reported that could have been included as direct education had the demographics been available.
6) Indirect Education Question 8: Since only the estimate number to the target population reached is reported for indirect education, those participants outside of the target population are not reflected in the indirect education data. It would present a more in-depth picture to be able to report the total number of participants reached through indirect education.
7) Indirect Education Question 8b: Suggest two additional data sources for identifying numbers of target audience reached: U.S. Census 2010/ACS and FRPM/WIC/other means-tested data
8) Direct Education Question 3: Currently Implementing Agencies are not allowed to use free school meal data to categorize parents as SNAP recipients This sometimes prevents *Network* from counting their activities as direct education so they are diverted into the indirect education count. However federally-encouraged initiatives include sending home information about SNAP with children who qualify for free meals. Further, for social marketing campaigns, those participants in activities that take place in census tracts in which greater than 50% of the households live at < 130% of the Federal Poverty Level qualify under column E, "Estimated number of FSP Reached." It seems a logical argument that parents of children receiving free meals should also be able to be categorized as SNAP recipients for purposes of direct education documentation.

- Other comments.

With the implementation of NEOP, EARS reporting will need modification in the years to come, going beyond reporting descriptive and process data to capturing results and managing knowledge. There is concern that EARS is not currently structured to collect data relevant to community and public health approaches. As presently designed, EARS is unable to provide the *Network* contractors implementing SNAP-Ed with useful data to improve the quality of their programs. With NEOP, it will be important to establish early what the common objectives are for both the USDA and the Implementing Agencies. A core set of metrics useful locally by states and nationally must be selected and sustained over time. Those EARS elements that do not work well or provide meaningful data should be changed or discarded and replaced with more appropriate measures. Consideration could be given of alternative development methods, such as cooperative efforts among states with similar program activities, collaboration with other federal agencies that have similar intervention approaches, or securing technical expertise from outside contractors skilled in large-scale evaluation to work with states and their local partners.

FFY11 *Network for a Healthy California*
Activity Tracking Form for EARS
Screen Shots

1) Visual Basic code to create the data entry screen to mimic a database



2) Example Direct Education entry using the data collection cards to collect demographics

Database Entry

Search Items: Enter a Date to Search. | Previous Record | Find | Next Record | Add | Delete

Start Date of Event: 4/4/2011 (mm/dd/yyyy)
End Date (If more than 1 day):
Primary: Objective 2, Activity 3
Secondary: Objective 0, Activity 0

Indirect Education
Direct Education
Staff/Non-Target Event
Were any Harvest of the Month materials used?

Educator Name:
Notes:

CHAMPIONS for CHANGE
Network for a Healthy California

Event Description: Lesson #2

Did the event include school children during school? (K-12 and Preschool)
Site Name: Farmers Market - Ukiah
Main Topic: Fruits & vegetables
Type of Activity: Consumer Nutrition Education Class
Time: 30
Session Format: Single sessi
Interactive Media

If batching classes enter participant information for a single class and enter the number of classes attended by those participants here: 1

First Time Participants

SNAP/CalFresh Recipients		Non-SNAP	
Male	2	Male	2
Female	2	Female	2
< 5 yrs		< 5 yrs	
5-17	1	5-17	
18-59	3	18-59	4
60+		60+	

	Non-Hispanic/ Latino	Hispanic/ Latino
White	0	4
Asian		
African American	4	0
American Indian or Alaskan Native		
Native Hawaiian or other Pacific Islander		
More than one race		

Repeat Participants

SNAP/CalFresh Recipients		Non-SNAP	
Male	2	Male	2
Female	2	Female	2
< 5 yrs		< 5 yrs	
5-17		5-17	
18-59	4	18-59	3
60+		60+	13

Number of people who answered question 2 (Other Programs):

Did not fill out a card

This is not the same as participants that had their information filled in by event personnel

# of Participants without demographic information available:

Replicate (Add New Record). If you are updating an existing record please use "Amend". This button is for | Amend | Clear Form | Find Record for Deletion | Delete Record

Start Date									
4/1/2011	Y								
4/1/2011	Y								
4/1/2011	Y								
4/1/2011									
4/1/2011									
4/4/2011	Y								
4/4/2011									
4/4/2011									
4/4/2011									
4/4/2011									
4/4/2011	Y								
4/4/2011	Y								
4/4/2011	Y								
4/5/2011	Y								
4/5/2011	Y								
4/5/2011									
4/5/2011	Y								
4/5/2011									
4/5/2011	Yes		1	1	3	0	0	0	Amy Jirout

DB | Infrastructure | Media | Progress Report Lookup | Sites | Mass Entry | EARS-SAAR Report

Ready | 100%

3) Example direct education using school data (FRPM)

Database Entry

Search Items: Enter a Date to Search. | Previous Record | Find | Next Record | Add | Exit

[redacted] mm/dd/yyyy 4/4/2011

End Date (if more than 1 day)

Primary: Objective 2, Activity 2

Secondary: Objective 0, Activity 0

Indirect Education

Direct Education

Staff/Non-Target Event

Were any Harvest of the Month materials used?

Educator Name

Notes

CHAMPIONS for CHANGE

Event Description: Classroom lesson #2

Did the event include school children during school? (K-12 and Preschool) ☑

Site Name: Anderson Valley Elementary

# of Participants: K-12 22, Preschool

If batching classes enter participant information for a single class and enter the number of classes attended by those participants here: 1

Main Topic: Fruits & vegetables

Type of Activity: Consumer Nutrition Education Class

Time: 30

Session Format: Single session

Interactive Media ☐

Schools 2-7 | Schools 8-14 | Schools 15-21 | Schools 22-27

		K-12	Preschool
School 2			
School 3			
School 4			
School 5			
School 6			
School 7			

Reminder (Add New Record): If you are updating an existing record please use "Amend". This button is for | Amend | Clear Form | Find Record for Deletion | Delete Record

	Start Date								
8	4/1/2011								tables
9	4/1/2011								
10	4/1/2011								
11	4/1/2011								ugars or caloric
12	4/1/2011								
13	4/4/2011								tables
14	4/4/2011								
15	4/4/2011								
16	4/4/2011								
17	4/4/2011								
18	4/4/2011								tables
19	4/4/2011								
20	4/4/2011								tables
21	4/5/2011								tables
22	4/5/2011								ng / preparation
23	4/5/2011								
24	4/5/2011								
25	4/5/2011								
26	4/5/2011	Vitamin Values in summer fruits	TRUE	FALSE	FALSE	TRUE	Pomolita Middle School	Public Schools	Fruits & vegetables

DB | Infrastructure | Media | Progress Report Lookup | Sites | Mass Entry | EARS-SAAR Report

Ready | 100%

4) Example Indirect Education entry

Database Entry

Search Items: Enter a Date to Search. | Previous Record | Find | Next Record | Add | Exit

[redacted] mm/dd/yyyy 4/4/2011

End Date (if more than 1 day)

Primary		Secondary	
Objective	2	Objective	0
Activity	3	Activity	0

Indirect Education
Direct Education
Staff/Non-Target Event
Were any Harvest of the Month materials used?

Educator Name
Notes

CHAMPIONS for CHANGE
Network for a Healthy California

Event Description: Health Fair

Did the event include school children during school? (K-12 and Preschool)
Site Name: Mendocino Coast District Hospital
Indirect Education Participants: 100
Type of Indirect Education: Community Events / Fairs Participated
Specify Other

If batching classes enter participant information for a single class and enter the number of classes attended by those participants here: 1

Replicate (Add New Record). If you are updating an existing record please use "Amend". This Button is for | Amend | Clear Form | Find Record for Deletion | Delete Record

Start Date								
4/1/2011								tables
4/1/2011								
4/1/2011								
4/1/2011								ugars or caloric
4/1/2011								
4/4/2011								tables
4/4/2011								
4/4/2011								
4/4/2011								
4/4/2011								tables
4/4/2011								
4/4/2011								tables
4/5/2011								tables
4/5/2011								ng / preparation
4/5/2011								
4/5/2011								
4/5/2011	Vitamin Values in summer fruits	TRUE	FALSE	FALSE	TRUE	Pomolita Middle School	Public Schools	Fruits & vegetables

DB | Infrastructure | Media | Progress Report Lookup | Sites | Mass Entry | EARS-SAAR Report

Ready 100%

5) Customized Site Lists for each contractor by EARS Site Type

Click Here When You Are Finished Entering New Sites

Public School or Preschool with School kids as the participants	Site Name	Type	Address	Zip	City	Census Tract or CDS Code	125% FPL (Free Meals)	185% FPL (FRPM)	126-185% FPL (Reduced-Price Meals)	If a location-based proxy site select criteria
Yes	Anderson Valley Elementary	Public Schools				23655406025084	70.37%	79.80%	9.43%	
Yes	Anderson Valley Junior and Senior High	Public Schools				23655402330900	65.95%	69.83%	3.88%	
Yes	Arena Union Elementary	Public Schools				23655576025092	17.36%	66.95%	49.59%	
Yes	Blosser Lane Elementary	Public Schools				23-65615-6108369	60.27%	72.91%	12.64%	
Yes	Brookside Elementary	Public Schools				23-65623-2330314	66.76%	78.20%	11.44%	
Yes	Calpella Elementary	Public Schools				23-65615-6025183	60.07%	74.72%	14.65%	
Yes	Dana Gray Elementary	Public Schools				23-655565-6025100	48.55%	68.23%	19.69%	
Yes	Eagle Peak Middle School	Public Schools				23-65615-6114581	45.43%	66.91%	21.48%	
Yes	Eel River Charter School	Public Schools				23-65607-2330272	100.00%	100.00%	0.00%	
Yes	Fort Bragg High	Public Schools				23-65565-2331361	38.13%	54.07%	15.94%	
Yes	Fort Bragg Middle School	Public Schools				23-65565-6061667	44.72%	61.18%	16.46%	
Yes	Frank Zeek Elementary	Public Schools				23-65615-6025191	50.78%	67.41%	16.63%	
Yes	Grace Hudson Elementary	Public Schools				23-65615-0101147	74.69%	84.76%	10.07%	
Yes	Lakeport Head Start and State Preschool	Head Start Programs	2548 Howe	95453	Lakeport		100.00%	100.00%	0.00%	
Yes	Laytonville Elementary	Public Schools				23-73916-6025308	43.58%	59.64%	16.06%	
Yes	Leggett Valley Elementary	Public Schools				23-75218-6025118	48.35%	59.34%	10.99%	
Yes	Leggett Valley High	Public Schools				23-75218-2332724	42.10%	63.15%	21.05%	
Yes	Lighthouse Community Day School	Public Schools	300 B Dana	95437	Fort Bragg	23-65565-2330355	9.00%	83.00%	74.00%	
Yes	Meadowbrook Head Start and State Presch	Head Start Programs	6958 Mead	95422	Clearlake		100.00%	100.00%	0.00%	
Yes	Nokomis Elementary	Public Schools				23-65615-6025217	68.66%	85.58%	16.92%	
Yes	North Ukiah Head Start-Frank Zeek Elem.	Head Start Programs	11100 N. B	95482	Ukiah		100.00%	100.00%	0.00%	
Yes	Noyo Continuation High School	Public Schools	250 South	95437	Fort Bragg	23-65565-2330215	20.00%	65.00%	45.00%	
Yes	Oak Manor Elementary	Public Schools				23-65615-6025225	75.19%	85.32%	10.13%	
Yes	Pearl Head Start	Head Start Programs	14521 Pea	95422	Clearlake		100.00%	100.00%	0.00%	
Yes	Point Arena High	Public Schools				23-65599-2333649	46.63%	56.74%	10.11%	
Yes	Pomolita Middle School	Public Schools				23-65615-6025233	58.18%	68.09%	9.91%	
Yes	Potter Valley Elementary	Public Schools				23-73866-6025241	61.83%	76.33%	14.50%	
Yes	Redwood Elementary	Public Schools				23-65565-6025126	50.47%	64.15%	13.68%	
Yes	Round Valley Elementary	Public Schools				23-65607-6025175	100.00%	100.00%	0.00%	

6) Optional management tool for *Network* contractors to track meeting their Goals, Objectives and Activities. The example shows that if Goal 1, Objective 1, Activity 3 is to provide a minimum of 10,000 direct education contacts the contractor would know they were 1,796 contacts away from reaching the goal.

To look up an Event/s type in one or more of the following search crietria.

Search Criteria		
Primary Goal	Primary Objective	Primary Activity
1	1	3

DIRECT EDUCATION Unduplicated Contacts	<5 Years	5-17 Years	18-59 Years	60 + years	All Ages Combined
Number of Food Stamp Recipients in SNAP-Ed	0	0	0	0	0
Number of All Other Participants in SNAP-Ed	0	0	0	0	0
SNAP-Ed	0	0	0	0	0

Indirect Education	
# participants	# of est. target pop.
8020	5959

DIRECT EDUCATION Duplicated count	<5 Years	5-17 Years	18-59 Years	60 + years	All Ages Combined
Number of Food Stamp Recipients in SNAP-Ed	3	4694	0	0	4698
Number of All Other Participants in SNAP-Ed	3	3504	0	0	3506
Total Number of SNAP-Ed Participants	6	8198	0	0	8204

# of Classes Taught	Total time spent in class (min) Contacts x Length of class
199	8850

Page 1

FFY 2011 Final Report
Table of Contents

Binder 1 of 3

I. SNAP-Ed Program Overview
- a. *Network* SNAP-Ed Narrative Annual Report
- b. UC-FSNEP SNAP-Ed Narrative Annual Report
- c. Combined CA narrative, UC + FSNEP
- d. Combined UC/ Network EARS report

II. SNAP-Ed Administrative Expenditures
- a. *Network* Administrative Expenditures
- b. UC-FSNEP Administrative Expenditures

III. SNAP-Ed Evaluation Reports Summary Chart
- a. *Network* Evaluation Reports Summary Chart
- b. UC-FSNEP Evaluation Reports Summary Chart

IV. SNAP-Ed Planned Improvements
- a. *Network* Planned Improvements
- b. UC-FSNEP Planned Improvements
- c. Combined UC/ Network EARS report

V. SNAP-Ed EARS Feedback
- a. *Network* EARS Feedback
- b. UC-FSNEP EARS Feedback

VI. Appendixes

1. Network Evaluation Reports (See Summary Chart)

i. *Network Impact Outcome Evaluation Report- State Aggregated Data FFY 2011*

Binder 2 of 3

ii. Individual Local Contractor Impact/Outcome Evaluation Reports

Binder 3 of 3

iii. *Network* EARS Report
iv. 2010 Benchmark Report Executive Summary
v. Strengthening HOTM: Results of a Survey of California Teachers
vi. Network for a Healthy California Large Store Intervention
vii. Study Shopper Intercept Survey
vii. Food Stamp Office Resource Kit (FSORK), Use of Revised FSORK2 Kit in Food Stamp Offices

viii. Communications Report FFY 11
ix. African American Beauty Salon Supply Store Formative Evaluation Final Report
x. Network Combined Optional Appendixes:

1. Combined Staff Partner Training
2. Conference presentations and journal publications
3. Curriculum development/Adaption
4. Partnership activities
5. Awards
6. Supporting Documentation Regional Trainings
7. Work Products, Nutrition Education Materials (List w/ copies available upon request)
8. Attached PDF Published Journal Articles (1-18)

2. UC-FSNEP Evaluation Reports

   i. UC-FSNEP Optional Appendices

3. Section B: UC-FSNEP SNAP-Ed Reports

Food Stamp Nutrition Education 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 08/31/2010.

State: California Federal Fiscal Year: 2011

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 Food Stamp Program Agency 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 food stamp nutrition education. **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, Food Stamp Program 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, Food Stamp 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 Food Stamp 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: FSNE Participants and Contacts

1a. Direct Education: FSNE PARTICIPANTS by Age and Food Stamp Program Status

Reporting an unduplicated count of direct education participants means providing the number of different individuals who receive any FSNE 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 FSNE 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 Food Stamp Recipients in FSNE	6,819	716,320	24,348	1,039	748,526
2	Number of All Other Participants in FSNE	2,658	333,450	25,377	2,846	364,331
3	Total Number of FSNE Participants	9,477	1,049,770	49,725	3,885	1,112,857

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: FSNE CONTACTS by Age and Food Stamp Program Status

A "FSNE contact" is defined as an interaction in which a FSNE participant participates in a direct education activity. Each FSNE participant may have one or more FSNE contacts.

- For Question 1b, indicate below if you are providing actual counts or an estimate of FSNE 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 Food Stamp Recipients in FSNE	160,928	4,654,672	31,326	1,883	4,848,809
2	Contacts with All Other Persons in FSNE	144,430	2,597,253	33,306	4,560	2,779,549
3	Total Contacts with FSNE Participants	305,358	7,251,925	64,632	6,443	7,628,358

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 Food Stamp 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- food stamp) 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 Food Stamp Program combined with persons who are not eligible for the Food Stamp Program.

- Row 3: Enter the **total participants (1a) and contacts (1b) for FSNE 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 food stamp status among children (columns A and B) who receive FSNE services in school and child care settings by multiplying the number of children participating in FSNE 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 FSNE 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 Food Stamp Participants in FSNE" and 40 students under "Number of All Other Participants in FSNE" for a total of 100 students.

○ Teen-age FSNE 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: FSNE PARTICIPANTS by Gender

- For Question 2a, indicate below if you are providing an unduplicated count or an estimate of FSNE direct education participants.

___ Actual Counts of Participants (unduplicated)

__X_ Estimated Counts of Participants

		A	B
		Female	**Male**
1	**Number of FSNE Participants**	561,844	551,013

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: FSNE CONTACTS by Gender

- For Question 2b, indicate below if you are providing actual counts or an estimate of FSNE direct education contacts.

___ Actual Counts of Contacts

_X__ Estimated Counts of Contacts

		A	B
		Female	**Male**
1	**Number of FSNE Contacts**	3,643,062	3,985,296

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 FSNE participants in Question 1a, Row 3, Column E. The total of A and B in Table 2b should equal the total number of FSNE 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 FSNE direct education participants.

__ _ Actual Counts of Participants (unduplicated)

_ X __ Estimated Counts of Participants

		A	B	C
		Number of Hispanic or Latino FSNE Participants by Race	**Number of Non-Hispanic/Latino FSNE Participants by Race**	**Total by Race**
Individuals Reporting ONLY ONE RACE	**1. American Indian or Alaska Native**	172	8,402	8,574
	2. Asian	161	82,169	82,330
	3. Black or African American	358	72,546	72,904
	4. Native Hawaiian or Other Pacific Islander	46	6,109	6,155
	5. White	833,459	92,748	926,207
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	690	15,997	16,687
	11. TOTAL by ethnicity	834,886	277,971	1,112,857

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 FSNE participants for each racial category listed in Rows1-11. Specifically, in Rows 1-5, report the number of FSNE participants who are of Hispanic or Latino ethnicity and report only one race. In Rows 6-10, report the number of FSNE participants who are of Hispanic or Latino ethnicity and report two or more races. Use Row 10 for all FSNE 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 FSNE 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 FSNE participants who are not of Hispanic or Latino ethnicity and report only one

race. In Rows 6-10, report the number of FSNE participants who are not of Hispanic or Latino ethnicity and report two or more races. Use Row 10 for all FSNE 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 FSNE 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 FSNE participant who reports they are Hispanic and Black is counted in Column A, Row 3.

Example 2: A FSNE participant who reports being White, Asian, and Black but not Hispanic is counted in Column B, Row 10.

4. Direct Education: Number of FSNE 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	26	**Libraries**	6
Adult Rehabilitation Centers	5	**Churches**	8
Worksites	2	**Public/Community Health Centers**	89
Community Centers	96	**Public Schools**	1,437
Elderly Service Centers	15	**Head Start Programs**	58
Emergency Food Assistance Sites	22	**Other Youth Education Sites** (includes Parks and Recreation)	144
Extension Offices	0	**Shelters**	10
Farmers Markets	11	**WIC Programs**	14
Food Stamp Offices	8	**Other (Indian Tribal Organization):**	5
Food Stores	11	**Other (Community Gardens):**	3
Public Housing	31	**Other (Community Based Organizations):**	27
Individual Homes	5	**Other (Colleges/Universities):**	2

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: FSNE is provided to residents of a shelter that is located in a local church. Record this site under "Church".

Example 2: FSNE is provided to participants in Head Start which is operating in the local elementary school which also has FSNE 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: FSNE is provided through interactive multimedia via kiosks in 15 food stores and 10 worksites that have no other FSNE 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**	23,115	10-240	0.3%
2	**Series – 2 to 4 sessions**	1,619	10-240	2.8%
3	**Series – 5 to 9 sessions**	5,338	10-180	1.1%
4	**Series – 10 or more sessions**	3,840	10-180	0.6%

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 Food Stamp Program 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 FSNE 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 food stamp/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 FSP Recipients Reached	F. Estimated Number of Other Low Income Persons Reached	G. Total Estimated Reach (Low-Income, FSP Recipients AND All Others)
1 Latino Campaign	17	P, D, I, E	F, A, B, C, D, E, H, M	286,839	217,932	919,699
2 African American Campaign	12	P, D, I, E	G, C, H, M	126,172	45,373	337,511
3 Power Play! Campaign	18	P, D, I, E	F, G, A, B, C, D, E, H, I, L	244,316	92,163	504,165
4 Worksite Program	7	P, D, I, E	F, G, A, B, C, D, E, H, I, M	1,012	16,830	28,611
5 Retail Program	15	P, D, I, E	F, G, A, B, C, D, E, H, I, M	1,657,193	732,926	4,451,000

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 <u>priority population</u> (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 Food Stamp Program recipients reached this reporting year through this campaign
- Column F: Enter the estimated number of low-income persons (EXCLUDING Food Stamp recipients) reached through this campaign this reporting year.
- Column G: Enter the total estimated number of people (low-income, Food Stamp 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 Food Stamps. 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 FSNE 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

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 FSNE and any other sources of funds)** for the campaign this reporting year.
- Column L: Enter the **Federal FSNE expenditures** for the campaign this reporting year.

INDIRECT EDUCATION:

Item #8 asks for information about food stamp 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	12,164	1
Nutrition Education TV PSAs	2,433,752	1
Nutrition Education Articles	440,767	1
Billboard, Bus or Van Wraps, or Other Signage	25,830,215	1
Community Events/Fairs -- in Which Participated	151,147	2
Community Events/Fairs – Only Sponsored	7,518	2
Other	7,831,756	1

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 Food Stamp Agency **only**	$0
6. Indian Tribal Organization Contributions	$0
7. Sum of Lines 4, 5 & 6	**$0**
8. Federal Reimbursement	**$55,101,055.90**
9. TOTAL FSNE EXPENDITURES: Sum of Lines 3, 7 & 8	**$55,101,055.90**

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 FSNE 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 FSNE 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 Food Stamp 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 FSNE 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 FSNE 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 FSNE 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 FSNE; 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) FSNE Expenditures. This total should equal Line 3 in Question 10, Expenditures by Category of Spending.

10. Expenditures by Category of Spending *(See Instructions below)*

Cost breakouts for item #10 may be the actual allocation or estimated.

1. Total Expenditures for FSNE Program Delivery	$ 43,023,031.40
2. Total Expenditures for Administrative Costs	$ 12,078,024.50
3. TOTAL FSNE Expenditures (State and Federal)	$55,101,055.90

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 FSNE 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 FSNE.
- Cost of any FSNE evaluation efforts.
- Cost of traveling to deliver FSNE services.
- Cost of training for nutrition education providers.
- Indirect costs (must be proportionate to time spent to delivery of FSNE)
- 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 FSNE administration not on nutrition education. (*example: State FSP/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.

NETWORK FOR A HEALTHY CALIFORNIA
2010 Tracking Study

Executive Summary

This report presents findings from the *Network for a Healthy California* 2010 Tracking Study. Interviews were conducted with approximately 1,000 SNAP recipient mothers, 1000 SNAP eligible mothers and 440 low-income mothers (LIM) within the 130-185% FPL range. In addition, we interviewed a comparison group of approximately 400 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 2010.

This part of the report summarizes the main findings from the study.

Advertising Recall

Advertising recall is down in 2010. Fifty-nine percent of the SNAP recipient audience, and 52% of the eligible audience, report net aided recall of *Network* advertising. The decline among eligibles is significant. Unaided recall also significantly declined in 2010 in both audiences.

The declines are not surprising given that a new television campaign was launched this year. Television is normally the largest driver of net recall. Even with the launch of the new campaign, 2010 recall is comparable to 2008 when the previous Ownership campaign was in its second year. Also, significantly less was spent on advertising in 2010 than in 2009.

The aided television scores also significantly declined in 2010 within both audiences as did spending. Television scores are higher than in 2007, however, the first year of the previous campaign. Despite a small spending decline, radio scores actually significantly increased in 2010, from 42% to 52% among recipients and from 38% to 49% among SNAP eligible mothers. Outdoor recall remained flat, staying at 2009 levels despite a significant spending decrease.

Network Awareness

About one-third of both the recipient and eligible audiences are aware of the *Network* on an aided basis, a significant increase since 2008, but still quite low. Among LIM, awareness is slightly higher, 40%, but the difference is not statistically significant.

Rethink Your Drink *Awareness*

The majority of *Network* audiences report aided awareness of *Rethink Your Drink* campaigns, far more than the higher- income audience where only about one-quarter recall the campaigns.

Access to Workplace Programs

About 10% of eligibles and recipients report access to employer nutrition-related benefits at work, no change from 2009 levels. About nine in ten recipients and six 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 differences in usage levels; in fact, more recipients (89%) report use than any other group. Recipient use actually increased from the 2009 level.

Less than 10% report access to physical activity-related benefits, no change from 2009. Fifty-nine percent of recipients and 67% of eligibles with access report using the benefits, about the same as in 2009. Higher-income mothers are more likely to report access to these benefits (24%) but their rate of use is comparable to *Network* audiences except among eligibles who report very high rates of use (67%).

Exposure to Other Non-Advertising Interventions

Exposure to other interventions (e.g. classes and workshops, food demonstrations, health fairs and festivals) remains high: 81% of recipients and 63% of eligible mothers report exposure to one or more. Exposure among recipient mothers has increased since 2008.

The 2010 rate of exposure among recipients is on par with the rate among higher-income moms (81%). In terms of *Network* audience comparisons, the rate of exposure is significantly lower among LIM (63%) and eligible mothers (63%).

Social Media

Three-quarters of both eligible and recipient mothers report access to the Internet in 2010. The access rate for recipients increased since 2009. Among LIM, 82% report access as compared with 99% of the higher-income segment. The differences between *Network* audiences and the comparison group are significant.

About half of LIM and eligible mothers, and 42% of recipients, have an online profile at a social networking site, significantly fewer than the 67% among the higher-income segment. *Network* audiences tend to use the sites more frequently, however: about one-third of eligibles and LIM check them several times per day, compared with only 17% of higher-income mothers. Recipients reported less heavy use than the other *Network* audiences (22%).

About half of LIM and eligibles own a cell phone that with Internet access, comparable to the proportion of higher-income mothers. Recipients are significantly less likely to, 44%. Except for recipients, the vast majority of those with the phones use the Internet searching capabilities of their phones; among recipients, the majority is smaller.

Public Policy Reforms

There is overwhelming support across all the audiences for the establishment of food and beverage standards in government run programs. There is less support for restricting fast food restaurants near school facilities; majorities of *Network* audiences are supportive but only 43% of higher-income mothers are supportive. There is a slightly higher level of support for fast food restrictions in residential neighborhoods among higher-income mothers (49%). Fifty-one percent of recipients are in support of this proposal compared to 59% among LIM and eligibles.

A majority of all four populations support banning the advertising and sale of unhealthy food products near school grounds; among the eligible and LIM audiences the majorities are very large, about two-thirds of mothers surveyed.

Knowledge

Recommended Intake of Fruit/Vegetables

In general, the level of knowledge about the recommended level of fruit and vegetable consumption remains low, only about four in ten mothers. Higher-income mothers were significantly more likely than *Network* audiences to be knowledgeable about the current public health behavioral recommendation.

National Dietary Guidelines

Knowledge about the national dietary guidelines continues to be low among all the study populations. As with the 2009 study, more understand the importance of

age than gender and physical activity level as determinants of recommended consumption levels.

Seriousness of Obesity Epidemic & Efficacy of Preventative Behaviors

Almost everyone understands the obesity epidemic to be a serious problem in California. The overwhelming majority of respondents also accept that there are disease preventative benefits associated with the recommended behaviors. These data have changed little over time. The only difference between the study populations: higher-income mothers are more likely to understand the preventative benefits of fruit and vegetable consumption but knowledge levels are very high across all the groups.

Social Norms

There were across-the-board increases in perceived normative support for all our recommended behaviors in 2009. There are no significant changes in 2010 although there have been small increases on some of the measures. Despite the 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

Fruit & Vegetable Consumption

One-half of eligibles, and 40% of recipients, report high self-efficacy related to personally increasing fruit and vegetable consumption. Among LIM, 53% report high self-efficacy. These data have not changed since 2009 when new measures were introduced. There are no differences between the study populations except that recipients lag behind the three other groups. Among higher-income mothers, 51% report high self-efficacy.

Physical Activity

There were increases in physical activity self-efficacy in 2010. On both the *making time* and *sticking to the plan* dimensions, there have been significant increases from 2009 to 2010 within both the eligible and recipient audiences. In 2010, four in ten report high-efficacy. This is impressive since there were declines in these scores in the previous years. In 2010, the self-efficacy scores of *Network* audiences were comparable or better than those of the higher-income comparison group. This is consistent with 2009 data.

Family Change Efforts

A majority of both recipients (66%) and eligibles (59%) feel highly efficacious about the promotion of healthy eating in their families; this represents no change from 2009 levels. Sixty percent of LIM report the same. All three *Network*

audiences lag significantly behind their higher-income counterparts (82%) on this measure, however.

In terms of promoting physical activity, the majority of eligible mothers (59%) reported high self-efficacy; among recipients, only 43% reported high self-efficacy. These data have not changed since 2009. On this measure, LIM (62%) and eligibles (59%) actually lead the comparison group (48%).

Price and Access Barriers to Behavior Change

Food Price Barriers

About one-third of recipients and eligibles believe vegetables are too expensive and more than four in ten are concerned about the expense of fruit. Both of these percentages significantly declined since 2009, however, among recipients. As with the *Network's* previous media campaign tracking studies, the comparison group was less likely than *Network* audiences to report the problem.

Fruit & Vegetable Access Barriers

The fruit and vegetable access problem may also be declining among recipients. In 2008, 26% reported that they could not find good, fresh produce where they lived; in 2010, it has dropped to 19%. Among 2010 eligibles, 14% reported the problem. Compared to *Network* audiences, significantly fewer higher-income respondents reported the problem.

Physical Activity Access Barriers

About 15% of eligibles and recipients report difficulty in finding places to be physically active in 2010, a decline from previous years. As expected, *Network* audiences are far more likely to report this problem than higher-income mothers.

Behaviors

Fruit & Vegetable Consumption

There has been no change in fruit and vegetable consumption in 2010. On the current official recommendation measure, about four in ten in all the study populations consume at the recommended level. Eligible audience members are most likely to report the recommended intake, 45%; this is significantly more than the other three study populations.

On the new self-report measures assessing fruit and vegetable consumption changes over the last year, majorities of all three *Network* audiences reported that they are eating more of both. The differences between the *Network* audiences and the higher-income comparison group are large.

Physical Activity

Except for a significant decline from 2009 to 2010 among recipients, the 2008-2010 data on leisure time physical activity are flat. This is using the new 150

minutes per week standard. On the measure, 51% of eligibles and 45% of recipients reported being active at least 150 minutes in 2010. Forty-six percent of LIM meet the standard as do 50% of higher-income mothers. None of the 2010 differences between the study populations are significant.

On the new 2010 combined work and leisure measure, the three *Network* audiences do better than the comparison group. Fifty-five percent of the eligible mothers, and four in ten among the LIM and recipient groups, are very active on this measure. Very actives are respondents reporting at least 150 minutes of leisure time activity and a high level of activity at work. Only 30% of the higher-income group was categorized as very active.

Family Change

The study suggests that large majorities of eligible and recipient mothers are engaging in these behaviors in 2010. The only exceptions: setting limits on TV, which only 52% of eligible sample respondents reported, and doing physical activities together with the family, which only 48% of eligibles and 26% of recipients reported.

Over time trends are mixed. There have generally been increases in these behaviors since 2008. However, on doing physical activities together with the family, there has been a significant decline among recipients from 2009 to 2010. The same is true of setting TV limits (among eligible mothers) and setting limits on unhealthy snacks (among recipients). On the other two measures, the general promotion of physical activity and the promotion of fruit and vegetable consumption within the family, the increases from 2008 to 2009 have been sustained in 2010.

The higher-income comparison group is significantly more likely to engage in all the family change behaviors except for doing physical activities together as a family and generally promoting physical activity within the family. On these, *Network* audiences are more likely to be engaged than their higher-income counterparts.

Subgroup Differences: Race/Ethnicity

We found a number of differences based on race/ethnicity in the 2010 data. The summary below also draws on the findings from 2008 and 2009.

- *Ad Recall*: Across the measures, Hispanics were most likely to have aided recall of *Network* ads in 2010. On outdoor, African Americans also compared well, at least among the recipient and eligible audiences. Both groups also tended to lead on recall in 2008 and 2009. Whites and Others tended to lag.
- *Exposure to Non-Advertising Interventions*: There have been no significant race/ethnic differences on this measure.

- *Knowledge of Recommended Level of Fruit and Vegetable Consumption*: Hispanics and those in the Other (race/ethnic) group are more likely to be knowledgeable about the recommended level of fruit and vegetable consumption.

- *Normative Beliefs*: On health eating related norms, Whites tended to lead in the 2010 data but there were often no significant differences or clear patterns on these measures. On the physical activity related norms, Whites do best across the measures. Hispanics lag behind the other groups.

- *Self-Efficacy Beliefs*: On eating related self-efficacy beliefs, Whites lead most often across the measures. On physical activity related self-efficacy beliefs, African Americans lead on almost all the measures while Hispanics were most inclined to lag behind.

- *Personal fruit and vegetable consumption:* The data suggest no clear pattern of differences. In 2010, there were no significant differences. In 2009, Hispanics led and Whites lagged behind the other groups. In 2008, Hispanics lagged.

- *Measure of Whether Consumption Increased in Last Year:* There were no significant differences for fruit. On vegetables, Hispanics were most likely to say that they increased their consumption in the last year and African Americans were least likely.

- *Personal Level of Physical Activity*: There is a clear pattern across the studies: Hispanics were significantly more likely to lag on the measure.

- *Family Change Behaviors*: There is no clear pattern on healthy eating related changes. On the physical activity related ones there is a pattern: Hispanics lag behind the other groups while African Americans lead. Whites also compared well in the 2009 data. There is only one of these measures where Hispanics compared well, the setting of limits on TV watching within the household. On this measure, Hispanics led in two of the three years. African Americans and Others also compared well on this measure; Whites lagged, although in only one of the three years.

- *Internet and Social Media Usage*: Hispanics are significantly less likely in 2010 to report Internet access and the creation of a social media profile. Whites and Others are most likely to use a home computer for access to the Internet; African Americans were most likely to use a mobile device for access.

Subgroup Differences: Unemployment

Those with an unemployed or underemployed breadwinner in the household were significantly more likely in 2010 to report exposure to a non-advertising intervention. They were also more likely to report broader normative support,

higher self-efficacy and more positive behavioral outcomes. On these latter measures, the differences were only sometimes statistically significant, however.

Outcomes

In order to assess campaign effectiveness, we once again looked at differences between *Network* audiences and the higher-income comparison group. We also examined relationships between measures of campaign exposure and intended outcomes.

Comparisons with Higher-Income Group

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. *Network* audiences also generally do as well or better than the higher-income group when we compare self-efficacy scores on physical activity related behaviors. On healthy eating related ones, the data are more mixed. They are also more mixed on the knowledge measures.

Network audiences are less likely than the comparison group to report exposure to non-advertising interventions. They are also still less likely to have access to workplace interventions.

Recall/Exposure Effects

We found evidence of a positive relationship between campaign exposure as measured by ad recall and some of the outcome measures within some of study populations. The outcome measures included those on fruit and vegetable consumption, changes in fruit consumption over the last year (self-reported), physical activity with family members, sugar-sweetened beverage limits, and three of the self-efficacy measures.

In 2009 we found the same relationships but on fewer outcome measures. The 2010 and 2009 findings are all consistent with analyses conducted in 2008 and 2005 which indicated a positive relationship between some important outcomes and exposure to both advertising and non-advertising interventions. Further analysis of Benchmark Study data is planned for later this year in order to more fully assess the issue of campaign effectiveness.

Strengthening *Harvest of the Month*: Results of a Survey of California Teachers

September 2011

- Prepared for -

Network for a Healthy California

FIELD RESEARCH CORPORATION

601 CALIFORNIA STREET • SUITE 900 • SAN FRANCISCO • CA 94108 • 415-392-5763 • FAX 415-434-2541 • info@field.com

Field Research Corporation is an Equal Opportunity/Affirmative Action Employer

Table of Contents

Executive Summary **1**

Background/Objectives **7**

Methodology **9**

About This Report **15**

Detailed Findings **16**

1.0 How *Harvest of the Month* is Being Implemented 17
2.0 Integrating *Harvest of the Month* into the Core Curriculum 37
3.0 Promoting *Harvest of the Month* 39
4.0 Enhancing *Harvest of the Month* 41
5.0 Family Newsletter 51
6.0 Summary of Grade Level Differences 53
7.0 Summary of Implementaion Level Differences 57

Conclusions & Recommendations **60**

Appendices ..... **Following**

Instructions to Teachers
Mail Survey Questionnaire
Educator Newsletter Supplied with Survey
Web Questionnaire

Table Index

A Grade Level Taught (Q21) *11*
B Number of Years Using Harvest of the Month in Classroom (Q22) *12*
C Region (Q23) *13*
D Number of Years Teaching (Q24) *14*
1.1 Proportion of Eligible Schools Reported As Implementing Harvest of the Month *18*
1.2 Reported Use / Non-Use Among Sampled Residents (Q1) *19*
1.3 Among Non-Users, Reasons for Not Implementing Harvest of the Month (Q2) *20*
1.4 Source of Nutrition Education in Classroom, Among Users (Q3) *21*
1.5 Harvest of the Month Materials Used in Classroom This Year, Among Users (Q4) *22*
1.6 Sections of State Newsletter Used on At Least Monthly Basis, Among Users (Q5) *24*
1.7 Other Harvest of the Month Materials/Activities Used, Among Users (Q6) *26*
1.8 Other Nutrition Education/Promotional Resources Used, Among Users (Q7) *28*
1.9 Average Monthly Number of Times Harvest of the Month Activities Implemented, Among Users (Q8) *30*
1.10 Average Amount of Time Spent on Harvest of the Month, Among Users Q9) *31*
1.11 Frequency of Implementing Specific Activities, Among Users (Q10) *33*
1.12 Frequency of Students Performing Specific Activities, Among Users (Q11) *35*
2.1 Most Important Subjects that Harvest of the Month Should Focus On, Among Entire Sample (Q12) *38*
3.1 Argument Most Likely to Influence Other Teachers, Among Entire Sample (Q13) *40*
4.1 Biggest Challenges in Implementing Harvest of the Month, Among Entire Sample (Q14) *42*
4.2 Sections of State Newsletter to Drop, Among Entire Sample (Q15) *44*
4.3 Most Important Modifications to State Newsletter, Among Entire Sample (Q16) *46*
4.4 Other Enhancements Besides Those Related to Educator Newsletter, Among Entire Sample (Q17) *48*
4.5 If Enhanced, Time to be Spent on Harvest of the Month, Among Entire Sample (Q18) ... *50*
5.1 Frequency of Family Newsletter Distribution, Among Entire Sample (Q19-20) *52*

Executive Summary

- This report presents findings from a survey of California teachers. The purpose of the study was to explore how the *Harvest of the Month* toolkit can be strengthened. The survey was of teachers working in schools served by *Network for a Healthy California* funded school-based contractors. Teachers targeted for toolkit use in the schools were asked to participate. Data were collected through a web and mail survey implemented in the spring of 2011.

Main findings from the study are summarized below.

Extent of Harvest of the Month Use

- According to the initial Local Incentive Awardee (LIA) coordinator survey data, 58% of eligible schools are implementing *Harvest of the Month* on at least some level. This leaves 42% of schools not making use of *Harvest of the Month* tools; this latter group was excluded from the survey sample. The rate of implementation is highest among elementary schools, 75%. Among middle schools it is 46%. Among high schools it is 40%.

- Of those teachers in schools implementing *Harvest of the Month* at some level, 90% reported use of the tools during the current school year. Both users and non-users were asked to complete the survey.

- The most common reasons for non-use: concerns about the amount of time involved (43%) and a belief that other activities are more important (37%).

- Other reasons: others handle *Harvest of the Month* in the school (23%), no receipt of *Harvest of the Month* materials (21%), lack of knowledge (17%) and not knowing how to implement it in the classroom (10%).

Who Provides Nutrition Education in the Schools?

- Seven in ten teachers provide classroom nutrition education. Only 7% of study respondents reported that others (not teachers) provide it; 16% reported a team teaching arrangement.

Most Frequently Used Harvest of the Month Tools

- The state-version of the Educator Newsletter is the most often used *Harvest of the Month* tool (61%) followed by a shorter version of the Educator Newsletter (39%) developed by the LIA. The shorter version is based on the State-version.

- Fewer reported using the Family Newsletter (37%) as well as the posters (21%) and the website (18%). Among elementary level teachers, 16% reported use of menu slicks.

State Educator Newsletter: Most Widely Used Sections

- Nutrition Facts is the section most often used at least once per month, followed by Reasons to Eat, Cooking in Class, Exploring California: Taste Testing, and How Does It Grow?

Other Frequently Used Harvest of the Month Materials

- Other frequently used materials during the school year: 42% used student workbooks; 29% used postcards and other promotional materials; 26% used the Tasting Trio taste tests; 23% used the lesson plans; and 20% used the story books.

- Among elementary teachers only, the percentage using workbooks increases to 49%; the percentage using story books increases to 24%.

- Forty-six percent of teachers reported using either the Tasting Trios or the taste testing section of the Educator Newsletter.

Other Nutrition Education/Promotional Materials

- Dairy Council materials were used during the year by 44% of teachers, while 25% report use of mypyramid.gov materials.

- Among 4th and 5th grade teachers, 24% reported use of *Power Play!*

- Few (5%) mentioned *Rethink Your Drink* materials.

- Seventeen percent report use of postcards, stickers and other promotional items.

- About one in four teachers (28%) report use of no additional nutrition education or promotional materials.

Extent of Harvest of the Month Activity

- *Harvest of the Month* is used frequently in the classroom. One-third (32%) of teachers offer *Harvest of the Month* four or more times in an average month. One-third offer *Harvest of the Month* two to three times, while another third offer it once in an average month.

- Usage is associated with grade level – the lower the grade level, the more *Harvest of the Month* is used. K-2 teachers reported the most frequent use. High school teachers reported the least. Teachers in the Los Angeles and Orange County regions reported more frequent use than those in the Gold Country, Central Valley and the remainder of the state.

- There is a high degree of variability in the amount of time spent on *Harvest of the Month* in an average month. Twenty-three percent of respondents reported spending 15 minutes or less. Forty-three percent reported spending 16-60 minutes. Another one-third reported spending one hour or more.

Most Prevalent Classroom Activities

- A total of 85% of educators employ produce taste testing at least once per month. Produce taste testing is a once-a-month activity for the majority (63%) of teachers; an additional one in five (22%) engage in it two or more times per month.

- Taste testing as part of a prepared recipe is a once-a-month activity for 49% of teachers; another 17% engage in it two or more times per month. Most of these teachers also engage in produce taste testing at least once per month.

- Classroom cooking, either with or without student participation, is less likely to take place at least monthly. The majority of teachers (56%) involve students either less than once per month or never. One half (50%) make no use of teacher demonstrations or only on a less than once-per-month basis; of the other one half, 28% do a demonstration monthly, 9% do a demonstration two or more times, and 14% were not sure.

- Ninety-five percent engage in at least one of the forms of taste testing monthly. Sixty percent engage in at least one of the forms of cooking. Almost all the teachers (96%) engage in either taste testing or cooking at least monthly.

Most Prevalent Student Activities

- In terms of student activities, almost half of teachers read to students (49%) and lead discussions (47%) once per month and a sizeable number engage in these activities even more frequently.
- About one-third (36%) of teachers use workbooks or activity sheets once a month with students with an additional 19% using them two or more times per month. Among elementary teachers only, the percentages are similar.
- Research, reports and creative art projects are far less common in the classroom. The majority either never engages in these activities or does so less than once per month.

Integrating Harvest of the Month into Core Curriculum

- There is agreement that *Harvest of the Month* content should be integrated into health and physical education curricula. Sizeable majorities of teachers strongly favor both. Many teachers also support linking it to science and home economics/life skills curricula. Fewer think it important to link it to English, math and social science curricula.

Best Arguments to Use in Reaching Out To Teachers

- Teachers believe that the best arguments for teacher participation are that *Harvest of the Month* exposes students to fruit and vegetables and teaches them about the importance of sound nutrition.

Enhancing Harvest of the Month: Most Significant Challenges That Should Be Addressed

- The amount of time required and lack of equipment and ingredients are viewed as significant challenges by the largest number of teachers. About one-third viewed the time challenge as significant; about the same number rated the lack of equipment and ingredients as a significant challenge.
- Lack of lesson plans and ready-to-use resources are viewed as significant challenges by about one in five teachers. About the same number said the same about insufficient cafeteria support.
- Grade-appropriateness problems and insufficient administrative support are viewed as significant by only about one in ten teachers.

- *Harvest of the Month* users rated all of the challenges lower than non-users. Non-users were most concerned about lack of ready- to-use materials and lesson plans as well as the amount of time required.

Enhancing Harvest of the Month: The Educator Newsletter

- Cafeteria Connections, Student Sleuths, Student Champions, Botanical Facts, What's in a Name and School Garden sections led the list of those that should be dropped in order to shorten and enhance the state newsletter. Many teachers do not feel strongly about shortening the Educator Newsletter, however, including those using the longer version. Only 26% of teachers rated it as an important enhancement and the difference between short and longer version users was not significant.

- A majority of teachers do want more newsletter emphasis on activities that are easy to implement (63%) and require minimal preparation (61%), and on lesson plans tied to the core curriculum (54%).

- Forty-five percent want more grade-appropriate content for elementary level students, far more than the 17% who are concerned about grade-appropriate content at the high school level.

- Non-users differ from users on only three of the tested modifications: minimal preparation, lesson plans and grade-appropriate content for high school grades. In each case, the non-users believed the modifications to be more important.

Enhancing Harvest of the Month: Other Steps

- In addition to the Educator Newsletter changes, respondents were asked to identify other possible implementation aids from a list we supplied. Grade-appropriate student activity worksheets ranked highest, followed by grade-appropriate student workbooks, grade-appropriate teacher activity packets and other ready-to-use activities and materials.

- Interestingly, few teachers mentioned the need for more online resources, probably because site coordinators are already making them available to teachers.

Enhancing Harvest of the Month: Time That Will To Be Spent after Enhancements

- Except for those investing the most time in *Harvest of the Month* (i.e., one hour or more), teachers expect to spend less time on *Harvest of the Month* after enhancements are made. They tended to view them as time saving.
- Thirty-nine percent report that they will spend 15 minutes or less on *Harvest of the Month* if it is enhanced, compared to 23% who presently spend this amount of time.
- Twenty-seven percent would spend 16-60 minutes if the tools were enhanced compared to the 43% who now report that they spend this amount of time.
- Another 32% report they will spend an hour or more, about the same as now (33%).

The Family Newsletter

- Just under half of teachers (47%) say they always distribute the Family Newsletter versus sometimes or never. This translates into more than 70% of those teachers who report a role in Family Newsletter distribution in their schools. About one-third (35%) of teachers report no role in the process.

Background/Objectives

This section of the report discusses the study background and objectives.

Harvest of the Month

- Harvest of the Month (*Harvest of the Month*) is a multifaceted resource designed to assist teachers and other school personnel in providing nutrition education to under-resourced schools.
- The goal is to support healthy food choices through increased awareness and the active promotion of seasonal California fruit and vegetables.
- The *Network for a Healthy California (Network)* developed an *Harvest of the Month* toolkit and became involved in implementation in 2006.
- School personnel have flexibility in which tools they use and how they use them.

Previous Qualitative Research

- This survey was preceded by a qualitative study conducted in May-June, 2010. It consisted of key informant interviews with 98 teachers, site coordinators, Local Incentive Awardee (LIA) coordinators and food service staff from across the state.
- The qualitative study explored a number of issues including:
  - which *Harvest of the Month* resources and other nutrition education materials are being used in classrooms,
  - reasons for the use and non-use of the resources and materials,
  - how much time is being spent on *Harvest of the Month* in the classroom,
  - perceived value and importance of the resources and materials,
  - barriers to broader use of the resources and materials, and
  - the factors that would encourage their greater use in California schools.

- Some of the qualitative study findings:
  - taste tests and the Educator Newsletter are the most commonly used *Harvest of the Month* elements,
  - many teachers find the Educator Newsletter too lengthy and not user-friendly, turn-key and grade-appropriate enough,
  - lack of time to prepare lesson plans is the biggest challenge for teachers, and
  - prepared lesson plans and classroom-friendly taste tests and recipes were viewed as important aides in *Harvest of the Month* implementation.

Survey Objectives

- It was decided that a population-based survey of teachers was needed in order to have generalize-able data on these issues, especially the Educator Newsletter and how it can be improved.

- Specific study objectives were to assess:
  - the rate of non-participation in *Harvest of the Month* and the reasons for it,
  - who is involved with the provision of nutrition education in the classroom and what materials are being used,
  - how the state newsletter and other materials and activities are being used in the classroom,
  - the amount of time spent on *Harvest of the Month* in the classroom,
  - the academic subjects that *Harvest of the Month* should be integrated in with,
  - the most persuasive argument to use in promoting *Harvest of the Month* to teachers,
  - the biggest challenges in implementing *Harvest of the Month*,
  - perceived strengths and weakness of the state's Educator Newsletter along with what changes should be made,
  - the extent and frequency of teacher involvement in the distribution of the Family Newsletter, and
  - characteristics of teachers targeted for *Harvest of the Month* participation, e.g., grades taught, number of years using *Harvest of the Month* and number of years teaching.

Methodology

Overview

- A total of 751 interviews were completed with a population-based sample of teachers in schools served by existing school-based contractors funded by the *Network*.
- We sampled the *Harvest of the Month* teacher target audience, i.e., those teaching grades that *Harvest of the Month* is targeted to within each of the schools. All of these teachers were asked to participate even if they did not actually use *Harvest of the Month* tools this year.
- The interviews were completed in English during March-May, 2011.
- The school *Harvest of the Month* coordinator/lead teacher was asked to enroll the teachers and distribute the surveys.
- Teachers were offered a choice of completing a hard copy or web questionnaire.
- Participating coordinators were offered a $25 incentive; teachers were offered a $10 incentive.
- The survey questionnaire was developed jointly with the *Network* and contained 22 items.

Sample Development

- We started with a statewide list of 2,136 eligible schools supplied by the *Network*; the overwhelming majority of schools were elementary schools.
- From this we selected a random sample of 468 schools for an initial survey of LIA coordinators. The purpose was to identify "zero-implementation" schools, name and contact information of school coordinators and the approximate number of teachers at the schools within the grades targeted for *Harvest of the Month*.
- The teacher count was used to help us determine an appropriate size for the second, final survey of the schools.

- The initial survey of LIA coordinators was completed by email.
- The final sample was of 99 schools/coordinators; 68 agreed to participate, 69%.
- The survey was distributed to 1,536 teachers; 751 completed one, 49%.
- Of the 751 completed interviews, 117 were completed on the web and 634 were completed using the paper-and-pencil version of the questionnaire.

Respondent Characteristics

- Key respondent characteristics are summarized in the figures that follow.

Figure A. Grade Level Taught (Q21)	
N =	751
Grade K-2	44%
Grade 3-5	36
Grade 6-8	16
Grade 9-12	9
Total	*105%**

* *Total exceeds 100% due to rounding and because some teachers reported teaching multiple grades.*

- The sample was composed overwhelmingly of elementary school teachers (80%), with K-2 teachers being the largest segment (44%). There were relatively few middle and high school teachers.

Figure B. Number of Years Using *Harvest of the Month* in Classroom (Q22)	
N =	751
Never	2%
1 year	10
2-3 years	33
4-5 years	32
6-7 years	14
8 or more years	8
Refused	1
Total	*100%*

- The majority reported using *Harvest of the Month* for four or more years. One-third reported 2-3 years, while another third said 4-5 years.

Figure C. Region (Q23)	
N =	751
Los Angeles	54%
Orange County	14
Bay Area	4
Gold Country	10
Central Valley	8
Northcoast	3
Gold Coast	2
Central Coast	<1
Sierra Cascade	5
Refused	1
Total	*101%**

* *Total exceeds 100% due to rounding.*

- The majority of respondents were from the Los Angeles region. Of the remaining ones, the vast majority were from Orange County, the Gold Country and the Central Valley.

Figure D. Number of Years Teaching (Q24)	
N =	751
1-5 years	12%
6-10 years	21
11-20 years	45
21-30 years	14
31 or more years	7
Refused	1
Total	*100%*

- The vast majority of the audience has taught for more than ten years. Only about one in ten (12%) has taught for five years or less.

About This Report

- In the report we present frequency distribution tables for all the study variables.
- If we found significant differences between subgroups the differences are noted in the text. Only those differences significant at the 95% confidence level are noted. In our analysis we primarily looked at subgroups defined by region, the grades the teachers taught, their extent of *Harvest of the Month* tool/material use and the length of time they reported using *Harvest of the Month* tools and materials. On some of the measures we also looked at differences between *Harvest of the Month* users and non-users.
- The extent of *Harvest of the Month* use measure was configured as follows: the high implementation group (32%) is composed of those teachers reporting 4 or more uses per month of *Harvest of the Month* tools/materials. The medium group (33%) is composed of those reporting 2-3 uses per month of the tools and materials. The low implementation group (31%) is composed of those reporting one use per month. Five percent of study respondents provided no data on frequency of use so they were excluded from this analysis.
- For the length of time analysis we compared those reporting 1-5 years of *Harvest of the Month* use with those reporting more than 5 years.
- The study questionnaires and related fielding materials appear in the appendix to this report.

Detailed Findings

This section of the report presents the detailed findings from the study. The first section focuses on how *Harvest of the Month* tools, activities and materials are being used. The second focuses on how teachers believe *Harvest of the Month* content should be integrated into the core academic curricula. These are followed by sections on *Harvest of the Month* promotion, enhancement of the Educator Newsletter and other *Harvest of the Month* elements and the teacher role in Family Newsletter distribution.

1.0 How *Harvest of the Month* is Being Implemented

This section of the report presents data on how *Harvest of the Month* is being used in California classrooms.

Table 1.1. Proportion of Eligible Schools Reported As Implementing *Harvest of the Month*	
N =	**468**
Reported some level of implementation	58%
Reported no implementation	42
Total	*100%*

- Six in ten (58%) of the sampled schools on the initial LIA coordinator survey were reported to be implementing *Harvest of the Month* on at least some level. The remaining schools were reported to be not implementing *Harvest of the Month*. These latter schools were excluded from the sample for the teacher survey.

- Among elementary schools, 75% reported at least some level of implementation compared with 46% among middle schools and 40% among high schools.

Table 1.2. Reported Use / Non-Use Among Sampled Residents (Q1)	
N =	751
Have implemented/used *Harvest of the Month* this year	90%
Have not	9
Don't know/Refused	1
Total	*100%*

- Of those teachers in schools implementing *Harvest of the Month* at some level, 90% reported doing so during the current school year. This is a very high rate of use.
- Subgroup differences:
  - *Gold Country region*: Less likely than others to report implementation this year.
  - *Los Angeles region*: More likely than others to report implementation this year.

Table 1.3. Among Non-Users, Reasons for Not Implementing *Harvest of the Month* (Q2)	
N =	70
It is too time-consuming	43%
I have other priorities	37
Harvest of the Month is handled by others in our school	23
I never received any *Harvest of the Month* materials	21
I don't know enough about it	17
I don't know how to implement *Harvest of the Month* in the classroom	10
It is too difficult	3
I don't have enough support from the school administration	1
Total	*155%**

* *Total exceeds 100% due to multiple responses and rounding.*

- Concerns about the amount of time involved, and a perception that other activities are more important, lead the list of reasons for not participating in *Harvest of the Month*.
- About one in five reported that *Harvest of the Month* is handled by others in their school or that they received no materials.
- Seventeen percent said they did not know enough about *Harvest of the Month*.
- Ten percent said they lacked implementation information.
- Of those reporting no receipt of materials, not knowing enough about *Harvest of the Month*, or lack of implementation information, very few indicated that *Harvest of the Month* was handled by others in their schools. This indicates that these are implementation problems in their own right.
- Subgroup differences:
  - We did not explore subgroup differences on this measure.

Table 1.4. Source of Nutrition Education in Classroom, Among Users** (Q3)	
N =	681
I provide it	70%
Others provide it (e.g., Nutrition/Health Educator, Nutritionist, Chef, etc.)	7
Both, I team-teach with others (e.g., Nutrition/Health Educator, Nutritionist, Chef, etc.)	16
Don't know	8
Total	*101%**

* *Total exceeds 100% due to rounding.*

- Seven in ten teachers provide classroom nutrition education; only 7% report that others provide it. Sixteen percent reported some type of team teaching arrangement.

- Subgroup differences:
  - *K-2 teachers:* More likely than others to report team teaching.
  - *Los Angeles region*: More likely to report that they provided it.
  - *Orange County region*: More likely to report they provided it.
  - *Balance of the state*: More likely to report team teaching.

** Those teachers reporting no use of *Harvest of the Month* this year were skipped out of this and the following items that focus on how materials are being used.

Table 1.5. *Harvest of the Month* Materials Used in Classroom This Year, Among Users (Q4)	
N =	681
State-version of *Harvest of the Month* Educator Newsletter (4-page version)	61%
Shorter *Harvest of the Month* Educator Newsletter (1-2 page version)	39
Family Newsletter (1 page)	37
Posters (i.e., basketball, runner, soccer)	21
Harvest of the Month website	18
Menu slicks	16
Other *(volunteered)*	14
None *(volunteered)*	1
Total	*207%**

* *Total exceeds 100% due to multiple responses and rounding.*

- The state-version of the Educator Newsletter was the *Harvest of the Month* tool most often used, followed by the shorter version of the Educator Newsletter. The shorter version is sometimes provided by LIA coordinators to teachers in lieu of the longer state-version.
- The Family Newsletter was used by 37% of teachers.
- Fewer reported use of the other materials.
- Menu slicks are targeted to elementary schools only. Among elementary teachers, 16% reported menu slick use. This is the same percentage as in the sample as a whole since the vast majority of respondents were elementary school teachers.
- Since this was the first question on the topic, it elicited volunteered responses having to do with other materials. The ones that were most often mentioned were workbooks (4%) and nutrition books (2%), suggesting that these are thought of as *Harvest of the Month* materials by some teachers.
- The remaining other responses included bookmarks and other promotional materials, Farmer of the Month, Dairy Council, recipe cards, online videos, food/produce samples, calendars, cookbooks, fruit/vegetable picture cards and resource kits.

- One possible explanation for the relatively low reported use of the website: it tends to be used by site coordinators and lead teachers who download the materials for the teachers to use in the classroom.

- Subgroup differences:
  - *K-2 teachers:* More likely than others to use the Family Newsletter.
  - *Middle school teachers:* Less likely to use the Family Newsletter; more likely to use posters.
  - *High school teachers:* Less likely to use shorter Educator Newsletter and Family Newsletter.
  - *Low implementation group:* Less likely to use posters and website.
  - *High implementation group:* More likely to use the Family Newsletter, website and menu slicks.
  - *Los Angeles region*: More likely to use the state version of the *Harvest of the Month* Newsletter and the website.
  - *Gold Country region*: More likely to use posters and menu slicks.
  - *Central Valley region*: More likely to use the shorter *Harvest of the Month* Newsletter.
  - *Balance of the state*: More likely to use the Family Newsletter and posters.

Table 1.6. Sections of State Newsletter Used on At Least Monthly Basis, Among Users (Q5)	
N =	681
Nutrition Facts	46%
Reasons to Eat	34
Cooking in Class/Recipe	30
Exploring California: Taste Testing	29
How Does It Grow?	29
Health and Learning	25
Just the Facts	21
How Much Do I Need?	19
Physical Activity Corner	15
Botanical Facts	14
Home Grown Facts	14
A Slice of History	13
Botanical Images	13
What's in a Name	13
Literature Links	8
Cafeteria Connections	7
School Garden	5
Adventurous Activities	4
Student Sleuths	4
Student Champions	2
None on a Monthly Basis	1
Don't know	0
Total	*346%**

* *Total exceeds 100% due to multiple responses and rounding.*

- When asked which sections of the state newsletter are used at least monthly, Nutrition Facts was the section most often selected followed by Reasons to Eat, Cooking in Class, Exploring California: Taste Testing, and the How Does It Grow? Section. Health and Learning, Just the Facts and How much Do I Need? were also mentioned with some frequency.

- The other sections were less popular. Some are used by very few teachers.

- Subgroup differences:*
  - *K-2 teachers:* (n=318) More likely than others to use Exploring CA: Taste Testing (35%), Cooking in Class (35%) and How Does It Grow (35%)?
  - *Grade 3-5 teachers:* (n=247) More likely to use How Much Do I Need? (27%).
  - *Middle school teachers:* (n=91) Less likely to use Exploring CA: Taste Testing (13%), Cooking in Class (18%), Reasons to Eat (19%) and How Does It Grow? (15%).
  - *High school teachers:* (n=55) Less likely to use Cooking in Class (13%), How Does It Grow? (15%), How Much Do I Need? (6%) and Nutrition Facts (33%).
  - *Low implementation group:* Less likely to use all of the sections *except* for Reason to Eat, Botanical Facts, Student Sleuths, A Slice of History and Literature Links.
  - *High implementation group:* More likely to use Health and Learning, Exploring CA: Taste Testing, Cooking in Class, How Does It Grow?, How Much Do I Need?, Cafeteria Connections, Home Grown Facts, Physical Activity Corner and Nutrition Facts.
  - *Los Angeles region*: More likely to use Cooking in Class, How Does It Grow?, How Much Do I Need?, A Slice of History, Home Grown Facts, Physical Activity Corner and Nutrition Facts.
  - *Gold Country region*: More likely to use Cooking in Class.

---

* *We examined subgroup differences only for those sections mentioned most often in the sample as a whole.*

Table 1.7. Other *Harvest of the Month* Materials/Activities Used, Among Users (Q6)	
N =	681
Harvest of the Month student workbooks	42%
Harvest of the Month postcards, stickers, pencils, or other promotional materials	29
Harvest of the Month Tasting Trio taste tests	26
Harvest of the Month lesson plans	23
Storybooks to supplement the *Harvest of the Month* Newsletter	20
Food samples/produce	3
Other	2
None	16
Don't know	2
Total	*163%**

* *Total exceeds 100% due to multiple responses and rounding.*

- In terms of other *Harvest of the Month* elements being used during the year, student workbooks are most common followed by promotional materials, the Tasting Trio taste tests, lesson plans and storybooks.

- Forty-six percent use some form of taste testing, either the Tasting Trios referenced above or the taste testing section of the state newsletter referenced in the preceding table.

- The workbooks and storybooks are targeted to elementary school teachers. Among them (K-5 combined), 49% used *Harvest of the Month* student workbooks and 24% used storybooks.

- The other responses included chefs in the classroom, books, student journals, bingo games, thinking maps, measuring tools, cutting utensils, worksheets downloaded from the website and gardening activities.

- Subgroup differences:
  - *K-2 teachers:* More likely than others to use workbooks, storybooks and promotional materials; less likely to report use of no materials.
  - *Middle school teachers:* Less likely to use workbooks, storybooks, and taste testing including the Tasting Trios; more likely to say none.

- *High school teachers:* Less likely to use workbooks, storybooks and promotional items.
- *Low implementation group:* Less likely to use workbooks, storybooks, Tasting Trios and the taste testing/Tasting Trios combination; more likely to say none.
- *Medium implementation group:* More likely to use workbooks, promotional materials.
- *High implementation group:* More likely to use taste testing including the Tasting Trios.
- *Orange County region:* More likely to use *Harvest of the Month* lesson plans and promotional materials.
- *Gold Country region:* More likely to use the *Harvest of the Month* workbooks and lesson plans; less likely to use any taste testing and to say none.
- *Balance of the state:* More likely to use the storybooks; less likely to use any taste testing.

Table 1.8. Other Nutrition Education/Promotional Resources Used, Among Users (Q7)	
N =	681
Dairy Council of California materials	44%
www.mypyrmaid.gov materials	25
Other postcards, stickers, pencils, or promotional materials	17
Power Play! School Idea & Resource Kit (SIRK)	6
Rethink Your Drink materials	5
Other	<1
None	28
Don't know	2
Total	*127%**

* *Total exceeds 100% due to rounding.*

- When we asked about other nutrition education resources in use during the year, Dairy Council materials were selected by 44% of teachers while 25% reported use of mypyramid.gov materials.
- The target audience for *Power Play!* is fourth and fifth grade teachers. Among this group, 24% reported use of these materials.
- Seventeen percent reported use of postcards, stickers and other promotional items.
- Few reported use of *Rethink Your Drink* materials.
- The other responses were: physical activity equipment, health textbooks, Scholastic magazines, documentaries such as *Food Inc.* and *Supersize Me*, food/produce samples, news magazines and science materials.
- About one in four (28%) reported use of no other nutrition education or promotional materials.
- Use of any of the materials and activities was strongly related to grades taught: 22% of K-2 teachers, 30% of grade 3-5 teachers, 50% of middle school teachers and 53% of high school teachers used other nutrition education resources.

- Subgroup differences:*
  - *K-2 teachers:* More likely than others to use Dairy Council materials.
  - *Middle school teachers:* Less likely to use Dairy Council materials; more likely to say none.
  - *High school teachers:* More likely to say none; less likely to use Dairy Council items.
  - *Low implementation group:* Less likely to use www.mypyramid.gov, Dairy Council items, *Rethink Your Drink* and promotional materials; more likely to say none.
  - *Medium implementation group:* More likely to use Dairy Council items.
  - *High implementation group:* More likely to use www.mypyramid.gov, Dairy Council items, *Rethink Your Drink* and promotional materials; less likely to say none.
  - *Gold Country region:* More likely to use *Power Play!* and *Rethink Your Drink* materials.
  - *Orange County region:* More likely to use www.mypyramid.gov.
  - *Los Angeles region:* More likely to use Dairy Council items.
  - *Power Play!*: Among 4th and 5th grade teachers, 24% reported use of *Power Play!* Fifteen percent of Gold Country teachers (n=59) reported use of the materials compared with 7% in Los Angeles (n=377), 4% in the Bay Area (n=25) and 2% in the Central Valley (n=54). There were no *Power Play!* users in the other regions.

* *We examined subgroup differences only for those sections mentioned most often.*

Table 1.9. Average Monthly Number of Times *Harvest of the Month* Activities Implemented, Among Users (Q8)	
N =	681
1 time	31%
2 - 3 times	34
More than 3 times	30
Don't know/Refused	5
Total	*101%**

* *Total exceeds 100% due to rounding.*

- An impressive 30% of teachers offer *Harvest of the Month* four or more times in an average month. One-third offer it 2-3 times, while another third offer it once in an average month.

- These data indicate that the *Harvest of the Month* activities are being used quite often in classrooms.

- Monthly usage is directly related to grade level taught. Teachers in lower grade levels are much more likely to implement activities multiple times in a month, while the converse is true for higher grade levels. For example, 56% of high school teachers reported only 1 time per month, while less than half that number (26%) of K-2 teachers reported only 1 time.

- Subgroup differences:
  - *High school teachers*: More likely to have implemented *Harvest of the Month* activities once per month; less likely to have done so 2 to 3 times per month.
  - *Regional differences:* Los Angeles and Orange County teachers were likely to be engaging in *Harvest of the Month* activities more frequently than their counterparts in other regions. In Los Angeles, 35% reported use of the tools four or more times per month; in Orange County, 29% did. This is compared with 22% in the Gold Country, 17% in the Central Valley and 21% in the balance of the state.

Table 1.10. Average Amount of Time Spent on *Harvest of the Month*, Among Users Q9)	
N =	681
1-5 minutes	1%
6-15 minutes	22
16-30 minutes	16
31-60 minutes	27
1-2 hours	18
2-3 hours	12
More than 3 hours	3
Refused	1
Total	*100%*

- There is a high degree of variability in the amount of time spent on *Harvest of the Month* in an average month.
- Twenty-three percent of respondents reported spending 15 minutes or less. Forty-three percent reported spending 16-60 minutes. Another one-third reported spending one hour or more.
- Subgroup differences:
  - *K-2 teachers:* More likely than others to say they spent 1-2 hours on *Harvest of the Month.*
  - *Grade 3-5 teachers:* More likely than others to say they spent 31-60 minutes on *Harvest of the Month.*
  - *High school teachers:* More likely than others to say they spent 6-15 minutes on *Harvest of the Month.*
  - *Low implementation group:* More likely to say 16-30 minutes; less likely to say 1-2 hours, 2-3 hours or 3 or more hours.
  - *Medium implementation group:* Less likely to say 6-15 minutes and 3 or more hours; more likely to 31-60 minutes.
  - *High implementation group:* Less likely to report 6-15 minutes, 16-30 minutes and 31-60 minutes; more likely to report 1-2 hours, 2-3 hours and 3 or more hours.

- *Los Angeles region:* More likely to report 6-15 minutes: less likely to say 16-30 minutes.
- *Orange County region:* More likely to say 16-30 minutes.
- *Gold Country region:* More likely to say 31-60 minutes; less likely to say 6-15 minutes.
- *Central Valley region:* Less likely to say 1-2 hours.
- *Balance of the state:* More likely to say 16-30 minutes.

Table 1.11. Frequency of Implementing Specific Activities, Among Users (Q10) (n=681)							
	Monthly Participation						
	Never	Less than once	Once	2-3 times	4 or more times	DK/Ref	Total
Tasting the produce only	3%	5	63	13	9	7	100%
Tasting the produce as part of a prepared recipe	11%	14	49	10	7	10	101%*
Classroom cooking using teacher demonstrations	30%	20	28	5	4	14	101%*
Classroom cooking with student participation	35%	21	22	5	3	14	100%

* *Total exceeds 100% due to rounding.*

- Produce taste testing is a once-a-month activity for the majority (63%) of teachers; an additional one in five (22%) engage in it two or more times per month.
- Taste testing as part of a prepared recipe is a once-a-month activity for 49% of teachers; another 17% engage in it even more often.
- There is very strong overlap between the two tasting measures. The majority of those reporting at least once for tasting with produce only, reported the same for tasting as part of a prepared recipe. Large numbers of teachers doing taste testing appear to be doing both forms.
- Classroom cooking, either with or without student participation, is less likely to take place at least once per month. The majority of teachers (56%) reported involving students either less than once per month or never. Fifty percent reported either no teacher demonstrations or only on a less than once-a-month basis.
- A total of 95% reported engaging in at least one of the forms of taste testing one or more times per month. Sixty percent reported engaging in at least one of the forms of classroom cooking one or more times per month. A total of 96% reported engaging in one or the other activity at least monthly.

- Subgroup differences:
  - *K-2 teachers*: More likely to say use of tasting produce only, teacher cooking demonstrations and cooking demonstrations with student involvement.
  - *Middle school teachers:* Less likely to say use of tasting as part of a recipe, use of teacher cooking demonstrations and cooking demonstrations with student involvement.
  - *High school teachers:* More likely to say use of tasting as part of a recipe.
  - *Low implementation group:* Less likely to say use of tasting produce only, tasting produce as part of a recipe, teacher cooking demonstrations and cooking demonstrations with student involvement.
  - *Medium implementation group:* Less likely than others to tasting produce only.
  - *High implementation group:* More likely to say use of tasting produce only, tasting produce as part of a recipe, teacher cooking demonstrations and cooking demonstrations with student involvement.
  - *Los Angeles region:* More likely to say use of tasting as part of a recipe, use of teacher cooking demonstrations and cooking demonstrations with student involvement.
  - *Orange County region:* Less likely to say use of teacher cooking demonstrations and cooking demonstrations with student involvement.
  - *Central Valley region:* More likely to say use of tasting produce only; less likely to say use of tasting as part of a recipe, use of teacher cooking demonstrations and cooking demonstrations with student involvement.
  - *Balance of the state:* Less likely to use tasting produce as part of a recipe.

Table 1.12. Frequency of Students Performing Specific Activities, Among Users (Q11) (n=681)							
	Monthly Participation						
	Never	Less than once	Once	2-3 times	4 or more times	DK/Ref	Total
Listen to nutrition information on featured produce being read aloud	4%	8	49	23	11	5	100%
Participate in active large or small group discussions on featured produce	7%	10	47	20	9	7	100%
Use workbooks or activity sheets on featured produce	23%	13	36	13	6	9	100%
Do creative art projects focused on featured produce	36%	26	17	8	1	12	100%
Report back on information gathered about featured produce	45%	15	18	6	1	15	100%
Do research on featured produce	45%	20	16	4	1	15	101%*

* *Total exceeds 100% due to rounding.*

- In terms of student activities, almost half of teachers read to students (49%) and lead discussions (47%) once per month, and a sizeable number engage in these activities even more frequently.
- About one-third (36%) of teachers use workbooks or activity sheets once a month with students with an additional 19% using them two or more times per month.
- Among K-2 teachers only 15% never use workbooks or activity sheets with students, 15% use them less than once, 38% use them once, 15% 2 or 3 times per month and 9% use them more than 4 times per month.
- Among grade 3-5 teachers only, 20% said they never use workbooks or activity sheets with students, 13% use them less than once, 35% use them once, 16% 2 or 3 times and 5% use them more than 4 times per month.
- Research, reports and creative art projects are far less common in the classroom. The majority either never engages in these activities or does so less than once per month.

- Subgroup differences:
  - *K-2 teachers:* More likely than others to say listening to nutrition education information, active discussions, workbook or activity sheet use and creative art projects; less likely to say they report back on information.
  - *Middle school teachers:* Less likely than others to report active discussions, workbook or activity sheet use and creative art projects.
  - *High school teachers:* Less likely than others to report active discussions, workbook or activity sheet use: more likely to do research on produce.
  - *Low implementation group:* Less likely to report student use of all the specific activities.
  - *High implementation group:* More likely to report student use of all the specific activities.
  - *Los Angeles region:* More likely than others to say research on produce, workbook or activity sheet use, creative art projects and report back on information.
  - *Gold Country region:* Less likely to say research on produce and report back on information; more likely to say workbook or activity sheet use.
  - *Central Valley region:* Less likely than others to say research on produce, workbook or activity sheet use, creative art projects and report back on information.
  - *Balance of the state:* Less likely than other regions to report student workbook or activity sheet use, creative art projects and report back on information.
  - *1-5 years with Harvest of the Month:* Less likely than those with more years of experience to be assigning creative art projects.
  - *6-10 years with Harvest of the Month:* More likely than those with more years of experience to be assigning creative art projects.

2.0 Integrating *Harvest of the Month* into the Core Curriculum

A major concern of teachers is that *Harvest of the Month* content be integrated with the core academic curriculum. This section of the report presents these data.

Table 2.1. Most Important Subjects that *Harvest of the Month* Should Focus On, Among Entire Sample (Q12) (n=751)							
	Level of Importance						
	Least (1)	(2)	(3)	(4)	Most (5)	DK/Ref	Total
Health	1%	2	5	10	78	5	101%*
Physical Education	5%	6	13	27	41	10	102%*
Science	5%	8	22	33	23	9	101%*
Home economics/Life skills	9%	9	18	23	29	12	100%
English/Language arts	10%	12	25	21	21	11	100%
Mathematics	12%	16	27	19	17	10	101%*
History/Social science	15%	21	26	16	7	16	101%*

* *Total exceeds 100% due to rounding.*

- There is very broad and strong agreement that *Harvest of the Month* content should be integrated into health and physical education curricula.
- Many also support linking it to science and home economics/life skills curricula.
- Interestingly, fewer thought it important to link *Harvest of the Month* to English, math and social science curricula. This is despite previous reports of interest in linkage to these tested subjects.
- Subgroup differences:
  - *K-2 teachers*: More likely to rate English/language arts as important.
  - *Middle school teachers*: More likely to rate home economics/ life skills as important.
  - *High school teachers:* More likely to rate home economics/life skills as important; less likely to rate math and physical education as important.

3.0 Promoting *Harvest of the Month*

We collected survey information on how to best persuade teachers to make use of *Harvest of the Month* tools. These data are presented in this section of the report.

Table 3.1. Argument Most Likely to Influence Other Teachers, Among Entire Sample (Q13)	
N =	751
Harvest of the Month exposes students to different types of fruits and vegetables	44%
Harvest of the Month educates students about nutrition and its importance	29
Harvest of the Month engages and excites students	10
Harvest of the Month influences what families serve at home	2
Other	<1
I wouldn't recommend *Harvest of the Month*	1
Don't know/Refused	14
Total	*100%*

- The survey data indicate that the value of exposing students to fruit and vegetables, and the importance of nutrition education, are viewed as the most persuasive arguments for *Harvest of the Month* participation. Respondents were asked to choose only one response to this question.
- The other responses had to do with the idea that the tools are free and conform well to curriculum standards.
- Subgroup differences:
  - *K-2 teachers*: Less likely than others to say *Harvest of the Month* educates students about nutrition.
  - *Middle school teachers*: Less likely than others to say *Harvest of the Month* engages and excites students.
  - *High school teachers*: Less likely than others to say *Harvest of the Month* exposes students to different types of fruits and vegetables; more likely to say they wouldn't recommend *Harvest of the Month.*

4.0 Enhancing *Harvest of the Month*

A major goal of the study was to collect data on how *Harvest of the Month* can be enhanced. These data are presented in this section of the report.

Table 4.1. Biggest Challenges in Implementing *Harvest of the Month*, Among Entire Sample (Q14) (n=751)							
	Level of Challenge						
	Least (1)	(2)	(3)	(4)	Most (5)	DK/Ref	Total
It takes too much class time	25%	18	18	12	20	8	101%*
Lack of equipment for activities	24%	14	19	15	17	12	101%*
Lack of ingredients for activities	25%	15	19	14	15	12	100%
Too little cafeteria support	33%	13	11	10	12	22	101%*
Lack of lesson plans tied to curriculum standards	27%	16	20	12	11	14	100%
Materials/activities are not in a ready-to-use format for teachers	35%	13	19	9	12	13	101%*
Materials are not grade-appropriate	46%	14	13	7	6	15	101%*
Too little administrative support	44%	12	10	5	6	23	100%
Not receiving materials on time	<1%	0	0	0	1	99	100%
Other priorities to focus on	<1%	0	0	0	1	99	100%

* *Total exceeds 100% due to rounding.*

- The amount of time and lack of equipment and ingredients are viewed as significant challenges by the largest number of teachers. About one-third of each rated these challenges as a 4 or 5 on the 5-point scale. The balance of teachers rated these challenges as more manageable.

- Lack of lesson plans, ready-to-use resources, and too little cafeteria support are viewed as significant challenges by about one in five teachers.

- Grade-appropriateness problems and insufficient administrative support concerns are viewed as significant by only about one in ten teachers.

- Subgroup differences:
  - *K-2 teachers:* Less concern than others about amount of class time, lack of lesson plans and lack of equipment.
  - *Grade 3-5 te*achers: Less concern than others about grade-appropriateness of material and lack of administrative support.
  - *Middle school teachers:* More concern about amount of class time and lack of lesson plans.

- *High school teachers:* More concern than others about materials not being ready to use, grade-appropriateness of materials and lack of cafeteria support.
- *Los Angeles region:* More likely than other regions to report little cafeteria support.
- *Orange County region:* More likely than others to have increased concern about lack of ingredients for activities and amount of class time.
- *Gold Country region:* Less likely than other regions to report little cafeteria support and amount of class time.
- *Balance of the state:* More likely than others to say grade-appropriateness of material.
- *1-5 years with Harvest of the Month:* Less likely than those with more years of experience to have increased concern about lack of ingredients for activities.
- *6-10 years with Harvest of the Month:* More likely than others to have increased concern about lack of ingredients for activities.
- *Harvest of the Month Users:* In assessing differences between *Harvest of the Month* users (n=681) versus non-users (n=70) we collapsed the challenge level ratings into low (1-2), medium (3) and high (4-5) groups. Users were significantly more likely to fall into the low challenge rating group on all the measures. Non-users were more likely to fall into the high challenge group on three measures, those related to materials not being ready to use, lack of lesson plans and amount of class time.

Table 4.2. Sections of State Newsletter to Drop, Among Entire Sample (Q15) (n=751)				
	Keep	Drop	DK/ Ref	Total
Cafeteria Connections	57%	39	5	101%*
Student Champions	60%	35	5	100%
Student Sleuths	61%	35	4	100%
Botanical Facts	67%	29	4	100%
What's in a Name	70%	25	4	99%*
School Garden	73%	24	3	100%
Adventurous Activities	78%	19	4	101%*
A Slice of History	79%	17	4	100%
Home Grown Facts	80%	16	4	100%
Literature Links	82%	16	2	100%
Botanical Images	83%	14	3	100%
Just the Facts	86%	11	3	100%
Physical Activity Corner	85%	11	4	100%
Cooking in Class/Recipe	87%	10	3	100%
Exploring California: Taste Testing	87%	10	3	100%
How Much Do I Need?	88%	10	3	101%*
How Does It Grow?	88%	9	3	100%
Health and Learning	89%	8	3	100%
Reasons to Eat	93%	4	3	100%
Nutrition Facts	95%	3	2	100%

* *Total does not equal 100% due to rounding.*

- Cafeteria Connections, Student Sleuths, Student Champions, Botanical Facts, What's in a Name and the School Garden led the list of sections that should be dropped in order to shorten the state newsletter. One-quarter or more of teachers indicated their support for dropping them.

- Subgroup differences:[**]
  - *K-2 teachers*: More likely to respond that School Garden should be kept.
  - *High school teachers*: Less likely than other grade levels to say that Botanical Facts should be dropped.
  - *High implementation* group: More likely to say keep Cafeteria Connections and School Garden; less likely to say drop Cafeteria Connections and School Garden.
  - *Low implementation gr*oup: More likely to say drop Student Champions; less likely to say keep Student Champions.
  - *Gold Country region:* More likely to say that What's in a Name? should be dropped.

[**] We ran subgroup differences only for the highest ranking sections based on the "drop" percentage.

Table 4.3. Most Important Modifications to State Newsletter, Among Entire Sample (Q16) (n=751)							
	Level of Importance						
	Least (1)	(2)	(3)	(4)	Most (5)	DK/ Ref	Total
There should be more emphasis on activities that are easy to implement in the classroom	6%	4	16	23	40	12	101%*
There should be more emphasis on activities that take little or no time to prepare	6%	5	16	23	38	13	101%*
It should contain lesson plans that link to the core curriculum	10%	8	17	24	30	11	100%
It should have content that is more grade-appropriate for lower elementary kids	14%	9	17	17	28	16	101%*
It should be shorter	29%	8	20	12	14	17	100%
It should give more stress to why nutrition issues are important for teachers	25%	13	21	13	12	15	99%*
It should have content that is more grade-appropriate for high school level kids	27%	7	12	7	10	37	100%
Should be available in Spanish	0%	0	0	0	<1	100	100%
Other	<1%	0	0	0	<1	100	100%

* *Total does not equal 100% due to rounding.*

- Despite the previously presented data on items to drop, many teachers do not feel strongly about shortening the Educator Newsletter. Only 26% rated it as 4 or 5 on the scale of importance. Furthermore, there were no significant differences in attitudes between those using the state version of the newsletter and those using the shorter version.

- A majority want more emphasis in the newsletter on easy to implement classroom activities (63%), those requiring minimal preparation (61%) and on lesson plans tied to the core curriculum (54%).

- Forty-five percent want more grade-appropriate content for lower elementary level students. Seventeen percent want more grade-appropriate content for high school students.

- One-quarter want the newsletter to give more stress to why nutrition issues are important to teachers.

- The other responses, which were very few in number, included the addition of puzzles, quizzes, links to the web, grade-appropriate lesson plans related to the core curriculum, a parent section and arts and crafts.

- Subgroup differences:
  - *K-2 teachers:* More concern than others about material grade-appropriateness for lower elementary grades; less concern for grade-appropriateness of materials for high school grades.
  - *Grade 3-5 teachers:* Less concern than others about grade-appropriateness for lower elementary grades and high school grades, lesson plans and about stressing why nutrition is important.
  - *Middle school teachers:* More concern about lesson plans, grade-appropriateness of materials for high school grades and stressing importance of nutrition; less concern about grade-appropriateness of materials for lower elementary school grades.
  - *High school teachers:* More concern about grade-appropriateness for high school level grades; less concern about grade-appropriateness for lower elementary grades.
  - *Los Angeles region:* More concern than other regions for about grade-appropriateness for lower elementary and high school grades, lesson plans and about stressing why nutrition is important.
  - *Orange County region:* Less concern about stressing why nutrition is important.
  - *Gold Country region:* Less concern than other regions for about grade-appropriateness for lower elementary and high school grades, lesson plans and about stressing why nutrition is important.
  - *Balance of the state:* Less concern than other regions about lesson plans.
  - *10+ years with Harvest of the Month:* Less concern than those with fewer years of experience about lesson plans and grade-appropriateness for lower elementary grades.
  - *Harvest of the Month Users*: When doing the subgroup differences analysis for users versus non-users we collapsed the challenge level ratings into low (1-2), medium (3) and high (4-5) groups. We found differences on three of the measures. Users were more likely to fall in the low group on the measures related to minimal preparation, lesson plans and grade-appropriateness for high school grades.

Table 4.4. Other Enhancements Besides Those Related to Educator Newsletter, Among Entire Sample (Q17)	
N =	751
Grade-appropriate student activity worksheets	46%
Grade-appropriate teacher activity packets	36
Other ready-to-use activities and materials	34
Grade-appropriate student workbooks	33
More online resources	13
Other	5
Don't know/No opinion	15
Total	*182%**

* *Total exceeds 100% due to multiple responses and rounding.*

- In addition to the Educator Newsletter changes, there was significant interest in more grade-appropriate worksheets followed by grade-appropriate workbooks, grade-appropriate teacher activity packets and other ready-to-use activities and materials. Respondents were presented with this list of possible enhancements and asked to select up to three.**

- Surprisingly, few teachers indicated the need for more online resources in the survey. As reported above, online resources may be more important to school coordinators or lead teachers.

- The few other survey responses included provision of more or better food/produce, other cooking ingredients and cooking equipment.

- Respondents were asked to provide written comments about their choices. The over-arching theme was that worksheets, workbooks and other materials help to reinforce the concepts discussed in class and are important for the learning process. They are also engaging and popular with students.

- Others commented that dot-to-dot and fill in exercises, puzzles, coloring books and other resources that are "hands-on" and "manipulate-able" get student attention and this is important. In addition, it is vital for the materials to be grade-appropriate, especially for pre-K, K, and lower grades. Also, they need to be ready-to-use, given the lack of teacher preparation time, and not be time consuming to implement in the classroom.

** Many expressed a preference for multiple enhancements.

- Some argued for more materials suitable for speakers of Spanish and other languages as well as those with limited reading abilities, the disabled and special education students. There was support for workbooks and worksheets relating more directly to the featured produce so that learning can be enhanced. Many also stressed the importance of *Harvest of the Month* integration into the subjects being taught; given the size and diversity of the survey sample, the subjects varied greatly.

- Other comments included the importance of distributing enough copies of materials given limited school reproduction capabilities; the value of having more advance notice of what will be available to make planning easier; more timely delivery of materials; more activities that can be done at home; and, more whole produce (i.e. that does not need to be cut up) and other ingredients and supplies to make cooking in the classroom easier.

- Subgroup differences:
  - *Middle school teachers:* More interested in online resources.
  - *Low implementation group*: Less interested in grade-appropriate teacher activity packets.
  - *Medium implementation group*: More interested in grade-appropriate student activity packets.
  - *High implementation group*: More interested in grade-appropriate teacher activity packets.
  - *Gold Country region:* Less interested than other regions in grade-appropriate teacher activity packets.
  - *Orange County region:* More interested than other regions in ready-to-use activities and materials and grade-appropriate teacher activity packets.
  - *1-5 years with Harvest of the Month:* Less interested than those with more years of experience in grade-appropriate teacher activity packets.
  - *6-10 years with Harvest of the Month:* More interested in grade-appropriate teacher activity packets.

Table 4.5. If Enhanced, Time to be Spent on *Harvest of the Month*, Among Entire Sample (Q18)	
N =	751
1-5 minutes	2%
6-15 minutes	37
16-30 minutes	9
31-60 minutes	18
1-2 hours	16
2-3 hours	13
More than 3 hours	3
Don't know/Refused	3
Total	*101%**

* *Total exceeds 100% due to rounding.*

- Thirty-nine percent of respondents report that they will spend 15 minutes or less on *Harvest of the Month* if it is enhanced. This is compared to 23% who presently spend this amount of time.
- Twenty-seven percent would spend 16-60 minutes if the tools were enhanced, compared to the 43% who now report that they spend this amount of time.
- Another 32% report they will spend an hour or more, about the same as now (33%).
- Except for those who spend the most time on *Harvest of the Month* (i.e. an hour or more), these data indicate that most teachers expect to spend less time if enhancements to *Harvest of the Month* are made. They view them as time saving.
- While the survey question referred to time in the classroom, we believe that respondents may not have always understood it that way and instead reported total time including time for preparation.
- Subgroup differences:
  - *High school teachers*: More likely to say they would spend less time on *Harvest of the Month* if it is enhanced.
  - *Low implementation group:* More likely to say they would spend less time on *Harvest of the Month* if it is enhanced.
  - *High implementation group:* More likely to say they would spend more time on *Harvest of the Month* if it is enhanced.

5.0 Family Newsletter

One important *Harvest of the Month* resource is the Family Newsletter which is designed to take nutrition education messages into the home. The survey asked teachers about their efforts to distribute the newsletter. These data are presented in this section of the report.

Table 5.1. Frequency of Family Newsletter Distribution, Among Entire Sample (Q19-20)	
N =	751
Never	4%
Sometimes	11
Always	47
Don't know	3
Teachers not responsible at my school	35
Total	*100%*

- Just under half of teachers say they always distribute the Family Newsletter. This amounts to more than 70% of those teachers who are responsible for newsletter distribution in their schools.
- Few say they only sometimes or never distribute the newsletter.
- About one-third of teachers are not responsible for the newsletter's distribution within their school.
- Subgroup differences:
  - *K-2 teachers:* Less likely than others to say they never distribute the Family Newsletter.
  - *Grade 3-5 teachers:* Less likely to say they never distribute the newsletter.
  - *Middle school teachers:* More likely to say they never distribute the newsletter.
  - *High school teachers:* Less likely to say it is their role to distribute the newsletter.
  - *Los Angeles region:* Less likely to say it is their role to distribute the newsletter and that they always distribute the newsletter; more likely to say they sometimes distribute the newsletter.
  - *Orange County region:* More likely to say it is their role to distribute the newsletter.
  - *Central Valley region:* More likely to say they always distribute the newsletter.
  - *Balance of the state:* More likely to say they always distribute the newsletter and to say it is their role to distribute the newsletter.

6.0 Summary of Grade Level Differences

This section of the report summarizes all of the significant differences in study data based on the grade level of the teacher.

K-2 Teachers

- *Who Delivers HOTM:* More likely than others to report team teaching.
- *Tools Being Used:* More likely than others to use the Family Newsletter.
- *Newsletter Sections Being Used:* More likely than others to use Exploring CA: Taste Testing, Cooking in Class, and How Does It Grow?
- *Other Harvest of the Month Activities/Materials Being Used:* More likely than others to use workbooks, storybooks and promotional materials; less likely to report use of no materials.
- *Other Resources Being Used:* More likely than others to use Dairy Council materials.
- *Amount of Time Spent:* More likely than others to say they spent 1-2 hours on *Harvest of the Month*, significantly more than most teachers.
- *Frequency of Specific Activities:* More likely to say use of tasting produce only, teacher cooking demonstrations and cooking demonstrations with student involvement.
- *Frequency of Student Activities:* More likely than others to say listening to nutrition education information, active discussions, workbook or activity sheet use and creative art projects; less likely to say they report back on information.
- *Integrating Into Curriculum:* More likely to rate English/language arts as important.
- *Most Persuasive Argument:* Less likely than others to say *Harvest of the Month* educates students about nutrition.
- *Biggest Implementation Challenges:* Less concern than others about amount of class time, lack of lesson plans and lack of equipment.

- *Educator Newsletter Sections to Drop:* More likely to respond that School Garden should be kept.
- *Most Important Educator Newsletter Modifications:* More concern than others about material grade-appropriateness for lower elementary grades; less concern for grade-appropriateness of materials for high school grades.
- *Family Newsletter:* Less likely than others to say they never distribute the Family Newsletter.

Grade 3-5 Teachers

- *Newsletter Sections Being Used:* More likely to use How Much Do I Need?
- *Time Spent:* More likely than others to say they spent 31-60 minutes on *Harvest of the Month*, about the average.
- *Biggest Implementation Challenges:* Less concern than others about grade-appropriateness of material and lack of administrative support.
- *Most Important Modifications to Educator Newsletter:* Less concern than others about grade-appropriateness for lower elementary grades and high school grades, lesson plans and about stressing why nutrition is important.
- *Family Newsletter:* Less likely to say they never distribute the newsletter.

Middle School Teachers

- *Tools Being Used:* Less likely to use the Family Newsletter; more likely to use posters.
- *Newsletter Sections Being Used:* Less likely to use Exploring CA: Taste Testing, Cooking in Class, Reasons to Eat and How Does It Grow?
- *Other Harvest of the Month Activities/Materials Being Used:* Less likely to use workbooks, storybooks, and taste testing including the Tasting Trios; more likely to say none.
- *Other Resources Being Used:* Less likely to use Dairy Council materials; more likely to say none.
- *Frequency of Implementing Specific Activities:* Less likely to say use of tasting as part of a recipe, use of teacher cooking

demonstrations and cooking demonstrations with student involvement.

- *Frequency of Student Activities:* Less likely than others to report active discussions, workbook or activity sheet use and creative art projects.
- *Integrating Into Curriculum:* More likely to rate home economics/life skills as important.
- *Most Persuasive Argument:* Less likely than others to say *Harvest of the Month* engages and excites students.
- *Biggest Implementation Challenges:* More concern about amount of class time and lack of lesson plans.
- *Most Important Newsletter Modifications:* More concern about lesson plans, grade-appropriateness of materials for high school grades and stressing importance of nutrition; less concern about grade-appropriateness of materials for lower elementary school grades.
- *Other Enhancements Besides Newsletter:* More interested in online resources.
- *Family Newsletter:* More likely to say they never distribute the newsletter.

High School Teachers

- *Tools Being Used:* Less likely to use shorter Educator Newsletter and Family Newsletter.
- *Education Newsletter Sections Used:* Less likely to use Cooking in Class, How Does It Grow? How Much Do I Need? and Nutrition Facts.
- *Other Materials/Activities Being Used:* Less likely to use workbooks, storybooks and promotional items.
- *Other Resources Being Used:* More likely to say none; less likely to use Dairy Council items.
- *Frequency of Using:* More likely to have implemented *Harvest of the Month* activities once per month; less likely to have done so 2 to 3 times per month.

- *Amount of Time Being Spent:* More likely than others to say they spent 6-15 minutes on *Harvest of the Month*, significantly less than most teachers.
- *Frequency of Specific Activities:* More likely to say use of tasting as part of a recipe.
- *Frequency of Student Activities:* Less likely than others to report active discussions, workbook or activity sheet use; more likely to do research on produce.
- *Integrating Into Curriculum:* More likely to rate home economics/life skills as important; less likely to rate math and physical education as important.
- *Most Persuasive Argument:* Less likely than others to say *Harvest of the Month* exposes students to different types of fruits and vegetables; more likely to say they wouldn't recommend *Harvest of the Month*.
- *Biggest Implementation Challenges:* More concern than others about materials not being ready to use, grade-appropriateness of materials and lack of cafeteria support.
- *Sections of Educator Newsletter to Drop:* Less likely than other grade levels to say that Botanical Facts should be dropped.
- *Other Important Modifications to Educator Newsletter:* More concern about grade-appropriateness for high school level grades; less concern about grade-appropriateness for lower elementary grades.
- *How Much Time They Would Spend if Modified:* More likely to say they would spend less time on *Harvest of the Month* if it is enhanced.
- *Family Newsletter:* Less likely to say it is their role to distribute the newsletter.

7.0 Summary of Implementation Differences

This section of the report summarizes all of the significant differences in study data based on the level of implementation.

Low Implementation group

- *Tools Being Used:* Less likely to use posters and website.
- *Newsletter Sections Being Used:* Less likely to use all of the sections *except* for Reason to Eat, Botanical Facts, Student Sleuths, A Slice of History and Literature Links.
- *Other Materials/Activities Being Used:* Less likely to use workbooks, storybooks, Tasting Trios and the taste testing/Tasting Trios combination; more likely to say none.
- *Other Resources Being Used:* Less likely to use www.mypyramid.gov, Dairy Council items, *Rethink Your Drink* and promotional materials; more likely to say none.
- *Amount of Time Being Spent:* More likely to say 16-30 minutes; less likely to say 1-2 hours, 2-3 hours or 3 or more hours.
- *Frequency of Specific Activities:* Less likely to say use of tasting produce only, tasting produce as part of a recipe, teacher cooking demonstrations and cooking demonstrations with student involvement.
- *Frequency of Student Activities:* Less likely to report student use of all the specific activities.
- *Sections of Educator Newsletter to Drop:* More likely to say drop Student Champions; less likely to say keep Student Champions.
- *Other Enhancements Besides Newsletter:* Less interested in grade-appropriate teacher activity packets.
- *How Much Time They Would Spend if Modified:* More likely to say they would spend less time on *Harvest of the Month* if it is enhanced.

Medium Implementation group

- *Other Materials/Activities Being Used:* More likely to use workbooks, promotional materials.
- *Other Resources Being Used:* More likely to use Dairy Council items.
- *Amount of Time Being Spent:* Less likely to say 6-15 minutes and 3 or more hours; more likely to 31-60 minutes.
- *Frequency of Specific Activities:* Less likely than others to tasting produce only.
- *Other Enhancements Besides Newsletter:* More interested in grade-appropriate student activity packets.

High Implementation group

- *Tools Being Used:* More likely to use the Family Newsletter, website and menu slicks.
- *Newsletter Sections Being Used:* More likely to use Health and Learning, Exploring CA: Taste Testing, Cooking in Class, How Does It Grow?, How Much Do I Need?, Cafeteria Connections, Home Grown Facts, Physical Activity Corner and Nutrition Facts.
- *Other Materials/Activities Being Used:* More likely to use taste testing including the Tasting Trios.
- *Other Resources Being Used:* More likely to use www.mypyramid.gov, Dairy Council items, *Rethink Your Drink* and promotional materials; less likely to say none.
- *Amount of Time Being Spent:* Less likely to report 6-15 minutes, 16-30 minutes and 31-60 minutes; more likely to report 1-2 hours, 2-3 hours and 3 or more hours.
- *Frequency of Specific Activities:* More likely to say use of tasting produce only, tasting produce as part of a recipe, teacher

cooking demonstrations and cooking demonstrations with student involvement.

- *Frequency of Student Activities:* More likely to report student use of all the specific activities.
- *Sections of Educator Newsletter to Drop:* More likely to say keep Cafeteria Connections and School Garden; less likely to say drop Cafeteria Connections and School Garden.
- *Other Enhancements Besides Newsletter:* More interested in grade-appropriate teacher activity packets.
- *How Much Time They Would Spend if Modified:* More likely to say they would spend more time on *Harvest of the Month* if it is enhanced.

Conclusions & Recommendations

This section of the report presents conclusions and recommendations flowing from the study.

- **Although six in ten schools are implementing *Harvest of the Month*, the four in ten that are not present a target of opportunity in efforts to expand participation.**

These schools were reported as "zero implementation" schools by LIA coordinators. We do not have data on why they are not implementing *Harvest of the Month* but these schools could represent an important target of opportunity for future efforts to expand *Harvest of the Month* use.

- **Efforts to promote *Harvest of the Month* to teachers should stress the importance of nutrition education given current concerns about weight-related disease and the practical role that *Harvest of the Month* can play.**

Teachers believe that the best arguments for teacher participation are that *Harvest of the Month* exposes students to fruits and vegetables and teaches them the importance of sound nutrition. Promotional messages should focus on these persuasive arguments.

- **Among those schools implementing *Harvest of the Month*, study data suggest that the overwhelming majority of targeted teachers implemented it in the last year.**

Our data show that 90% of teachers in these schools used *Harvest of the Month* in the last year, a very high rate of use. Even allowing for the possibility that some non-participating teachers were non-responders to the survey, the study indicates that very large numbers are participating.

- **The most common reasons for non-use are concerns about the amount of time involved and a belief that other activities are more important.**

While the latter may be a difficult barrier to overcome, the study points to a number of steps that might be taken to reduce the amount of time involved with *Harvest of the Month* participation. The other reasons – not receiving materials and lack of knowledge about *Harvest of the Month* – can be

effectively addressed through improved distribution, training and communications efforts.

- **Many teachers make use of *Harvest of the Month* frequently throughout the month.**

One-third of teachers offer *Harvest of the Month* four or more times in an average month and an additional one-third offer it two or three times. Even though most teachers do not report spending a lot of time on *Harvest of the Month* in an average month, this repetition is powerful from both a persuasive communication and learning standpoint.

- **The Educator and Family Newsletters were the most commonly used *Harvest of the Month* tools during the school year.**

Six in ten use the state version of the Educator Newsletter and four in ten report use of the shorter version. About four in ten also report use of the Family Newsletter but this represents more than 70% of those teachers who play a role in its distribution. Fewer report use of the posters, website and menu slicks.

- **Student workbooks and taste testing are also used by many teachers.**

They are used more often than lesson plans, storybooks and promotional materials. Among elementary teachers, the target audience, 49% reported use of the workbooks. Forty-six percent of all teachers reported use of either the Tasting Trios or the taste testing section of the Educator Newsletter.

- **In terms of other nutrition education and promotional resources, those of Dairy Council are the most commonly reported.**

Dairy Council materials were used during the year by 44% of teachers. One-quarter report using www.mypyramid.gov and 17% said they used postcards, stickers and various other promotional items. Twenty-four percent of 4th and 5th grade teachers are making use of *Power Play!* About one in four teachers in the overall sample said they were making use of no additional resources.

- **Survey data corroborate that taste testing is the most prevalent *Harvest of the Month* activity in the classroom.**

Produce taste testing is a once-a-month activity for 63% of teachers; an additional one in five engage in it two or more times per month. Almost as many report taste testing as part of a prepared recipe. Ninety-five percent do one or the other at least monthly. Classroom cooking, either with or without student participation, is less likely to take place but fully 60% report doing it in one form or the other at least monthly. Almost all teachers (96%) do either taste testing or cooking at least monthly. The most common activities that students participate in are listening to teacher presentations, participating in discussions and using workbooks and activity sheets.

The majority of elementary teachers use workbooks or activity sheets once a month or more.

- **According to teachers, the biggest challenges in implementing *Harvest of the Month* are the amount of time it takes in the classroom and the lack of equipment and ingredients for activities.**

If possible the *Network* should provide funding for equipment and ingredients. Efforts should also focus on the distribution of materials and activities that take little classroom time. In addition, if resources allow, the *Network* should give emphasis to three other barriers important to sizeable segments of teachers: the perceived lack of ready-to-use materials, lesson plans tied to the core curriculum and insufficient cafeteria support.

- **Study data point to a number of changes that teachers want to see in the Educator Newsletter.**

Most want to see more emphasis on activities that are easy to implement and require minimal preparation as well as lesson plans tied to the core curriculum. Many also want more grade-appropriate content for lower elementary grade students.

A quarter would also like to see the state version of the newsletter shortened, fewer than we thought prior to the study. Cafeteria Connections, Student Sleuths, Student Champions, Botanical Facts, What's in a Name and the School Garden led the list of those sections that should be dropped.

Nutrition Facts is the section most often used followed by Reasons to Eat, Cooking in Class, Exploring California: Taste Testing, and How Does It Grow? These should be retained in a shortened newsletter.

- **In addition to the Educator Newsletter changes, many teachers want access to grade-appropriate student activity worksheets.**

There is also fairly broad interest in grade-appropriate student workbooks, grade-appropriate teacher activity packets and other ready-to-use activities and materials.

- **After enhancements, teachers expect to spend less time on *Harvest of the Month*.**

Except for those investing the most time in *Harvest of the Month*, teachers expect to spend less time on *Harvest of the Month* after enhancements are made. They clearly view the proposed enhancements as time saving.

- **Curriculum integration efforts should give top priority to the health and physical education subject areas.**

These are the subjects that were most commonly mentioned by respondents. Many teachers also support linking *Harvest of the Month* to science and home economics/life skills curricula. Fewer thought it important to link *Harvest of the Month* to English, math and social science curricula.

Conclusions & Recommendations

This section of the report presents conclusions and recommendations flowing from the study.

- **Although six in ten schools are implementing *Harvest of the Month*, the four in ten that are not present a target of opportunity in efforts to expand participation.**

These schools were reported as "zero implementation" schools by LIA coordinators. We do not have data on why they are not implementing *Harvest of the Month* but these schools could represent an important target of opportunity for future efforts to expand *Harvest of the Month* use.

Network Action Steps:

- *For FY 12 the templated SOW for school based LIAs states: GOAL 1: 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.*
- *Objective 2: (process) Implement and evaluate at least seven months of Harvest of the Month (HOTM) to reach SNAP-ED eligible school age students.*
- *Health Departments were given as an optional goal.*
- *For FY12 we will be expanding partnerships and working closer with Farm to School Projects.*

- **Efforts to promote *Harvest of the Month* to teachers should stress the importance of nutrition education given current concerns about weight-related disease and the practical role that *Harvest of the Month* can play.**

Teachers believe that the best arguments for teacher participation are that *Harvest of the Month* exposes students to fruits and vegetables and teaches them the importance of sound nutrition. Promotional messages should focus on these persuasive arguments.

Network Action Steps:

- *Plan to share data from CalCHEEPS fact sheet, create talking points and post at www.harvestofthemonth.com*

- *Creating document that compiles research on nutrition and achievement.*
- *Revising current training model to provide messages supporting arguments that Harvest of the Month supports fruit and vegetable consumption.*

- **Among those schools implementing *Harvest of the Month*, study data suggest that the overwhelming majority of targeted teachers implemented it in the last year.**

Our data show that 90% of teachers in these schools used *Harvest of the Month* in the last year, a very high rate of use. Even allowing for the possibility that some non-participating teachers were non-responders to the survey, the study indicates that very large numbers are participating.

Network Action Steps:

- *Data showed 90% of teachers used Harvest of the Month in the last year, a very high rate of use.*

- **The most common reasons for non-use are concerns about the amount of time involved and a belief that other activities are more important.**

While the latter may be a difficult barrier to overcome, the study points to a number of steps that might be taken to reduce the amount of time involved with *Harvest of the Month* participation. The other reasons – not receiving materials and lack of knowledge about *Harvest of the Month* – can be effectively addressed through improved distribution, training and communications efforts.

Network Action Steps:

- *As noted above we will be revising the training model and will address how to integrate the elements into recommended required curricular areas.*
- *Will be updating the Curriculum Integration Grids and will include the Common Core Standards and Nutrition Competencies*

- **Many teachers make use of *Harvest of the Month* frequently throughout the month.**

One-third of teachers offer *Harvest of the Month* four or more times in an average month and an additional one-third offer it two or three times. Even though most teachers do not report spending a lot of time on *Harvest of the Month* in an average month, this repetition is powerful from both a persuasive communication and learning standpoint.

Network Action Steps:

- *Teachers report implementing Harvest of the Month multiple times throughout the month. In FY12 we will provide additional research to the 35 featured produce items. This research will be on 15 new produce items and include more culturally diverse produce items.*

- **The Educator and Family Newsletters were the most commonly used *Harvest of the Month* tools during the school year.**

Six in ten use the state version of the Educator Newsletter and four in ten report use of the shorter version. About four in ten also report use of the Family Newsletter but this represents more than 70% of those teachers who play a role in its distribution. Fewer report use of the posters, website and menu slicks.

Network Action Steps:

- *These elements are used pre K – 12 grades, adult education, food banks, WIC, Retail Programs, Worksite Programs and Farm to School programs. The Menu Slick is designed for K-5 school food service. Currently working with Retail and Worksite to expand the use of the Posters.*
- *There are plans to streamline the website and conduct webinar for agencies to better understand the wealth of resources contained in the various sections.*

- **Student workbooks and taste testing are also used by many teachers.**

They are used more often than lesson plans, storybooks and promotional materials. Among elementary teachers, the target audience, 49% reported

use of the workbooks. Forty-six percent of all teachers reported use of either the Tasting Trios or the taste testing section of the Educator Newsletter.

Network Action Steps:

- *In partnership with the Farm to School taskforce we have revised/updated the Harvest of the Month/Farm to School preschool activity packets. We will provide a link at www.harvestofthemonth.com.*
- *We are currently pilot testing Harvest of the Month/ Farm to School lesson plans and student activity books for K-6 in partnership with Alameda County Office of Education Project EAT.*
- *We are developing additional tasting trios for taste testing activities.*
- *A template for Harvest of the Month student workbooks and curriculum pacing guides will be created for grades 1-3 utilizing Harvest of the Month nutrition facts, Rethink Your Drink messages and USDA MyPlate messages.*

- **In terms of other nutrition education and promotional resources, those of Dairy Council are the most commonly reported.**

Dairy Council materials were used during the year by 44% of teachers. One-quarter report using www.mypyramid.gov and 17% said they used postcards, stickers and various other promotional items. Twenty-four percent of 4th and 5th grade teachers are making use of *Power Play!* About one in four teachers in the overall sample said they were making use of no additional resources.

- **Survey data corroborate that taste testing is the most prevalent *Harvest of the Month* activity in the classroom.**

Produce taste testing is a once-a-month activity for 63% of teachers; an additional one in five engage in it two or more times per month. Almost as many report taste testing as part of a prepared recipe. Ninety-five percent do one or the other at least monthly. Classroom cooking, either with or without student participation, is less likely to take place but fully 60% report doing it in one form or the other at least monthly. Almost all teachers (96%) do either taste testing or cooking at least monthly. The most common activities that students participate in are listening to teacher presentations, participating in discussions and using workbooks and activity sheets.

The majority of elementary teachers use workbooks or activity sheets once a month or more.

- **According to teachers, the biggest challenges in implementing *Harvest of the Month* are the amount of time it takes in the classroom and the lack of equipment and ingredients for activities.**

If possible the *Network* should provide funding for equipment and ingredients. Efforts should also focus on the distribution of materials and activities that take little classroom time. In addition, if resources allow, the *Network* should give emphasis to three other barriers important to sizeable segments of teachers: the perceived lack of ready-to-use materials, lesson plans tied to the core curriculum and insufficient cafeteria support.

Network Action Steps:

- *Content standard grids, showing how Harvest of the Month links to the various curriculum areas are being updated and will include links to the common core standards helping teachers to identify how Harvest of the Month supports their lesson plans and accomplishing curricular requirements.*
- *Developing tip sheets to provide teachers strategies for partnering with sources to obtain produce and equipment, classroom cooking and implementation tips.*

- **Study data point to a number of changes that teachers want to see in the Educator Newsletter.**

Most want to see more emphasis on activities that are easy to implement and require minimal preparation as well as lesson plans tied to the core curriculum. Many also want more grade-appropriate content for lower elementary grade students.

A quarter would also like to see the state version of the newsletter shortened, fewer than we thought prior to the study. Cafeteria Connections, Student Sleuths, Student Champions, Botanical Facts, What's in a Name and the School Garden led the list of those sections that should be dropped.

Nutrition Facts is the section most often used followed by Reasons to Eat, Cooking in Class, Exploring California: Taste Testing, and How Does It Grow? These should be retained in a shortened newsletter.

- **In addition to the Educator Newsletter changes, many teachers want access to grade-appropriate student activity worksheets.**

There is also fairly broad interest in grade-appropriate student workbooks, grade-appropriate teacher activity packets and other ready-to-use activities and materials.

Network Action Steps:

- *Developing templates for student workbooks that are skill based and contain pacing guides for teachers.*
- *Developing Farm to School/Harvest of the Month activity books for K-6 grades.*

- **After enhancements, teachers expect to spend less time on *Harvest of the Month*.**

Except for those investing the most time in *Harvest of the Month*, teachers expect to spend less time on *Harvest of the Month* after enhancements are made. They clearly view the proposed enhancements as time saving.

- **Curriculum integration efforts should give top priority to the health and physical education subject areas.**

These are the subjects that were most commonly mentioned by respondents. Many teachers also support linking *Harvest of the Month* to science and home economics/life skills curricula. Fewer thought it important to link *Harvest of the Month* to English, math and social science curricula.

Appendices

- Instructions to Teachers
- Mail Survey Questionnaire
- Educator Newsletter Supplied with Survey
- Web Questionnaire

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.

Table of Contents

Abstract 3

Background & Description 5

Design 6

Results 10

Sample Characteristics 10

Process Results 12

Outcomes 14

Discussion 27

Recommendations: 28

Appendix A. *Retail Program* Theory of Change 30

Appendix B. Store Locations and Intervention Materials 35

Appendix C. Survey Instrument 40

Appendix D. Process Evaluation Questions 47

Appendix E. Demographic Results by Intervention Store Type 48

Appendix F. Outcomes by Intervention Store Type 50

Appendix G. Awareness of Merchandising Materials by Intervention Store Type 54

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 –

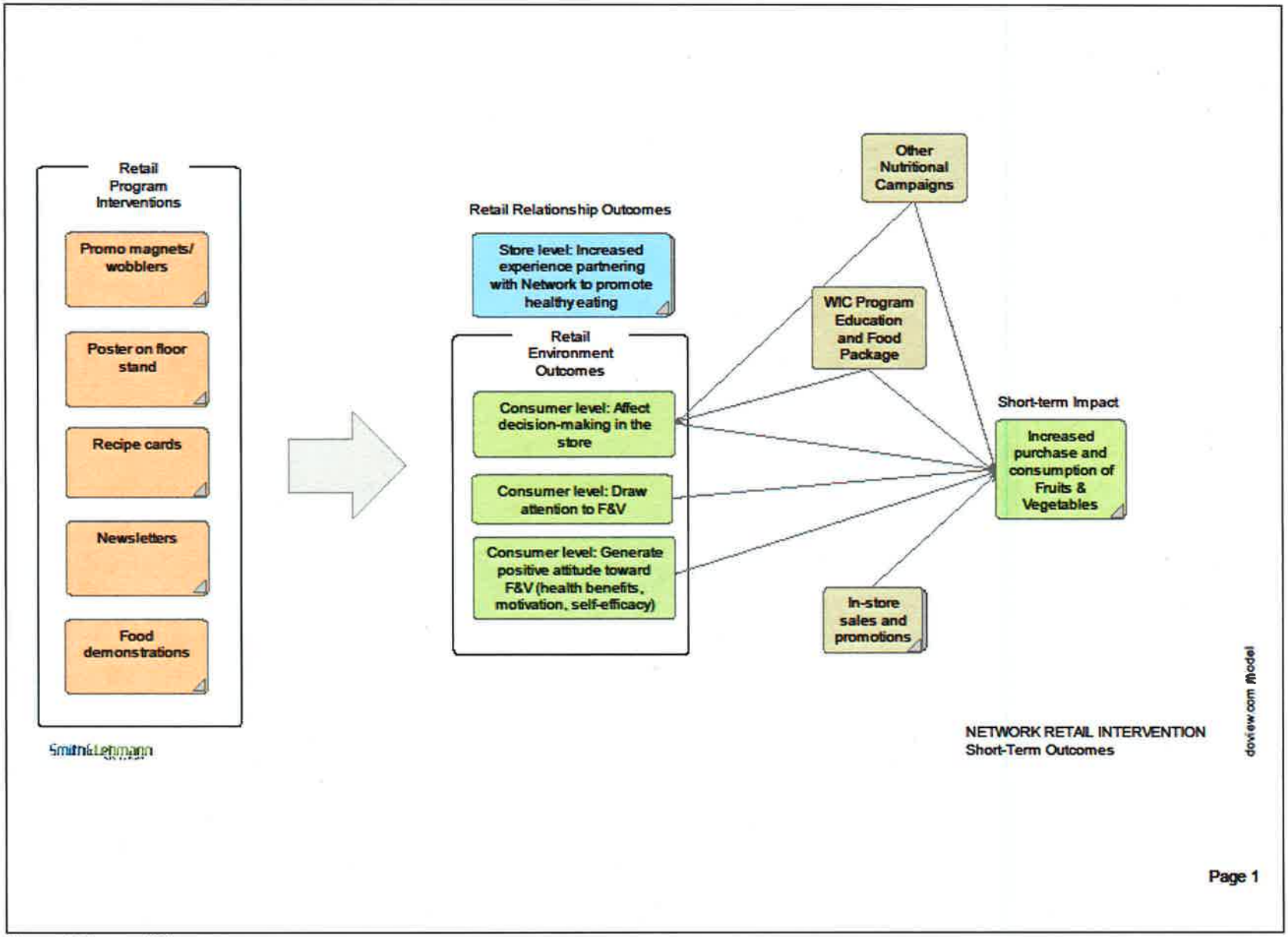


Figure 1 Theory of Change

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

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.

Figure 2. Timeline for the *Retail* Intervention study.

Merchandising Only Intervention

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.

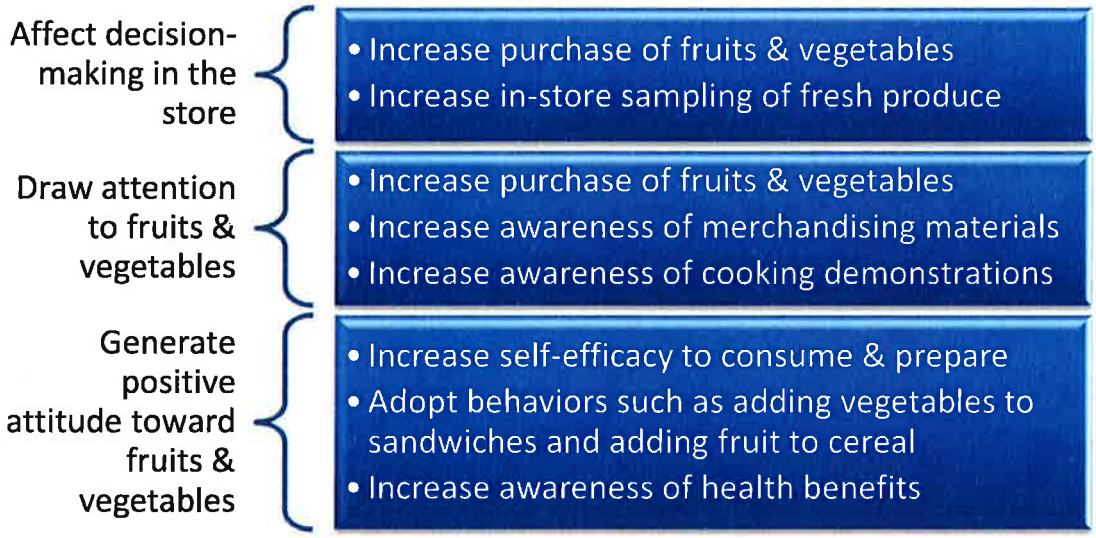


Figure 3. Items used in survey to measure key retail environment outcomes.

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).

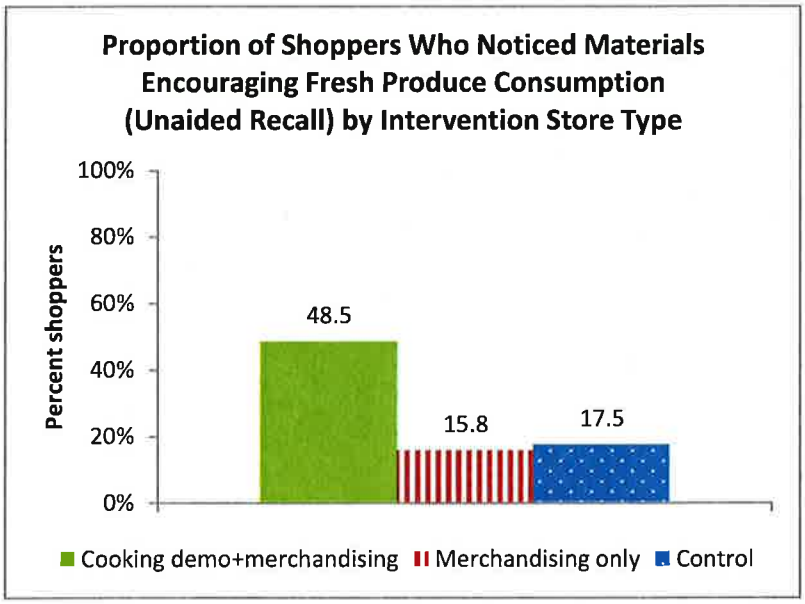


Figure 4. Shopper awareness of *Network* materials (unaided recall) by Intervention Store Type.

[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.

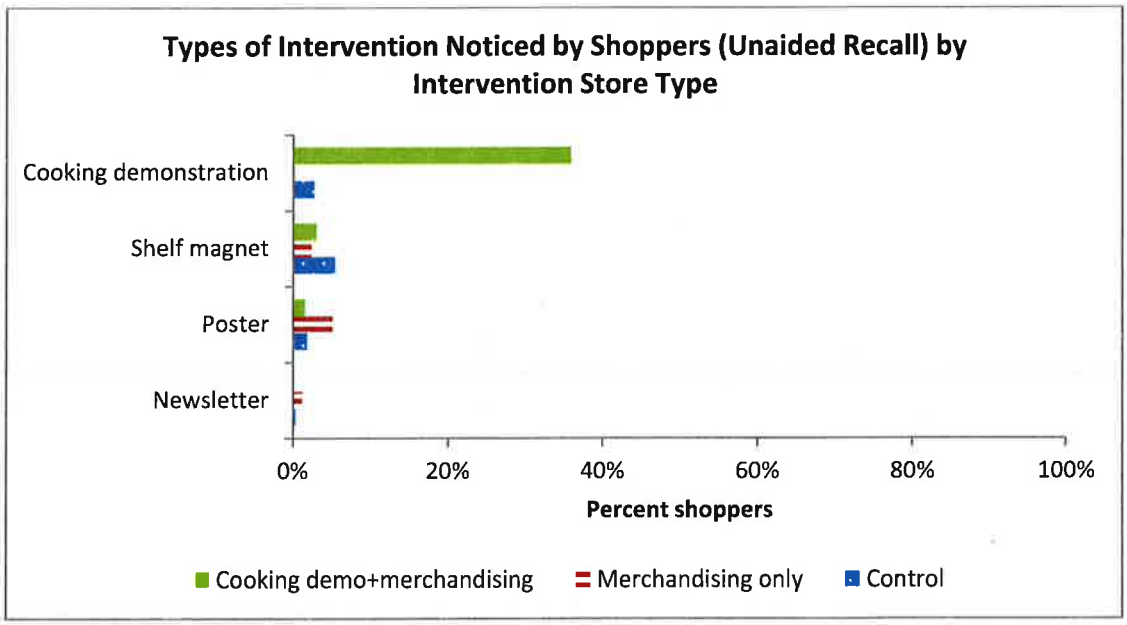


Figure 5. Intervention types noticed by shoppers at each store

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.

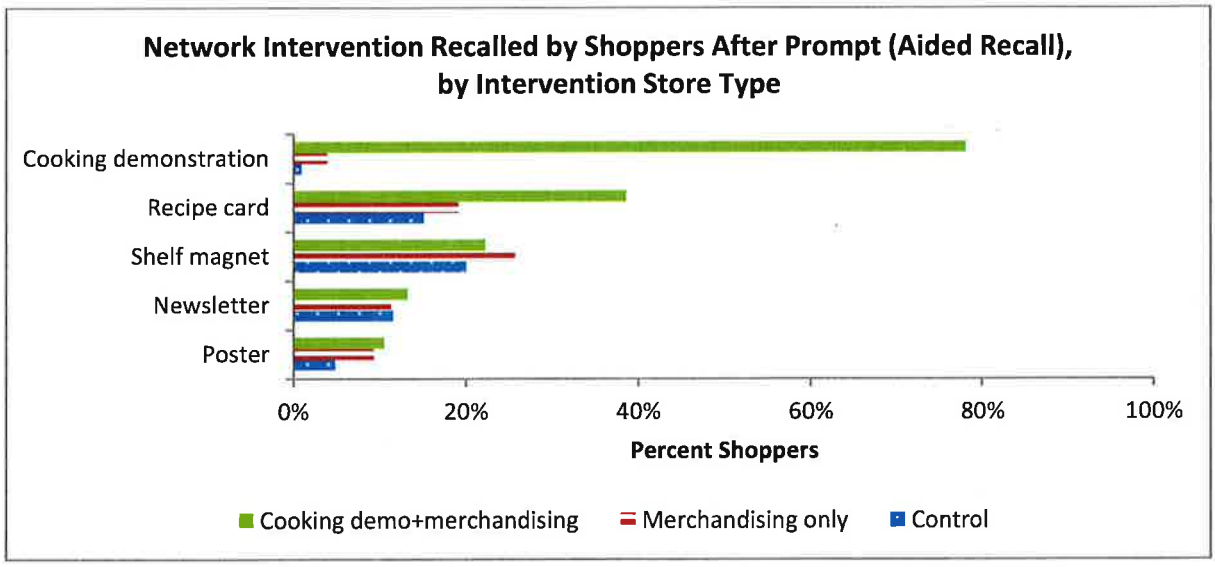


Figure 6. Recall of Network interventions after prompting by researcher, shown in each store type.

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).

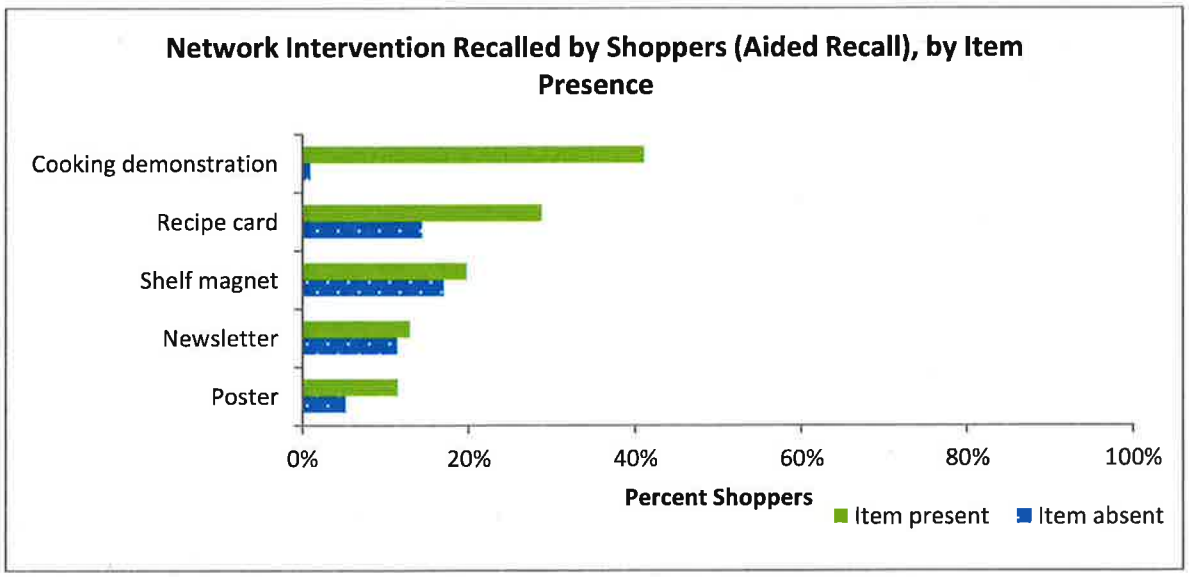


Figure 7. Prompted recall of *Network* intervention items, item as present or absent.

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.

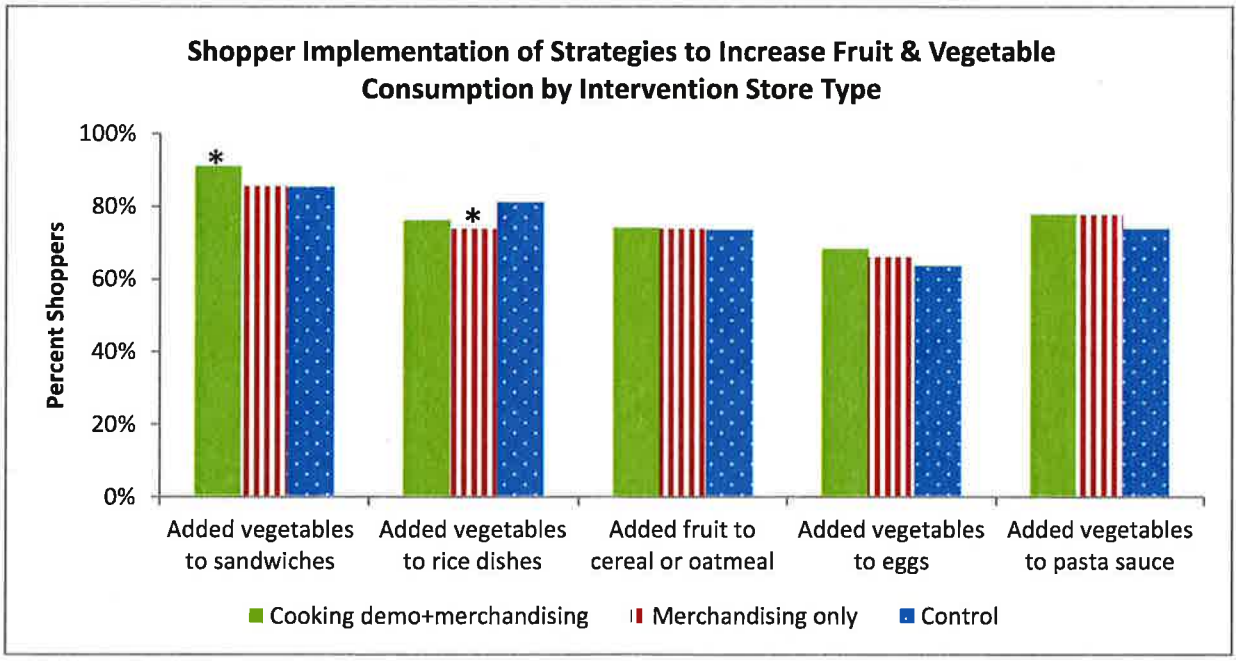


Figure 8. Shopper implementation of strategies to increase fruit and vegetable consumption by store type.

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.

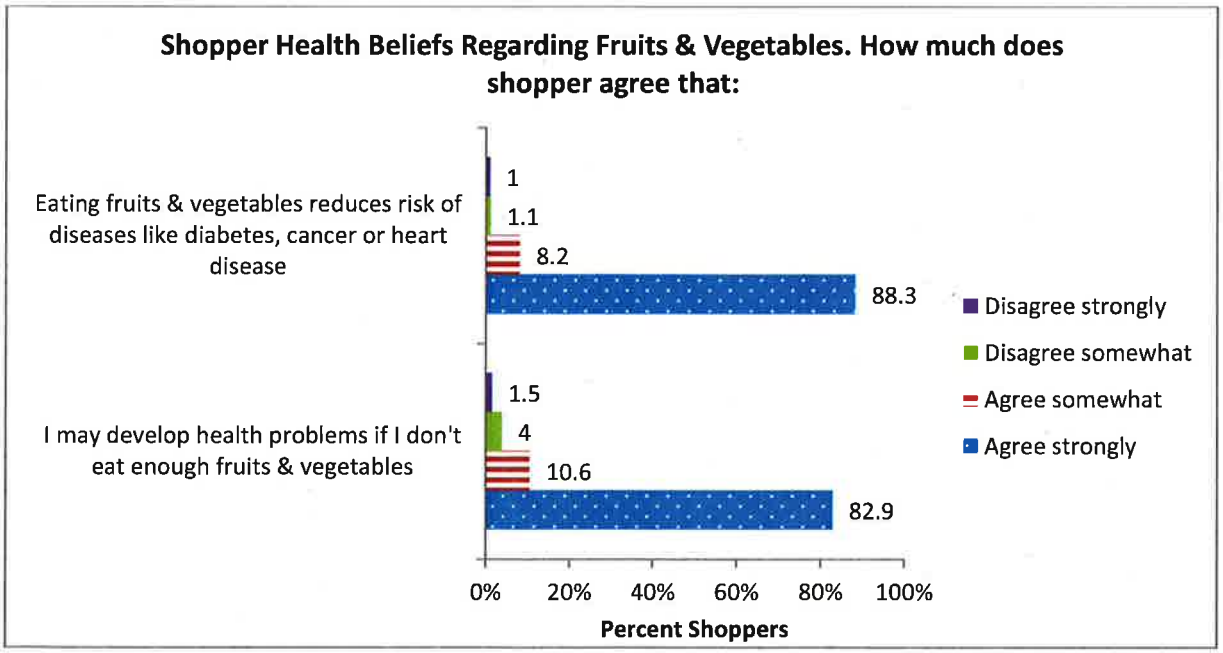


Figure 10. Shopper beliefs in relation to the consumption of fruits and vegetables with future health and disease risks.

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.

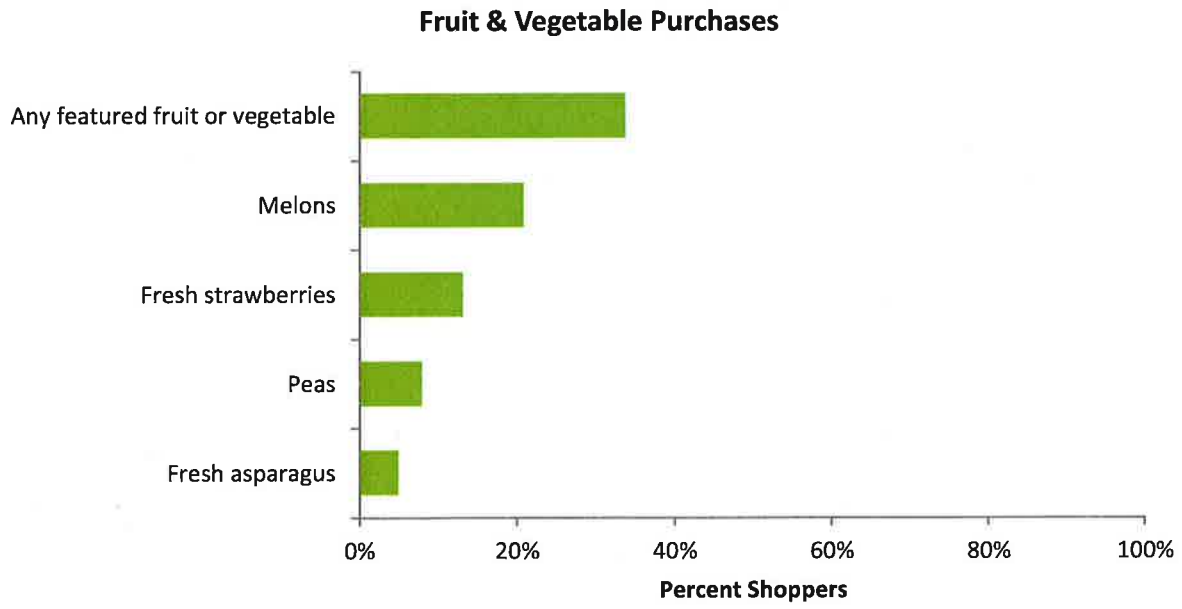


Figure 11. Shopper purchases of *Network* promoted fruits and vegetables.

[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.

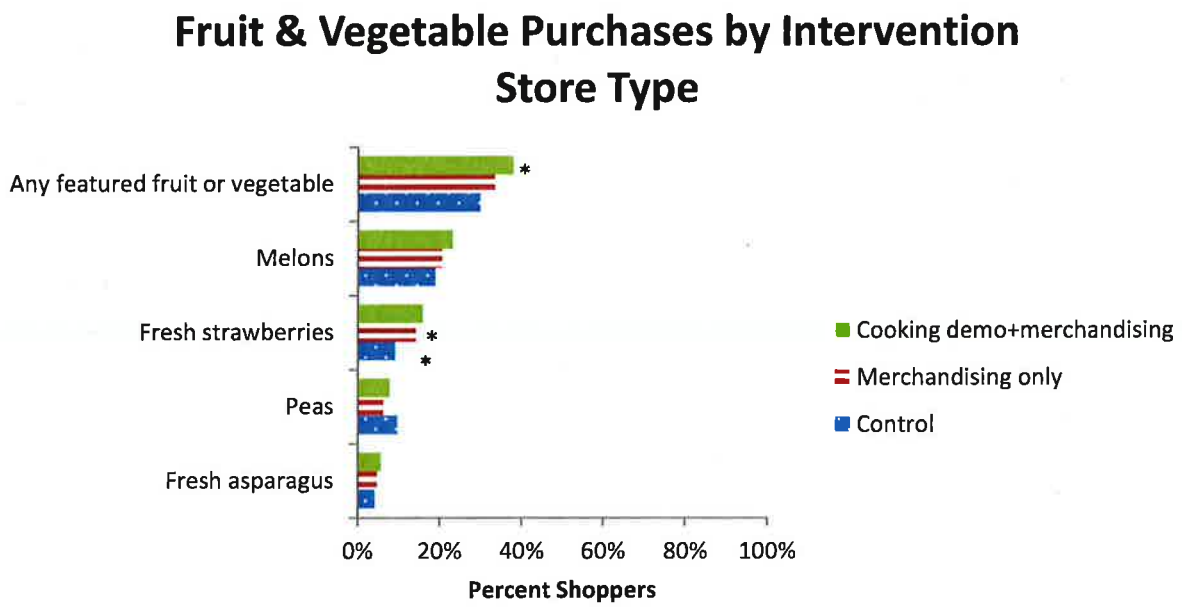


Figure 12. Purchases of *Network* promoted fruit and vegetable by Intervention Store

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.

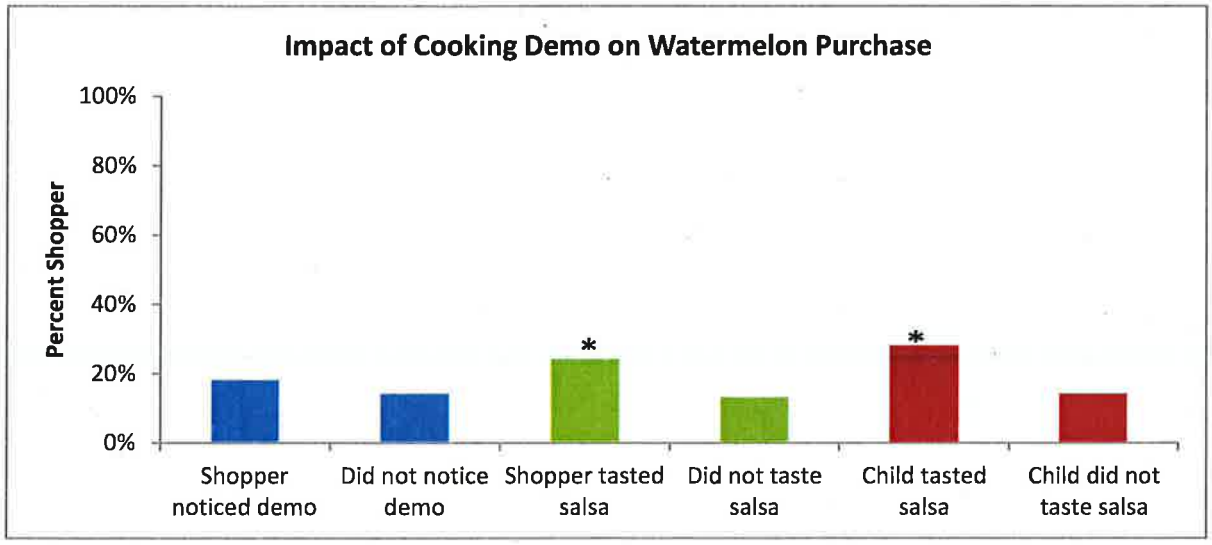


Figure 13. Cooking demonstration influence on the purchase of watermelon.

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.

---

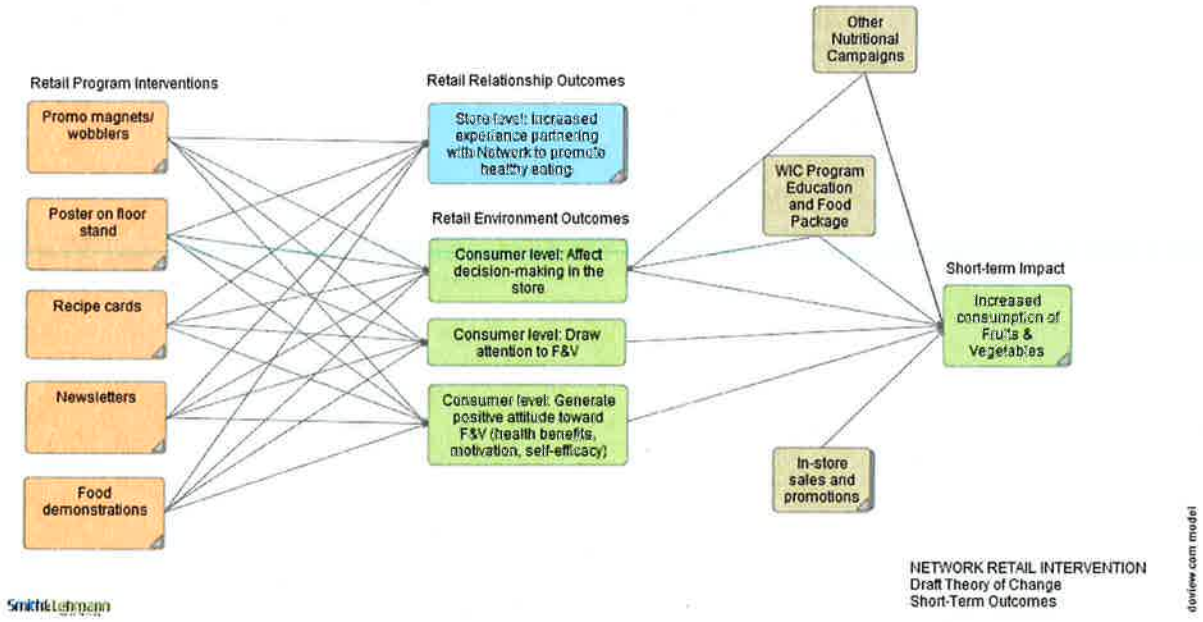
[19] Song HJ, J Gittelsohn, M Kim, S Suratkar, S Sharma, J Anliker (2009). "A corner store intervention in a low-income urban community is associated with increased availability and sales of some healthy foods." Public Health Nutr 12(11): 2060-7.

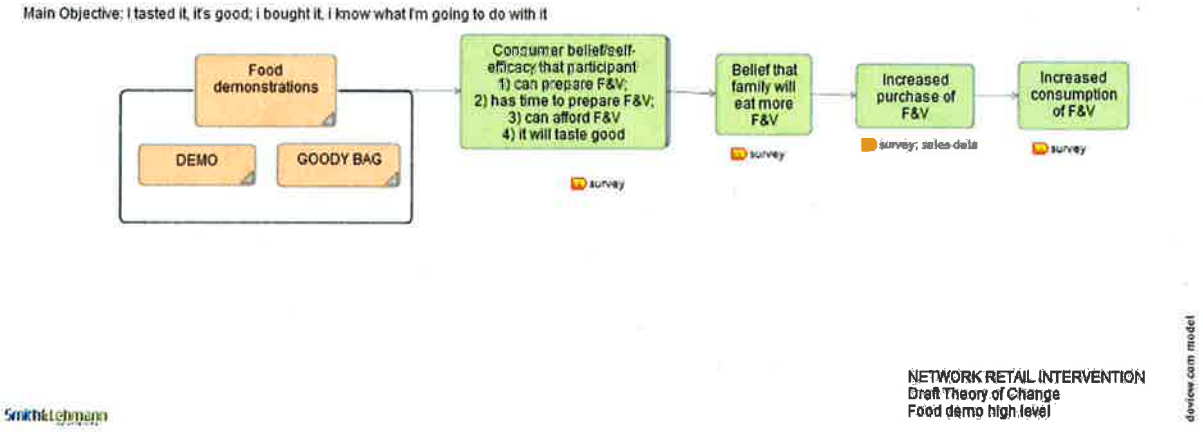
[20] Leviton LC, L Kettel Khan, D Rog, N Dawkins, D Cotton (2010). "Evaluability assessment to improve public health policies, programs, and practices." Annual Review of Public Health. 31: 213-233.

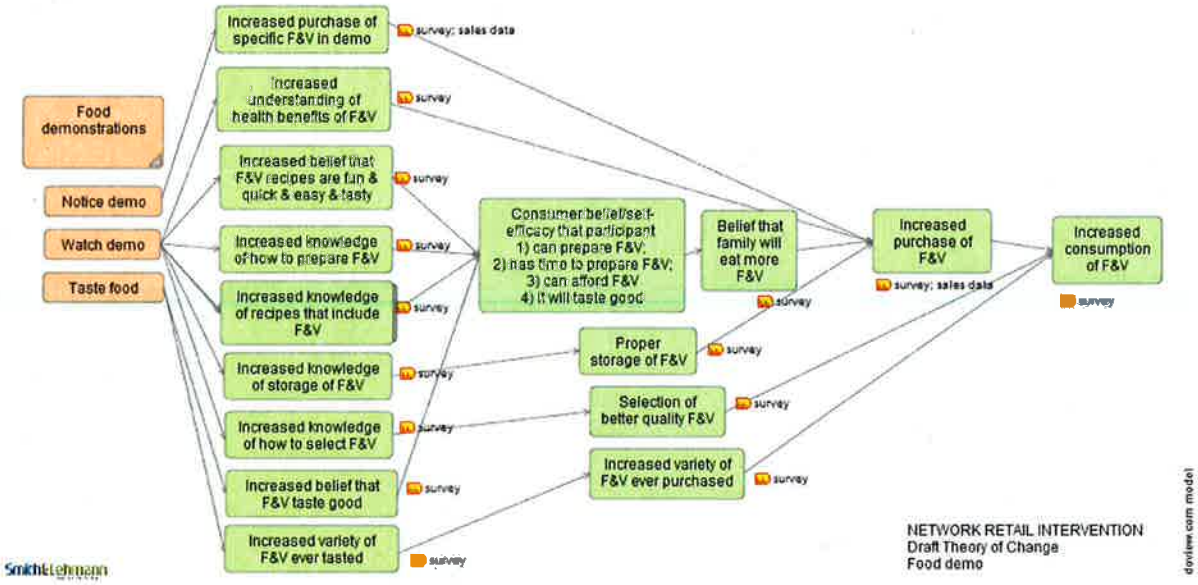
Future Interventions

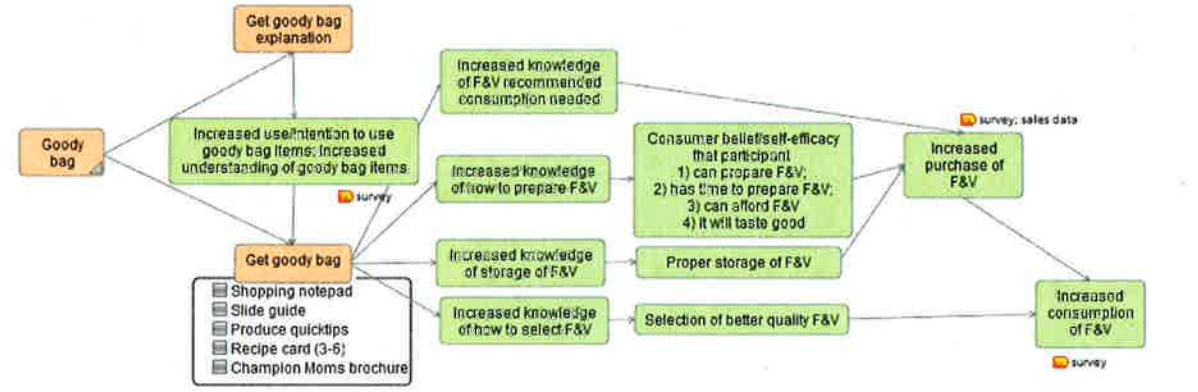
Based on the evaluation findings, the promotion of cooking demonstrations with merchandising materials would appear to be a better use of *Network* resources than the provision of merchandising materials independently of an in-store intervention. The findings indicate that the evaluated promotional materials 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

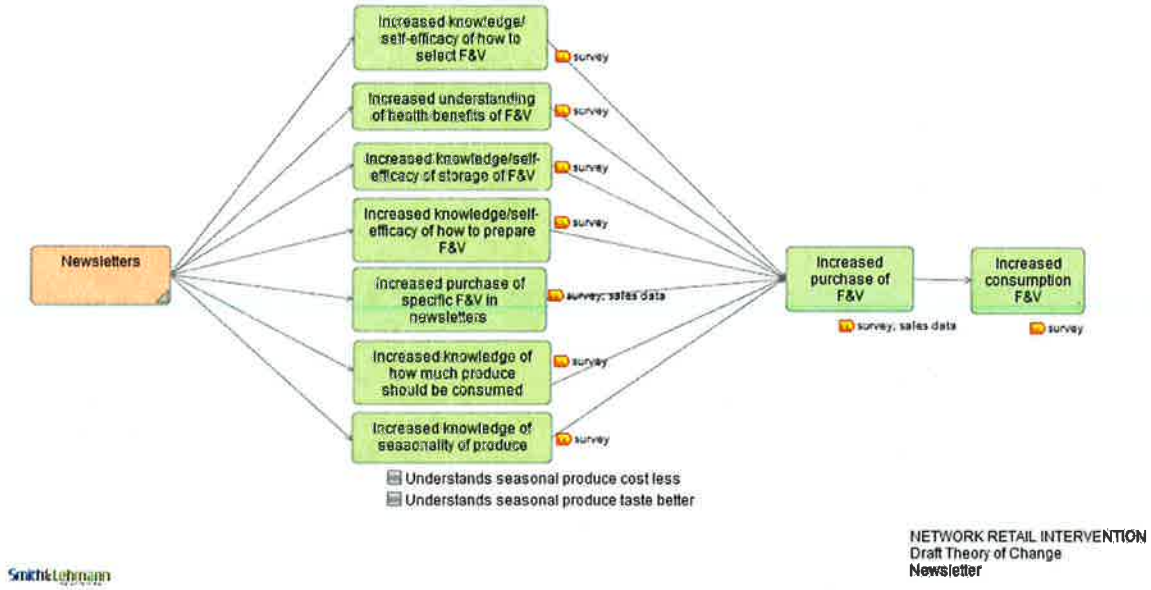


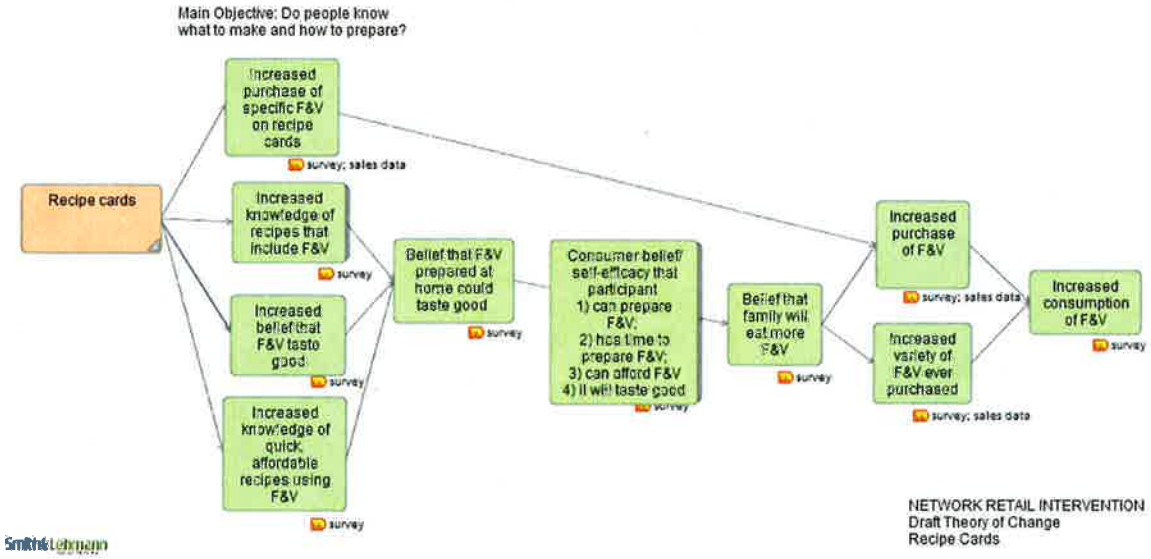


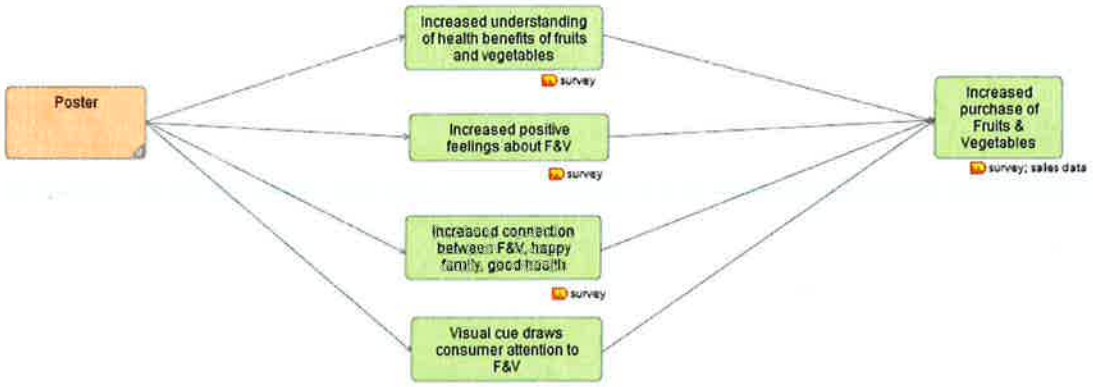




Note: Goody bag outcomes occur after leaving store and cannot be reliably measured by Retail Intervention Survey, although it is possible that some customers may have received a Goody Bag in a prior month


Newsletters
Increased knowledge/ self-efficacy of how to select F&V
Increased understanding of health benefits of F&V
Increased knowledge/self-efficacy of storage of F&V
Increased knowledge/self-efficacy of how to prepare F&V
Increased purchase of specific F&V in newsletters
Increased knowledge of how much produce should be consumed
Increased knowledge of seasonality of produce
survey
survey; sales data
Increased purchase of F&V
Increased consumption F&V
Understands seasonal produce cost less
Understands seasonal produce taste better
NETWORK RETAIL INTERVENTION
Draft Theory of Change
Newsletter
doview.com model

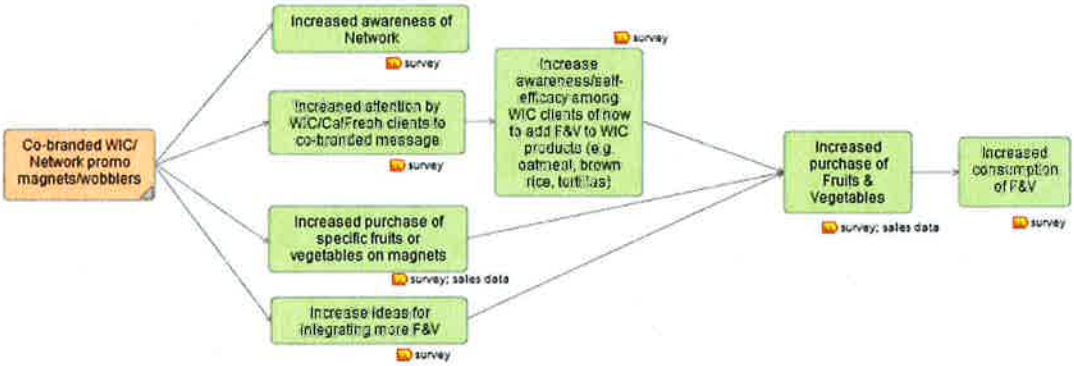

Main Objective: Do people know what to make and how to prepare?
Recipe cards
Increased purchase of specific F&V on recipe cards
Increased knowledge of recipes that include F&V
Increased belief that F&V taste good
Increased knowledge of quick, affordable recipes using F&V
Belief that F&V prepared at home could taste good
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
Increased purchase of F&V
Increased variety of F&V ever purchased
Increased consumption of F&V
survey
survey; sales data
NETWORK RETAIL INTERVENTION
Draft Theory of Change
Recipe Cards
doview.com model



NETWORK RETAIL INTERVENTION
Draft Theory of Change
Floor stands

Smith&Lehmann

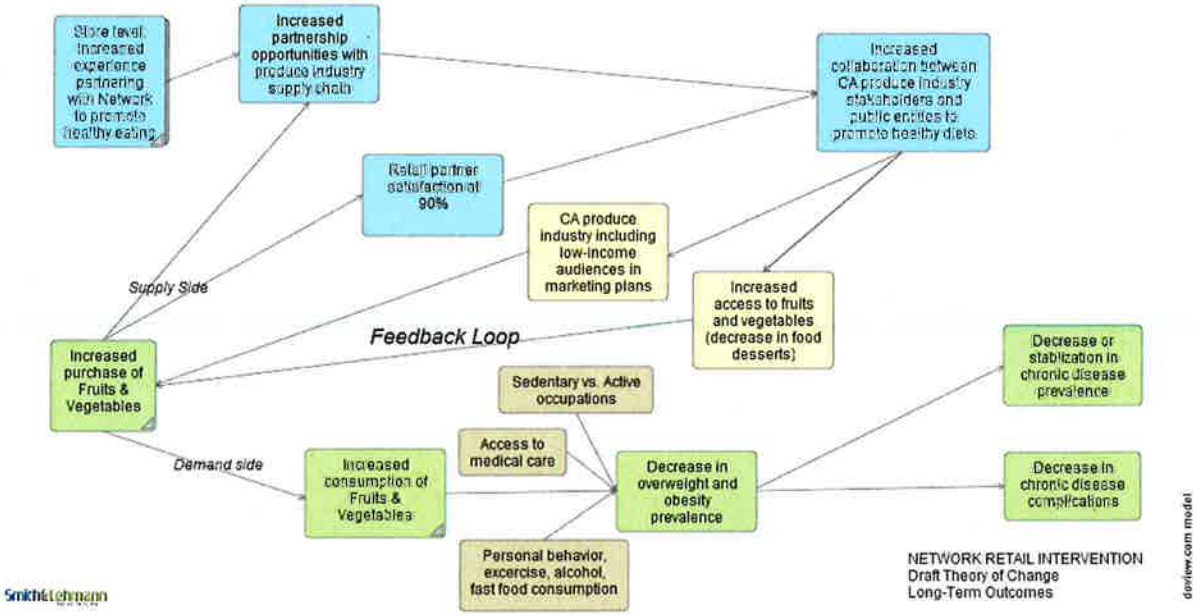
doview.com model



NETWORK RETAIL INTERVENTION
Draft Theory of Change
Magnets

Smith&Lehmann

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 stabilization 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
NETWORK RETAIL INTERVENTION
Draft Theory of Change
Long-Term Outcomes
Smith&Lehmann
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.

CHAMPIONS for CHANGE
Network for a Healthy California

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

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^2 sig.
	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							

CHAMPIONS for CHANGE
Network for a Healthy California

CDPH

Food Stamp Office Resource Kit (FSORK): Use of Revised FSORK2 Kit in Food Stamp Offices through Evaluation with Food Stamp Office Coordinators

Alyssa Ghirardelli, MPH, RD, Carolyn Rider, MA, Sharon Sugerman, MS, RD, FADA

The *Food Stamp Office Resource Kit (FSORK)* provides Supplemental Nutrition Assistance Program Education (SNAP-Ed) (formerly Food Stamp Nutrition Education) in waiting areas of county-based Social Services offices using audio visual and print materials to help low-income Californians learn how to purchase and prepare low-cost, nutritious meals and snacks. *FSORK* materials were designed to improve knowledge, skills, and intention to eat healthy foods, consume fruits and vegetables, and be physically active. The was developed in collaboration between the California Department of Public Health's *Network for a Healthy California (Network)*, the California Department of Social Services' SNAP Program, and the Western Regional Office of the U.S. Department of Agriculture's Food and Nutrition Service, and valued input from the California Welfare Directors Association. The *Network* is the largest single provider of SNAP-Ed in the nation.

The *FSORK*, available in English and Spanish, includes a welcome letter, 20-minute video, poster, brochures, recipe cards, and staff resource guide. The video, called "Good Food TV," is designed to be shown on a continuous loop throughout the day in the office waiting area. The poster and recipe cards complement the video. A poster display with a brochure rack containing the poster, brochures with tips for healthy eating and shopping for low-income families, and recipe cards are displayed in the waiting area. The recipes are easy to prepare, low cost, culturally appropriate, and family friendly, containing many choices of fruits and vegetables. The resource guide provides food stamp office staff with phone numbers of pertinent health, nutrition, and physical activity resources by county which they can then provide to individuals who request further health information.

All materials were developed based on formative research with SNAP-eligible parents and reviewed for technical accuracy by registered dietitians. Feedback to improve the materials was incorporated when applicable. *FSORK* materials can be viewed and ordered online[1]. Results from an evaluation conducted using an exit survey and observation study showed 70% of viewers recalled messages from the video and many clients watched the video regardless of distractions.[2]

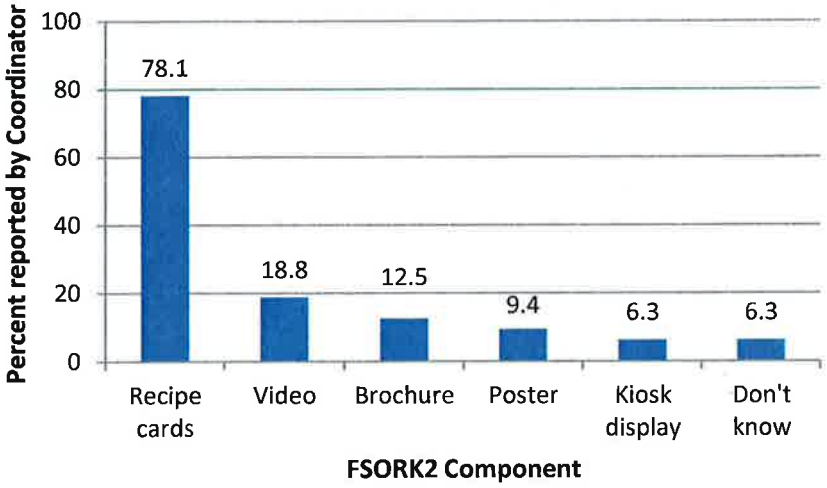
As a follow-up to the success of *FSORK* the *Network,* in collaboration with Women Infants and Children (WIC), University of California Food Stamp Nutrition Education Program (UCFSNEP), and media contractor Runyon, Saltzman and Einhorn, revised and updated the kit with a new video, brochure and recipe cards in 2007-2008. The updated kit, known simply as *FSORK2*, was offered to an estimated 387 county social services offices throughout California. Approximately 327 kits were distributed between 2008 and 2009.

In February 2010, an online survey was sent to a list of 71 Social Services Office Coordinators who coordinate multiple offices in 50 counties, asking about the use of the kit and elements most liked by clients. Between February and April 2010, 42 Office Coordinators (59%) responded to the survey. Of the Office Coordinators who responded, 76% (n= 32) reported that their offices currently use *FSORK* or *FSORK2*. Those who did not report current use (n= 10) were asked if they would consider implementing it in the future and all responded with "yes" or "maybe". This report summarizes survey responses from the 32 Coordinators reporting current use of the *FSORK2* in approximately 140 offices across California.

Preferred Materials and Ease of Use

For the revised *FSORK2*, recipe cards were by far the material reported as liked by clients more than any other (Figure 1). Seventy-eight percent of responses regarding what clients liked were for the recipe cards, 19% for the video "Good Food TV", 13% for the brochure, and 9% for the poster. Seventy-nine percent of Coordinators requested that the recipe cards be updated again.

Figure 1. Materials Perceived by Office Coordinators as Most Liked by Clients



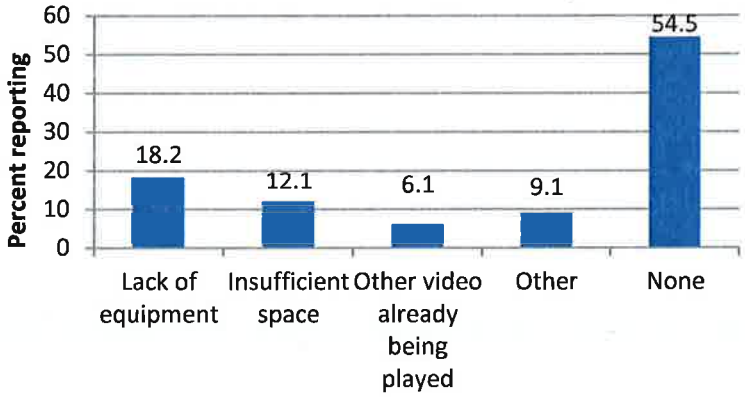
The recipe cards were also reported most often as easy to put in the offices (81% of responses), with the poster (71%) and kiosk display (61%) also being frequently reported.. The video was reported as easy to implement in only 36% of the responses. Forty-four percent of Coordinators reported that offices refill the brochures or recipe cards a few times a month. Several respondents requested for recipe cards to be updated a couple of times each year and for the ability to always keep the cards fully stocked. Twenty-two percent of Coordinators responding reported showing "Good Food TV" every day and 13% reported a few times a week. One-third of respondents reported never playing the video and one-quarter did not know how often it was played.

Barriers to Use of the *FSORK2*

Office Coordinators were asked whether they experienced any barriers to displaying specific components of the kit, and if so, to describe them. The video was most frequently cited as having barriers (45%) followed by the kiosk/display unit (39%), followed by recipe cards with brochures (26%). One quarter of Office Coordinators cited no barriers to implementing any of these three *FSORK2* components. Reported barriers were different across counties, and sometimes for different offices within counties. However, some general trends emerged.

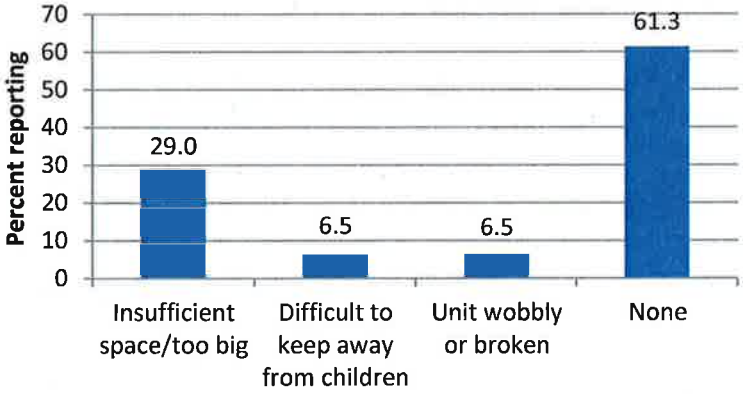
While 55% of Coordinators reported no barriers to displaying the video, 18% reported that they did not have the required video equipment to display it (Figure 2). Other barriers included insufficient space and having another video already playing. These reported barriers help to explain why one-third of Office Coordinators reported not playing the *FSORK2* video; only three Coordinators reported "never" playing the video without also reporting one of these specific barriers.

Figure 2. Reported Barriers to Displaying FSORK2 Video



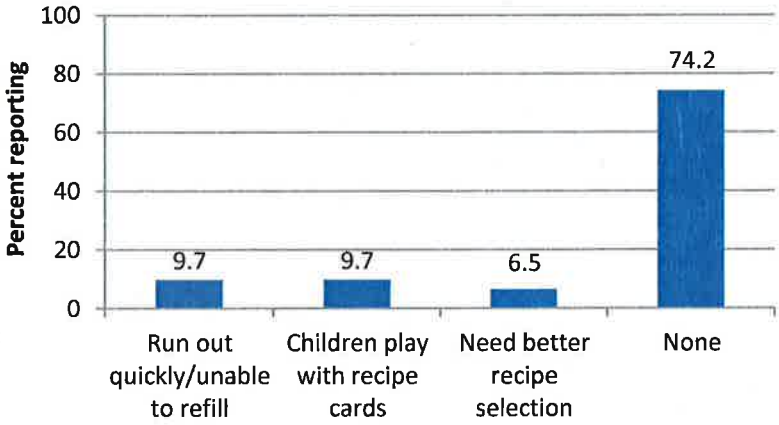
By far the most frequently cited barrier to displaying the kiosk display was that it was too large and/or that there was insufficient space in the social services office (29%) (Figure 3). The same three Office Coordinators reporting insufficient space for the kiosk display in their offices also mentioned equipment as a barrier to implementing the video component of *FSORK2*. A small number of respondents noted that the kiosk display was difficult to keep away from children or that it was wobbly or broken, while 61% reported no barriers to displaying it.

Figure 3. Reported Barriers to Displaying Kiosk Display



There were fewer barriers overall to displaying recipe cards and brochures, with nearly three-quarters of Coordinators (74%) reporting no barriers (Figure 4). Those who described barriers to displaying recipe cards and brochures reported that they run out quickly or are difficult to keep refilled, that children play with them, or that they need a better recipe selection. Coordinators who reported difficulties with running out of recipe cards quickly or children playing with the cards also tended to report similar barriers with children playing with kiosk displays.

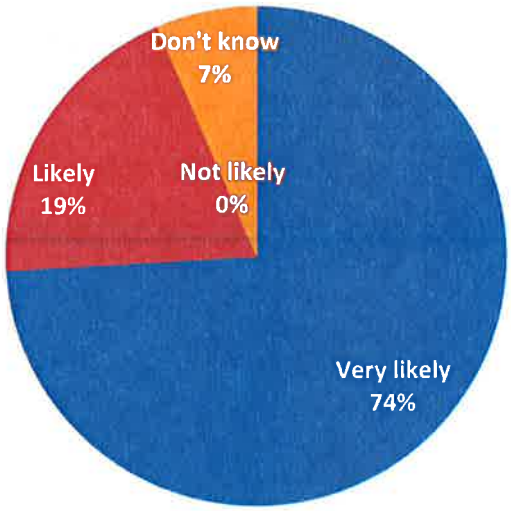
Figure 4. Reported Barriers to Displaying Recipe Cards and Brochures



Other Issues Impacting Future Use

Office Coordinators shared that the kits were well received by clients, that they are very informational and that they like the concept. However, there were some coordinators that were not informed about the kit or were not clear on the intent of the materials. There were also reports of a need for larger re-orders and that some re-orders took longer than expected. Most respondents reported that they were very likely to use the kit if updated again with none reporting they were not likely to use the kit (Figure 5). Coordinators reported that the seating area is the best place to provide nutrition education. Other areas in the office most often suggested to consider for another installment of *FSORK* include service windows or the information desk, the interviewer or case worker desk, orientation classes, and mobile sites such as community events.

Figure 5. Likelihood that Office Coordinators Will Re-Order Another FSORK



Conclusions and Implications

Future installments or updates to *FSORK2* depend on funding and commitment from participating agencies. Office Coordinators perceived that recipe cards were the kit element best received by clients and reported few barriers to implementation. Recipe cards may be cost effective and easier to refresh since the *Network* has a library of recipes to choose from and video production can be cost prohibitive. However, a previous evaluation study[2] showed results of greater client recall for the video messages and more frequent observation of client interaction with the video compared to the materials display that includes the recipe cards. Discrepancies between the studies may be explained through respondent perspectives since Office Coordinators may only indirectly hear about office needs through case workers and not direct observation of office conditions or client impressions. Another consideration is that offices may have barriers to implementation of the video and kiosk display that the *Network* cannot address, such as lack of equipment or space which may inform decisions for future updates to the kit. With staff turnover and changes in offices, information about the kit and current materials included should be periodically provided to Office Coordinators. This approach to nutrition education may not only be cost-effective, but offices appear to be good locations for delivery of SNAP-Ed.

References

1. *Network for a Healthy California*. The *Network for a Healthy California* Online Catalog - Go to Order Items, then to *Food Stamp Office Res Kit*. www.championsforchangematerials.net. Accessed February 15, 2011.
2. Ghirardelli A, Linares A, Fong A. Usage and Recall of the Food Stamp Office Resource Kit (FSORK) by Food Stamp Applicants in four California Counties. *J Nutr Educ and Behavior*. 2011;43(4):S86-S95.

Network for a Healthy California

California Department of Public Health

Network Communications – FFY11 Advertising and Public Relations

This provide a recap of *Network for a Healthy California* FFY11 advertising and public relations (PR) activity.

FFY11 Overview

Due to a delay in executing the *Network's* media contract, statewide communication in FFY11 was atypical versus the past several years during which paid advertising and earned media generated impressions near or exceeding the 1 billion count.

There was no paid advertising in FFY11. However, $7,832,605 in SNAP funding was encumbered in September 2011, and is being used to purchase advertising for February through July FFY2012.

In the absence of a public relations contract, The *Network's* Communication Unit worked directly with the *Regional Networks* to assist with signature events throughout the year, including Fruit & Veggie Fest (Retail Program), Power Up Your Summer (Power Play! Campaign), Juneteenth (African American Campaign), and Latino Health Awareness Month (Latino Campaign). The vast majority of reported *Regional Network* PR impressions were generated from activity surrounding these signature events. In total, the FFY11 *Regional Network* PR impressions count is 53,750,651, representing a 3% decline vs. the 55,198,744 impressions reported in FFY10. This count, based on total adults 18+, includes duplication as there is no known methodology to estimate unduplicated contacts or adjust for <185% FPL individuals.

3a) *Network* Media – Advertising & PR Contact Summary – FFY11

October 1, 2010 – September 30, 2011

Network Social Marketing Project Name (State-level)	Total Unduplicated Contacts Persons Living in <185% FPL HHs (Estimate Only)	Total Impressions Adults 18+ Living in <185% FPL HHs (Estimate Only)
Advertising - Coverage	0	0
PR – Statewide Program	0	0
PR—Regional Networks	N/A[1]	53,750,651[2]
Grand Total of Media Contacts	**N/A**	**53,750,651**

FFY11 marked the start of a new state media contract with Runyon, Saltzman & Einhorn (RS&E). However, the contract was not executed until August 24, 2011, rendering an absence of paid advertising and public relations services for almost the entire year. FFY11 SNAP-Ed funding in the amount of $7,832,605 was encumbered in September 2011, and is being used to purchase paid advertising for February through July FFY2012.

In the absence of a public relations contract, The *Network's* Communication Unit worked directly with the *Regional Networks* to assist with signature events throughout the year, including Fruit & Veggie Fest (*Retail Program*), Power Up Your Summer (*Power Play! Campaign)*, Juneteenth (*African American Campaign*), and Latino Health Awareness Month (*Latino Campaign*). The vast majority of reported *Regional Network* PR impressions were generated from activity surrounding these signature events. In total, the FFY11 *Regional Network* PR impressions count is 53,750,651, representing a 3% decline vs. the 55,198,744 impressions reported in FFY10.

[1] **Public Relations:** The 53,750,651 public relations (PR) impressions reported for the *Regional Networks* represent an Adult 18+ demographic. There is no known method to adjust PR impressions for <185 percent FPL or to estimate unduplicated impressions (contacts).

[2] **Public Relations, *Regional Networks***: For FFY11, media relations activity for online, print, television, and radio coverage were logged by the *Regional Networks*. Commencing with the execution of the media contract, the *Regions* submitted reported coverage to Citizen Paine (sub-contractor to RS&E) for the verification and compilation of impressions data.

3d) Network PR Impressions by Region by Medium -- FFY11

Region	Campaign/Program	ONLINE	PRINT	TV	RADIO	TOTAL
Bay Area						
	African American	0	0	0	0	0
	Latino	6,028	0	47,475	0	53,503
	Power Play!	16,704,966	0	11,868	0	16,716,834
	Retail	2,985,952	0	0	0	2,985,952
	Worksite	0	0	0	0	0
	Rethink Your Drink	0	0	0	0	0
	General *Network*	10,522,581	0	0	0	10,522,581
	Total	30,219,527	0	59,343	0	**30,278,870**
Central Coast						
	African American	0	0	0	0	0
	Latino	112,894	19,580	0	0	132,474
	Power Play!	63,581	0	0	0	63,581
	Retail	56,447	9,790	0	0	66,237
	Rethink your Drink	0	0	0	0	0
	Worksite	0	0	0	0	0
	General *Network*	7,550	52,282	0	0	59,832
	Total	240,472	81,652	0	0	**322,124**
Central Valley						
	African American	0	0	4,550	0	4,550
	Latino	6,854	110,427	153,315	0	270,596
	Power Play!	2,755	0	0	0	2,755
	Retail	0	0	0	0	0
	Rethink Your Drink	80,562	0	42,504	0	0
	Worksite	0	0	0	0	0
	General *Network*	153,978	154,000	120,824	0	428,802
	Total	244,149	264,427	321,193	0	**829,769**

3d) Network PR Impressions by Region by Medium -- FFY11

Region	Campaign/Program	ONLINE	PRINT	TV	RADIO	TOTAL
Desert Sierra						
	African American	32,415	28,000	0	0	60,415
	Latino	0	0	0	0	0
	Power Play!	0	0	0	0	0
	Retail	64,398	42,250	0	0	106,648
	Rethink Your Drink	0	0	0	0	0
	Worksite	0	0	0	0	0
	General *Network*	1,114,707	234,722	0	0	1,349,429
	Total	1,211,520	304,972	0	0	**1,516,492**
Gold Coast						
	African American	0	0	0	0	0
	Latino	0	35,000	9,573	0	44,573
	Power Play!	11,891	3,000	9,573	0	24,464
	Retail	10,388	3,000	0	0	13,388
	Worksite	0	0	0	0	0
	Rethink Your Drink	0	0	0	0	0
	General *Network*	3,688	174,739	9,573	0	188,000
	Total	25,967	215,739	28,719	0	**270,425**
Gold Country						
	African American	133,166	568,960	0	0	702,126
	Latino	0	8,141	0	0	8,141
	Power Play!	0	0	8,660	0	8,660
	Retail	153,120	0	0	0	153,120
	Worksite	17,080	0	0	0	17,080
	Rethink Your Drink	0	0	0	0	0
	General *Network*	2,102,722	250,030	0	0	2,352,752
	Total	2,406,088	827,131	8,660	0	**3,241,879**

3d) Network PR Impressions by Region by Medium -- FFY11

Region	Campaign/Program	ONLINE	PRINT	TV	RADIO	TOTAL
Los Angeles						
	African American	6,817	0	0	0	0
	Latino	0	0	0	0	0
	Power Play!	92,263	0	630,756	0	0
	Retail	585,600	0	0	0	0
	Rethink Your Drink	0	57,489	0	0	0
	Worksite	0	0	0	0	0
	General *Network*	466,472	172,022	0	0	0
	Total	1,151,152	229,511	630,756	0	**2,011,419**
Northcoast						
	African American	0	0	0	0	0
	Latino	0	5,400	90,267	0	95,667
	Power Play!	0	59,577	0	0	59,577
	Retail	3,800,286	59,577	0	0	3,859,863
	Rethink Your Drink	30,255	127,217	0	0	0
	Worksite	0	0	0	0	0
	General *Network*	1,351,352	186,011	0	0	1,537,363
	Total	5,181,893	437,782	90,267	0	**5,709,942**
Orange County						
	African American	0	0	0	0	0
	Latino	0	0	0	0	0
	Power Play!	0	0	0	0	0
	Retail	0	0	0	0	0
	Rethink Your Drink	0	0	0	0	0
	Worksite	0	0	0	0	0
	General *Network*	0	182,391	0	0	182,391
	Total	0	182,391	0	0	**182,391**

3d) Network PR Impressions by Region by Medium -- FFY11

Region	Campaign/Program	ONLINE	PRINT	TV	RADIO	TOTAL
San Diego						
	African American	2,384,550	0	0	713	2,385,263
	Latino	149,672	0	6,574	0	156,246
	Power Play!	0	0	34,088	0	34,088
	Retail	47,376	0	0	0	47,376
	Rethink Your Drink	0	0	0	0	0
	Worksite	0	0	0	0	0
	General *Network*	1,732,878	2,999,103	56,032	0	4,788,013
	Total	4,314,476	2,999,103	96,694	713	**7,410,986**
Sierra Cascade						
	African American	0	0	0	0	0
	Latino	0	0	0	0	0
	Power Play!	265,727	83,207	33,097	0	382,031
	Retail	110,448	116,646	5,451	10,086	242,631
	Rethink Your Drink	0	0	0	0	0
	Worksite	0	0	0	0	0
	General *Network*	492,288	161,546	17,985	0	671,819
	Total	868,463	361,399	56,533	10,086	**1,296,481**
LIAs						
	African American	0	0	0	0	0
	Latino	0	0	0	0	0
	Power Play!	0	0	0	0	0
	Retail	0	0	0	0	0
	Rethink Your Drink	19,118	0	0	0	0
	Worksite	0	0	0	0	0
	General *Network*	166,679	494,076	0	0	660,755
	Total	185,797	494,076	0	0	**679,873**

3d) Network PR Impressions by Region by Medium -- FFY11

Region	Campaign/Program	ONLINE	PRINT	TV	RADIO	TOTAL
TOTAL ALL REGIONS						
	African American	2,556,948	596,960	4,550	713	3,159,171
	Latino	275,448	178,548	307,204	0	761,200
	Power Play!	17,141,183	145,784	728,042	0	18,015,009
	Retail	7,814,015	231,263	5,451	10,086	8,060,815
	Worksite	17,080	0	0	0	0
	Rethink Your Drink	129,935	184,706	42,504	0	357,145
	General *Network*	18,114,895	5,060,922	204,414	0	23,025,554
	Total	**46,049,504**	**6,398,183**	**1,292,165**	**10,799**	**53,750,651**

Final Report

Beauty Salon/Supply Store Channel Development

September **2011**

DYJÄ
Davis Y. Ja & Associates

362 Victoria Street San Francisco, CA 94132 *tel* 415.585.2773 *fax* 415.239.4511 **dyja.com**

Public Health Institute

Network for a Healthy California

African American Campaign

A message from the California Department of Public Health funded by the Food Stamp Program of the U.S. Department of Agriculture.

Table of Contents

Executive Summary 6

Background 10

Key Informant Interviews with Other Beauty Salon Intervention Project Staff 13

1. Qualitative Data Collection and Analysis 13
2. Qualitative Themes 14
   - Beauty Salons and Stylist-Client Dialogues as 'Good Spaces' 14
   - Stylist/Client Interaction vs. Staff/ Client Interaction 15
   - Potential Challenges of the Beauty Salon Setting 16
   - Incentives 18
   - Promising Practices 19
3. Conclusion 21

Key Informant Interviews with Beauty Salon Stylists 23

1. Qualitative Data Collection and Analysis 23
2. Participant Information 23
3. Qualitative Themes 24
   - Beauty Salons and Stylist-Client Dialogues as 'Good Spaces' 24
   - Motivators for Stylists and/or Salons to Participate and the Benefits of Participating 26
   - Potential Challenges of a Salon-Based Campaign 29
4. Conclusion 32

Target Audience Focus Groups 33

1. Qualitative Data Collection and Analysis 33
   - Participant Recruitment 33

Interview Methods 33
Analysis Methods 34
2. Participant Information 34
3. Qualitative Themes 35
Beauty Salon and Stylists 35
Beauty Supply Stores 36
Sources of Information 38
Potential Benefits of the Campaign 39
Hairstyle Barriers and Exercise Friendly Hairstyles 40
Potential Campaign Challenges 42
Recommended Campaign Marketing Strategies 48
4. Conclusion 51
Key Informant Interviews with Beauty Supply Store Staff 53
1. Qualitative Data Collection and Analysis 53
2. Participant Information 54
3. Qualitative Themes 54
Beauty Supply Stores as 'Good Spaces' 54
Motivators for Beauty Supply Stores to Participate 56
Current and Recommended Health Education and Marketing 57
Potential Challenges of a Beauty Supply Store-Based Campaign 57
4. Conclusion 59
Recommendations 60
1. General Recommendations 60
2. Salon/Stylist Recommendations 60
3. Supply Store Recommendations 60

References 61

Appendices 63

A. Key Informants 63

B. Stylist Interview Guide 64

C. Map of Stylist Interview Locations 66

D. List of Participating Key Informants 68

E. List of Exercise Friendly Hairstyles from Beauty Salon Stylists 69

F. Focus Group Interview Guide 70

G. Focus Group Recruitment Proof (4X5 Card) 72

H. Craigslist Recruitment Advertisement 73

I. Focus Group Questionnaire 74

J. Map of Focus Group Participants 76

K. List of Exercise Friendly Hairstyles from Target Audience 78

J. Supply Store Interview Guide 79

L. Map of Supply Store Interview Locations 80

Executive Summary

Davis Y. Ja and Associates (DYJA) was contracted by the Public Health Institute's Network for a Healthy California, African American Campaign to conduct a feasbility study. This feasibility study was implemented to determine how Beauty Salons, Hair Stylists and Beauty Supply Stores might best contribute to the Network's efforts to improve nutrition and increase physical activity in the lives of low-income African American women between the ages of 18-54. To this end, DYJA conducted a formative research study in two geographic regions of California- the Los Angeles Region and the San Francisco Bay Area. The research consisted of four components:

- Key Informant Interviews with Other Beauty Salon Intervention Project Staff;
- Key Informant Interviews with Beauty Salon Stylists;
- Target Audience Focus Groups; and
- Key Informant Interviews with Beauty Supply Store Staff

Key Informant Interviews with Other Beauty Salon Intervention Project Staff

In June 2011, DYJA conducted key informant interviews with other beauty salon intervention staff. These interviews were conducted with six respondents who had conducted previous salon-based health interventions in Boston, North Carolina, Seattle, South Carolina, Philadelphia, and San Diego. As previous beauty salon intervention staff were located across the country, interviews were conducted by telephone. Each interview lasted approximately 25 minutes.

Key and important issues arising from these interviews which DYJA encourages the Network and its Advisory Council to consider are:

- Will only licensed salons/stylists be included in the intervention?
- Should the Network be more interested in reaching larger numbers of women more superficially or fewer numbers of women with a 'deeper' intervention?
- What are the proper levels of incentives (stylist/client/store) required in order to implement the intervention?
- What is the appropriate role of community organizational support?
- How can client-level change be accurately measured?

Key Informant Interviews with Beauty Salon Stylists

African American beauty salon stylists were conducted between July and September 2011 in the San Francisco Bay Area and the Los Angeles Region. Stylists who consented to participate, were engaged in a 15 minute audio-recorded interview. The overall response of stylists to the campaign idea, motivators for participation, perceived benefits of a salon-based program, and perceived challenges to program implementation were the primary themes discussed in these interviews.

A few of the important issues arising from Key Informant Interviews with Beauty Salon Stylists which the Network and its Advisory Council needs to consider are:

- How to effectively recruit and engage stylists to deliver health promotion messages?
- How to develop relevant and appropriate protocols to determine which sites to roll out the campaign?
- What specific actions and efforts will be required on the part of the salons and stylists?
- Taking appropriate measures to assist stylists to serve as role models for their delivered health promotion messages.

Target Audience Focus Groups

Focus groups with the intervention target audience, low-income African American women between the ages of 18 and 54 years residing in the San Francisco Bay Area and Los Angeles Region were conducted in August and September 2011. Focus groups lasted approximately one hour. Themes discussed in these focus groups included: knowledge of exercise friendly hairstyles, sources of health information, the influence of stylists/salons, and how participants felt about the prospect of receiving health promotion messages in a beauty salon or beauty supply store.

Overall, participants from both the San Francisco Bay Area and the Los Angeles Region had a positive response to the campaign. However, committing to personal change is an individual matter and may pose the most significant challenge for the campaign. While beauty supply stores were not generally seen as trusted locations or spaces as were beauty salons, supply stores could

serve to reinforce health promotion messages.

Changing lifestyles and habits among the African American community is a major endeavor but the salon as a trusted space and the role of the stylists may be helpful to initiate positive practices in place. The challenge will be in motivating the women to make the changes which can be done by providing needed health information, making it readily available, modeling the solutions to show that they are possible, and most importantly in supporting African American women to take action.

The single most important issue arising from Focus Groups with the Targeted Audience that the Network and its Advisory Council need to consider is:

- Implementation of an incremental and flexible approach which is adaptable to varying client conditions and levels of interest.

Key Informant Interviews with Beauty Supply Store Staff

Beauty supply store management and staff serving primarily African American women were interviewed between July and August 2011 in the San Francisco Bay Area and Los Angeles Region. Management and staff engaged in a 10-15 minute audio-recorded interviews. In the San Francisco Bay Area six supply store interviews were conducted at five locations. In Los Angeles, five beauty supply store interviews were completed at three supply store locations. Of the eleven total beauty supply store interviews conducted, eight were with managers, two were with store staff, and one with a store owner.

The main thematic patterns that emerged from these interviews centered around the characteristics of the community and the supply store, perspectives about the Network's proposed health education campaign, motivators for the stores to participate, current and recommended health education and marketing, and suggestions and potential challenges for a beauty supply store-based campaign.

Key and important issues arising from these key informant interviews which the Network and its Advisory Council need to consider are:

- Resistance to the idea in the supply store setting to the proposed intervention among stylist respondents, indicating that supply store locations may represent a more difficult setting in which to implement the proposed campaign.
- The average and limited amount of time spent in these locations by clients/customers, and the types of relationships developed in each setting may be a significant challenge to employing interventions in this setting.
- A possible conflict in the supply store setting between improving customer health and selling beauty products.
- Possible impact of racial and ethnic differences due to the fact that most beauty supply store staff and ownership are Korean immigrants.

Background

Obesity is a major national health concern across the United States and particularly in the African American community. African American women represent 50% of obese women in the United States, which exceeds all other races, ethnicities, and genders (Office of Minority Health, 2005). Additionally, almost 15% are categorized as "extremely obese" indicating that they possess 100 pounds of excess weight (Kumanyika, Whitt-Glover, Gary, Prewitt, Odoms-Young, Banks-Wallace et al, 2007).

Obesity increases the risk for sustaining other health problems and chronic diseases, which include but are not limited to, high blood pressure, cardiovascular disease, type 2 diabetes, stroke, arthritis, and some cancers, leading to increased mortality (CDC, 2010). Overall, African American women have a greater likelihood of dying from cardiovascular diseases and risk factors compared to white women in the United States (National Cancer Institute , 2004).

The trend in the rise of obesity and overweight has also touched California. It is estimated that 15.3 million people in a state of 37.2 million are obese with Los Angeles County being home to the greatest number of residents who are obese (Lin, 2010; U.S. Census Bureau, 2011). From 1995 to 2009, Californians who have diabetes has risen almost 20% (CDC, 2010). For African Americans over the age of 18 in the state, 35% were classified as obese and 11.5% had diabetes (Lin, 2010).

Poor eating habits and exercise behavior are believed to be the leading causes for obesity in the African American community. Poor eating is not only defined as having a diet that high fat and calories but also lacks adequate fruit and vegetable intake. According to Casagrande, Wang, Anderson, & Gary (2007), overall 38% of African Americans were less likely to meet fruit and vegetable consumption recommendations compared to whites.

The physical environment of many African American communites often poses many barriers to residents eating the recommended servings of fruits and vegetables. African Americans often live in low income communities where resources to support healthy lifestyles are often limited and exposure to unhealthy foods is greater (Capers et al, 2011). Low-income communities are

less likely to be able to access fresh food options or have grocery stores with quality produce, and are more likely to be home to convenience stores, liquor stores, and fast food establishments (Grier & Kumanyika, 2008).

In addition, national surveillance data has shown that African Americans are less likely than whites to engage in regular physical activity outside of the home. Studies have shown that African American are often more sedentary than other ethnic groups. African American communities are less likely to have physical activity spaces such as parks, public pools, or other green spaces (Powell, Slater & Chaloupka, 2004). Low-income areas may also have high crime rates that may deter the community from engaging in physical activity in those public spaces that may exist. Eyler et al. (2002) also found that African American women were resistant to exercise, especially during the work day for fear of sweating and ruining their hairstyles.

Eyler et al (2002), found that African American women were more likely to view exercise as a stressor that can cause injury. Other scholars have noted an important barrier to healthier lifestyles may be norms held by many in the African American community around beauty and obesity. In contrast to whites, there seems to be greater social acceptability of higher body weights among African Americans (Bennet & Wolin, 2006). A strong cultural identity may also create a greater likelihood of rejection of the "white model" of beauty and acceptable body size among some African Amricans. (Hawkins, 2007). Additionally, African Americans have a longer history of obesity in their families than other groups which may influence their acceptance of obesity, which in turn may affect their ideas about obesity in general (Capers, Baughman, & Logue, 2011). A larger body size may also be an adaptive measure for living in an environment where it can be unsafe to appear weak (Kumanyika et al, 2007). Finally, African Americans may carry a collective subconscious trauma created by a legacy of oppression and negative race-related experiences (Kumanyika et al, 2007). This trauma may have the potential to support norms that in turn support unhealthy lifestyles.

The research literature indicates that African Americans are the most affected by the health consequences of obesity. It is clear that efforts to create viable and sustainable solutions to the problem are needed to improve health outcomes. The Network's Beauty Salon/Supply Store

Channel Development feasibility study can begin to shed light on how to take steps to navigate these obstacles. This study provides an avenue for African American voices that are seldom sought to understand the issues and find effective solutions. This report shares the insights from other researchers who have piloted salon-based health interventions in other communities across the country, along with voices of potential community collaborators who are critical to the success of the campaign (stylists and beauty supply store staff), in addition to the community itself for whom the effort is intended to serve. Additionally, this report also provides recommendations to successfully encourage healthy eating and physical activity habits in the African American community through collaboration with beauty salons and beauty supply stores.

Key Informant Interviews with Other Beauty Salon Intervention Project Staff

This section describes the results of key informant interviews with other beauty salon intervention staff and researchers. These key informants were interviewed by telephone and located in: Boston, North Carolina, Seattle, South Carolina, Philadelphia, and San Diego.

1. Qualitative Data Collection and Analysis

In early June 2011, key informant interviews were requested from approximately 19 persons who were either staff members or researchers from previous beauty salon interventions. A total of ten individuals responded, with four suggesting another project staff member as a better respondent (all suggested respondents had already agreed to speak with us), leaving us with 6 respondents to interview. As these staff members and researchers were located across the country, interviews were conducted by telephone. Please see the appendices for a list of the interview subjects.

Data analysis was completed immediately after the collection of data. All interviews were then transcribed by DYJA staff. Complete transcripts were prepared and analyzed using thematic content analysis (Hsieh & Shannon, 2005; Krippendorff, 1980). This involved broadly categorizing the discussion data, initially using the subject domains on the interview instrument as an analysis guide. At this stage, the computer software NVivo (version 8) was utilized. This program allows for greater consistency in the analysis of the qualitative data and facilitated the storage of transcribed material, the organization and codification of the interviews. The themes identified were analyzed to provide meaning, taking into consideration an emic approach.

Individual interviews were analyzed and then compared with others using cross-case (Patton, 1990) and constant comparative (Silverman, 2000) analysis. The latter technique involved going back and forth through the discussion transcripts and finding repeated examples of themes and subthemes. Quotes from individuals were subsequently used to illustrate the themes arising collectively from the interviews.

This section describes the main thematic patterns emerging from the Key Informant Interviews with Other Beauty Salon Intervention Project Staff. Beginning with the theme *'good spaces' (for*

delivery of health promotion messages), the discussion will continue on to the themes of: *intervention suitability*; *challenges of the setting; incentives; and previous promising practices*.

2. Qualitative Themes

Beauty Salons and Stylist-Client Dialogues as 'Good Spaces'

All key informants agreed that the beauty salon environment represents a promising location or space for the delivery of health promotion messages. Interviewees describe that certain aspects of the culture, norms, and practices of hair salons that cater to African American women act as facilitators to discussing health in this milieu. For example, many clients see their stylists as lay therapists, often discussing all manner of life topics with them- including health issues and concerns. This is particularly true for women with long-term stylist relationships.

> *They already have an ongoing relationship for the most part. They're in frequent contact there, and so it's really an ideal way to think about sort of naturally weaving in health related messages. (Dr. Wilson)*

> *I think they are excellent places to do this kind of work. I have done some follow-up work because what I try to do is just take this whole study and use it as a springboard for funding do it again. To replicate. (Dr. Ralston)*

> *The whole point of having the stylists deliver is that they know their client, you don't. (Dr. Sadler)*

Others described the 'naturalness' of bringing up health in an environment centered on 'looking good'.

> *...because health is a big topic and there's a lot of literature of it already that women come – because, you know, any woman goes to a beauty salon – to have the stylist make you look good right? So health comes up. (Dr. Ralston)*

> *you know, you've got certain salons and barber shops in Brooklyn where they, you know, see their role as um, you know, promoting community well-being, community health, you know? (Dr. Wilson)*

However, in the discussion of salons as good spaces for a health intervention, Dr. Linan challenges us to go farther. She argues, that while she agrees salons are inherently good spaces

for health promotion, she feels that we need to do a better job of rigorous study to determine how to make these interventions as effective as possible, and with demonstrable consumer outcomes.

> *I'm a big fan <of beauty salons as good spaces for health promotion> but-if you look at the literature - There's not been a lot of rigorous study, there's been a lot of people talking about it, there a lot of people doing work that is minimally evaluated, and everyone says 'ooh, good idea', but when it's time to get down and dirty about how to promote an outcome at the customer level, it's really hard work, and there isn't a lot of evidence yet that outcomes at the customer level have been able to be reached – doesn't mean I'm not enthusiastic about it, just means that there is a lot more than needs to be learned about how to do this well, because there are a lot of challenges doing it in these settings. Is this a good idea? Yes we already know this. We're way past that-how to intervene best – that's where we are-we need to get past 'is it a good idea'. (Dr. Linan)*

Stylist/Client Interaction vs. Staff/ Client Interaction

Each of the key informants described their intervention as relying wholly, or at least largely on intervention staff training stylists to subsequently interact with clients. The reason for the greater reliance on stylist/client interaction was the issue of sustainability. Dependence on project staff to interact with and deliver health promotion messages to salon clients translated to a lack of sustainability. As such, key informants felt that if these health promotion efforts were going to be maintained over the long run, it was imperative that the efforts be made to train stylists in order to continue the intervention once project staff were no longer in the field. As each interview described the desire to have the intervention live beyond project staff time in the field, there was very little reliance on staff/client interaction for future interventions.

> *Okay so the first thing you want to remember is that you're trying to build sustainability in the community. So if you go and do the work and you leave, there's nothing left. So a sustainable program is one in which the project is done, the community still lives 'cause they had the program before. Everyone else got it and vow it was bound to work but they get to keep it. It's like, um, volunteering at a sporting event and they give you a cool shirt so that they know who you are. And you get to keep it when you're done. Same thing. But the community wins here because the community gets to keep these fabulous stylists who are already identified because they were civic minded and now what you've done is just to make them more talented. (Dr. Sadler)*

... sustainability was critical to us. We realized, you know, you go in with a project, and you know, got everybody all worked up. And then, if you have professionally delivered interventions you remove those professionals and you don't have an intervention. We wanted them to at least have a chance of living beyond us and have the stylist take it on themselves to see that there community was being watched out after and there is some evidence to indicate that that happens, if you set it up right. And the only way we could figure to do that was to work with the stylists with themselves to be the intervention people. (Dr. Bowen)

Potential Challenges of the Beauty Salon Setting

Specific challenges to intervening in the salon environment were varied and ranged from how busy salons/stylists were; the role / interest of stylist/ owner; and intervention standardization, for example- the issue of dosage seen to be an important issue.

Beauty salons are often very busy places, which can add an extra layer of complication to any intervention. It is possible that the fast pace at which many stylists work, may serve as a detractor to their participation in the intervention. Even for stylists very interested in the intervention, these are, first and foremost places of business.

A 'good fit' between the interest level of the stylist and the role/ she (or he) is being asked to play is another area that key informants felt was important. Due to the stylist's central role in the intervention, interviewees noted the extreme significance of the stylist's *internal motivation* to participate in the intervention. Similarly, care should be taken to ensure that what is being asked of the stylists is something *reasonable* and *realistic* given their varying levels of time and capacity (and possibly commitment/ interest).

I think you have to be careful of how much you're asking people to do, particularly when their first responsibility is to make money and make their relationship with their client. You design anything that's going to affect business or create any discomfort is not gonna work for you. So you have to, you know, create a really participatory approach with the stylists or really think about what's gonna work. And what's expectable will be really important. (Dr. Wilson)

Overall- the role of the owner and stylist is important- even when there's interest, they say they're in- but when it gets down to asking them to actually do something, really important to have the stylist know what role you want them to

play, and not to assume that each stylist are the same is going to do the same thing, or had equal interest, it's not realistic. (Dr. Linan)

Standardization of the intervention is another issue that was discussed with most of the key informants, specifically as it relates to the idea of dosage- or the amount of intervention to be administered to the clients.

Because I think the harder issue is, uh, getting, as I said before, getting access to them, um, in the setting that they are in. It just – what we found was, you know, um, they come in when they have appointments... you know, you're trying to catch them on a Tuesday and you know they don't come in until 3 'cause that's when they have an appointment. So it's just a different rhythm so we're trying to work on that now. (Dr. Ralston)

What's possible in terms of intervention method- not everything's possible in every salon- space issues, many have no computer tracked customer databases- so we don't even know what the denominator is on the number of customers- how many people you've reached vs. how many come there- so there are challenges on research side- tracking outcomes is very difficult... It's fine to just go into salons and offer an intervention, go into salons and offer it – if you don't have to track anything, a lot of folks are doing that, and that's fine, but that's not advancing science- or helping us get to outcomes that are going to move research forward, good research will build the evidence base to increase activity- because this is a great place to intervene. (Dr. Linan)

However, one key informant balked at the idea of a standardized dosage:

...one of the questions they're gonna ask in the review process is, are you gonna standardize the process...and you made a comment before about should we – or should the stylists deliver it? The whole point of having the stylists deliver is that they know their client, you don't; so they know that Brenda is actually anti- any discussion about nutrition. She's a little bit large and she likes it that way and her husband likes her that way. So what's the point of talking to her? Well the stylist knows that. You don't. The stylist knows that what she should be doing is talking about the fact that Brenda's mom who is also her customer was just diagnosed with diabetes. And you know, we all should be getting together to help your mom. You know we all need to lose 5 lbs to help her. Let's get on a team together, let's all lose 5 lbs because she's gotta lose 50. So help her. So a different way of approaching this is – now she can go and talk about nutritional if she wants to 'cause she has the right doorway to go through. (Dr. Sadler)

Incentives

Key informants noted a variation around the issue of incentives to stylists and clients. When asked, one key informant thought incentives were a very important aspect of the intervention:

> *I pay the stylist therefore 'cause otherwise you ask them to do something for free. It has no value. And if you don't think their time is worth it, then why should they? (Dr. Sadler)*

While most seem to offer incentives of some kind, some previous projects were more generous than others, and one project did not provide any financial incentive.

> *Uh, we did not. Interviews, all 3 levels of people, owners, employees, and actual clients and we provided – let's see in Seattle we provided no incentive. In Boston, but – oh I should be technical. In Seattle and Boston we provided no financial incentive. What we did was that in both places, the shop owners knew that an intervention was coming and we basically said, you know, if you help us now by gathering information, then when we're ready we're gonna involve you in interventions that can actually help you and help your business and help your clients. So, I guess in a sense that was an incentive. And we kept our word and we followed up with support and interventions in both settings. But I think that – I actually think that there were, there were no financial – you know here's $5 for participating or here's $20 for your uh business or whatever. We didn't do any of that. (Dr. Bowen).*

Others gave as much as $75 for stylists to participate in the training:

> *We gave stylists $75+ travel to training workshop; stylist interviews were $25; and customer questionnaire were $5; in the barber shop study we gave free haircuts – that was very popular. (Dr. Linan)*

Even with incentives, one key informant described difficulty with recruiting consumers to the study:

> *Basically, you know we were willing to drive out and pick 'em up and bring 'em back and you know we had food and we had incentives and it was still a challenge. (Dr. Wilson)*

Promising Practices

The final theme from key informant interviews is in articulating some of the promising previous practices used by previous salon health intervention projects. Several mentioned the use of discussion 'trigger' materials in the salons:

> *The other thing we had were mirror messages. Before I forget, these are really important. These were laminated pieces of paper, 8 messages. They said things like "I don't have any breast cancer in my family." Myth #3 "I don't have any breast cancer in my family, so I don't have to worry about it." Ask your stylist. And then on the back side when you flipped it over, it said "80% of women who get breast cancer have no family history, therefore, every African American is at risk to getting breast cancer." So it was laminated so it stuck in the mirror, the corner of the mirror, so you couldn't' help but look at it. Cute little photo of an African American woman on there and graphics with African American women. Funky font. You know, um, sassy, sassy is the word. You know? I challenge you to look on the face of the figure, playful challenging: "I don't have any breast cancer in my family so I don't have to worry about it right? Ask your stylist." And we always call them stylist or cosmetologists. Not your hair dresser. They hate that word. (Dr. Sadler)*

> *...you wanted to repeat the message to cue them to action every time they came into the salon and preferably multiple times to saturate them with cues. But also, to, make it so that they perceive this to be a personalized health threat. Both the serious health threat and one they are personally vulnerable to. So everything we used had African American women on it. So we didn't use the generic stuff. We really looked for the good stuff. At the time, NIH had some fantastic posters that everybody loved and the gentleman who did them has unfortunately died and I don't think they ever got them reprinted but they were very impactful posters. They were very colorful, pictures of African women, presumably in Africa carrying baskets on their head and they have it. So, that was a real hot point. I could certainly keep in the salons so people would take them home with them. One of them made copies of them for their home and it made a real statement, to have that kind of a message. (Dr. Sadler)*

> *And then we had, um, plexi-glass stands with breast cancer information all over the front so I'd go in there twice a month to make sure the plexi-glass stands were still neat and tidy – in salons, things get really messy really quickly. There's hair all over the place, hair spray all over the place, things stick. You don't think they're gonna stick. And no matter how clean everybody is sweeping the floors and stuff, stuff gets still stuck around. So I would go in and personally clean it up,*

which made a statement to the stylist that I care enough about my material that I would actually take care of it myself. And I promise them I won't burden you. That was a big piece, I promise I will not burden. I also paid the stylist $50/month because I felt that I would be interrupted in coming in twice a month. (Dr. Sadler)

Dr. Sadler's intervention, also described the very innovative practice of using a storyteller to teach the stylists to deliver health promotion messages to their clients:

We had an African American storyteller who would train the women in a more advanced stage of story-telling. So we could have hooks to put on their stories so they could hang their messages if they want it repeated. But the story there was that had everything integrated so they could transport that home into their work places, into their church, women and wherever they spent their time. So we had this African American storyteller who was just wonderful and they loved her to pieces. Local girls who goes – well she was fantastic with them. So she trained them in storytelling. And then I had the mother of the church who would periodically visit their salons and say "atta girl". It's really important what you're doing." So it's a lot of reinforcement of the stylist that was inexpensive to do. And I tell you this because this program was already done by the state and it failed. So, I'm giving you the background because they didn't do any of this stuff that I'm telling you to do. They just boxed up supplies and they sent them to the stylists and hope they work and the stylists puts them in the trash. Because without the support, who wants to get involved talking to Mary about her breast cancer? And then she has a meltdown in your chair. What do you do? There's nothing you can do and you have no backup, what are you supposed to do at that point? And she has no health insurance, maybe. So you know it's not the kind of thing you can do without a support system.

The need for adequate follow-up with intervention participants as well as recruiting with the expectation of significant participant attrition was also deemed as important:

The one thing that was really smart was we anticipated a huge attrition rate. From beginning to end, so we oversampled at the beginning. I budgeted plenty of time for follow-up which included 10 follow up telephone calls in the day or night. Follow up mailed ... So you really need to allow a big enough sample, so get your statistician to get the simplified calculation and assume you could have as high as a 60 or 70% attrition rate. Now that's probably not gonna happen to you, but we were in the military tent. We have two huge military bases here and the African American population–a big portion of that is the big military bases. So, that

means that if you're doing study over a year or the same period, you're gonna have deployment issues. (Dr. Sadler)

Another issue described was the importance of keeping survey and interview instruments short, despite researcher tendencies to make longer instruments:

...being proactive about that because we – I mean, as the academic institution, we wanted to ask every question under the kitchen sink and then we got pushed back, you know, there was push back on, you know "how much time do we have? How much attention, focus? It's busy, there's dryers going." If people have literacy issues, how are we going to be able to address that or pick up on that ... it may be indicative of Philadelphia, you might not have that issue. But here, you know, you have like a 30% poverty rate and the literacy rate is not that high.

However, by far, the most helpful practice to these previous salon interventions was a connection to community-whether that meant a formal advisory board or just the creation of informal relationships previous to the rollout of the intervention.

I will say, um, you know, what really is helpful is having a relationship with the business beforehand. .. you know having a little trust ahead of time sounds cliché but it does make a difference. (Dr. Wilson)

I had a tremendous amount of support from the community to do this. And then they were of course – often they were the mothers of the church. The wife of the pastor or the daughter of the pastor who could open – really open the door for me with the pastors blessing on it. So it made it a very different process than it might have otherwise been because it was really perceived to be coming from the community. (Dr. Sadler)

3. Conclusion

All key informants agreed that beauty salons and stylist-client dialogues offered good opportunities to deliver health promotion messages. But beyond that, Dr. Linan's comments and cautions were extremely instructive. It seems that the difficulty is not determining whether or not these are good spaces or locations, but instead how interventions can be implemented well and with sustainability, given the constellation and complexity of the challenges and barriers in this setting.

Key and critical issues which the Network and its Advisory Council need to consider in implementing this intervention is salons are:

- Licensing: Will only license salons/stylists be included in the intervention?
- Stylist Gender: Will male stylists be included in the intervention given the intervention target?
- Quality vs. Quantity: Is the Network more interested in reaching larger numbers of women more superficially or fewer numbers of women with a 'deeper' intervention?
- Incentives: What are the proper levels of incentives (stylist/client/store) for the intervention?
- Community Partnerships: The role of community connections cannot be overstated. We feel this aspect may be one of the single most important aspect of the intervention that will determine success or failure of the intervention.

Key Informant Interviews with Beauty Salon Stylists

This section describes the results of key informant interviews with beauty salon stylists, in order to determine how the intervention may best be conducted with the collaboration of African American beauty salons and stylists.

1. Qualitative Data Collection and Analysis

African American beauty salon stylists were recruited between May and September 2011 in the San Francisco Bay Area and Los Angeles Region via referrals, cold calls based upon online searches of salon locations in identified low-income areas, and by chance due to their close proximity to other identified locations. Stylists were asked to participate and if necessary, verbal consent was obtained from salon owners or managers of the locations.

Stylists, who consented to participate, engaged in a 15 minute audio-recorded interview. With the interview instrument as a guide, information about the characteristics of the community and the salon, perspectives about the Network's proposed health education campaign, and suggestions for the campaign were shared. Each stylist was provided with a $25.00 cash compensation for their participation. Each interview was transcribed and the transcriptions were analyzed using thematic content analysis (Hsieh & Shannon, 2005; Krippendorff, 1980). Using Nvivo 8, an analytic qualitative software, the subject domains of the interview instrument were employed as an analysis guide. Cross-case (Patton, 1990) and constant comparative analysis (Silverman, 2000) were used, and quotes extracted to illustrate the collective and unique themes that arose.

This section describes the main thematic patterns that emerged from the African American beauty salon stylist interviews conducted in both California regions. It will discuss the overall response of stylists to the campaign idea, motivators to participation, perceived benefits of a salon-based program, and perceived challenges to program implementation.

2. Participant Information

In the San Francisco Bay Area, a total of 33 salon sites were visited, of which ten salons specialized in hair braiding. In all, a total of 15 stylist interviews from African American salons

throughout the Bay Area were conducted at 11 different salon locations. Of these 11 salons, three were with braiding specialists in braiding salons. Of the braiders, one worked in a storefront salon, one in a licensed home salon establishment, and one in her home (braiders do not require licensing in the State of California).

In the Los Angeles area, a total of 25 locations were visited, eight of which were braiding salons. Overall, 15 stylist interviews were completed at 11 different salon locations, three of these interviews were with braiding specialists from braiding salons. Also, included in our sample is one independent unlicensed male stylist who worked out of his home or provided hair services to clients in their homes.

Of the 30 stylists who consented to participate in an interview, ten were owners, three were managers, and seventeen were contractor/staff stylists.

3. Qualitative Themes

Beauty Salons and Stylist-Client Dialogues as 'Good Spaces'

Overall, in both the San Francisco Bay Area and Los Angeles Regions there was overwhelming positive responses to the campaign idea. Respondents felt that that a salon-based program focused on how to make healthier choices regarding eating and exercise is needed in the African American community and the nature of the salon setting provides a favorable space. Additionally, the acceptance of a salon-based intervention was due to the nature of the conversations many stylists are already having with their customers in their current practice.

As indicated by previous research and the key informant interviews with staff on past salon-based interventions, stylists are often regarded as lay therapists by their clients. African American beauty salons are more than just places where women get their hair done, but social arenas where lives and information are often shared, advice is sought, and influence is likely. It seems that as long as there is rapport between the stylist and customer, very few topics are off limits. This relationship and ease of conversation provides a unique space for the promotion of messages surrounding health. It was determined that conversations around health issues are

already occurring between clients and stylists and are often one of the most popular topics of conversation.

> *I think it's more of a community. People come together in the beauty salon and they discuss everything from having children, to their marriage, to their health. So I think it would open up dialogue and they would be in comfortable surroundings. So yeah, I think it will be good. -#35*

> *And we're one resource than just the doctor's office you know. A lotta people don't like going to the doctor. So if you going somewhere where the atmosphere is a little more friendlier, and a little more open, little more down home, they tend to open up to different things. -#6*

> *Well for one, stylists are like real influential characters in a lot of their client's lives... whatever the case may be and you know we get real personal because we have a lot of intimate time with our customers. So they are able to talk and express openly." -#21*

> *"When the client is getting their hair done, they're more relaxed. And they're just you know—what I've experienced is that you talk about anything. They talk about any and everything [laughs]. It's quite interesting what you learn within an hour or two about somebody, and about their life, and about what they're going through. And then sometimes they just want somebody to listen. So I think that it's a great time to discuss nutrition and health, and stuff like that. -#18*

> *It's an excellent space. Reason being is because women come in here and they discuss very intimate and very private details. So something as simple as nutrition would be easily discussed. And clients take your advice; they feel like you're the expert, so then whatever you say, that's what they do. -#26*

Generally speaking, we also found that stylists have been in the practice of recommending exercise-friendly hairstyles to their clients. (A list of these hairstyles has been complied in Appendix E).

African American women spend substantial number of hours with their stylists. On average, stylists in the sample spend 2.8 hours with clients. Of those 2.8 hours with their clients, stylists estimated that an average of 35 minutes could be devoted to talking about healthy eating and the importance of exercise each visit. Interestingly, while braiders spent *more* time per client than

regular stylists (an average of 6 hours), they estimated *less* time (28 minutes) could be devoted to talking about healthy eating and exercise per client visit.

In terms of the frequency in which clients visit their stylists, hair appointments vary with the individual but some stylists shared that they have clients that come in once a month, once a week, or some that even visit twice a week.

An unlicensed stylist that either works from home or goes to client's homes, also provides the same unique one-on-one opportunity that one-chair shops or home shops provide for the discussion of healthy eating and exercise, with less of an 'audience' involved in the interaction.

> *Yeah. If they're at their house they're even more relaxed and more comfortable to discuss whatever. You know and I make myself—I'm a good listen so I love to help people anyway. But even in my—and when they come to where I am, you know it's not a whole bunch of people, where you know they don't wanna talk about something, don't wanna be embarrassed or whatever. So it's easier you know clients to talk to me about whatever they dealing with. -#18*

Motivators for Stylists and/or Salons to Participate and the Benefits of Participating

While only one stylist mentioned that there would need to be a financial incentive to participate in the Network's campaign. Most felt being able to save or change the lives of their clients make this campaign a worthy cause in which to become involved. Also, respondents indicated that being able to help their clients live healthier and longer lives would make them feel positive about their efforts. Stylists also indicted that having the ability to help their clients in such a way could convey the feeling to clients that their whole well-being is cared about, not just their hair.

> *We have a lotta overweight clients that are diabetics and it would benefit them to lose weight and you know. If you just save one life, it's worth it. You know puttin' it somewhere. And I know I have a few that over eat or constantly you know, congestive heart failure. And all that kind of stuff would work out, but if you can just save one life, it's a worthy cause. -#6*

> *It would benefit them because they would have the opportunity to get the information and the resources right at their hand, one stop. If getting their hair done, they gonna come anyway, so they have no choice but to get exposed to—you know if it's here and that's what you are offering. You know its exposure, whether*

they take it, it's still information there. So you know, I think it's a good source and place to have information like that. Especially for elderly, I do a lotta elderly. -#6

As an additional incentive, not only would being a part of a campaign to improve health outcomes not only benefit the women of the community, but many stylists felt that a salon's participation in the campaign would also be good for business, as a client that feels cared for can help build a salon's reputation and clientele.

Well I mean it would be a benefit to see the people that come in through here finding a way of getting healthier because of coming here. And I mean you want to see your customers happy and healthy. I think it would be a plus for a salon. -#33

Well more exposure for our salon. More clientele. That's what we thrive on exposure. We are already a well-known salon so more exposure the more better...it would be known for beauty inside and out. I think that's awesome actually. A good idea, very good. -#37

While some stylists believed it might be difficult to conduct the intervention while trying to do business, most stylists did not mention or see it as something that would negatively impact business. In fact, several respondents felt that it might improve business. Having a program that helps people improve their health, beauty, and lives lets the customer know that the salon is not just about taking their money, but that they care about their customers.

Although one braider's salon serviced one person at a time, she felt the impact of talking to just one client had the potential to reach many more. She shared that not only might her client be impacted and motivated to make changes upon receiving health messages from stylists, but so could their families and friends - impacting the larger community. Considering the salon setting is often a community forum, much of what is learned may be passed on to an individual's family.

Oh yeah, the community will benefit because like maybe it's not everybody that can afford to come to my salon. So it could be a group or family like 10, and it's only one person who can afford to get service from my salon, right? So when this person come in here and then find out about what is going on and about health. "Oh, when I went to that—" oh, people talk. "When I went to that shop, hey she

gave me snacks and hey, the fruit was good. You know, the veggies, she—oh god." So, for one person to come in and find out about that, I believe others that don't go to the salon can also get information. -#32

Another stylist indicated that just the existence of the campaign in the community, had the potential to reach beyond the salon itself.

It could be, it could benefit us. It might benefit us with more customers and you know it might not. It might just benefit a person that's walking down the street and see a sign and be like "Oh this is what they were talking about in there about the health thing." You never know. -#22

As previously indicated, many of the stylists spoke about having a bond with their clients and the idea of being able to help them become healthy and care for themselves is motivation in itself. It is also the case that many of the stylists indicated that they also struggled with eating healthy and exercising more. Therefore, the opportunity to get the information and help themselves, in addition to their clients, would be a great benefit to participating in the campaign. In addition to serving as resource for information, they have the opportunity to make changes in their own lives where they can serve as role models of healthy behavior for their customers.

...maybe not a huge one, but chances are if you tell 10 clients, maybe you might be able to get 3-4 clients to start practicing that -especially if that client is already having health issues. They'll love for you to say, "You know what, I think you should start to do this." Or "I think you should start to do that" you know. Clients love when you give them advice. They devour that. -#26

As far as the salon staff itself. 'Cause I mean people follow by example. So if they see us in here eating healthy and getting our bodies together, which we have been doing lately. Adrian's lost weight, I've lost some weight and you know they see that. She's lost weight. Everybody starting to notice it and it's like, "dang you know what I can't be the only fat girl in the crew. -#27

... monkey see, monkey do. They see me in here you know, got some kiwis. They are like "dang I haven't had a kiwi since I was like 4 that was good." Next thing you know their like at the store like I gotta get me some kiwi; that was good. -#21

I think I will have good impact—great impact on 'em [sic]. Because I really—me personally I'm trying to stay fit and healthy and exercise more. And so, if I talk

about it and I give like my testimony where I was. I was 300 pounds and I was working out, I started exercising, changed my eating habits, now I'm down to 175. So it's like, "Wow, really?" So that's already striking interest. And I'll yeah, "You should really—"and you know that will encourage them. And they're like, well if they can do it, then I can do it. -#18

Potential Challenges of a Salon-Based Campaign

Stylists or Salon Practices as a Barrier

First and foremost, the owner of the salon must be receptive to the idea of having their salon as a site for the campaign. There are many reasons why an owner may not be supportive of the idea. They may feel it would interfere with business or that it may be difficult to get their staff on board because many salon stylists are independent contractors (as opposed to employees) who rent space in a salon. Another consideration is what exactly "participation" will entail and the level of effort required of the stylists and owners.

An additional challenge is that if stylists' fail to model the appropriate behavior, perhaps if they struggle or don't care to model healthy behavior, trust regarding the validity of the health information and credibility may become lost. Despite the willingness of clients to make changes and accept the health information by the stylists, some stylists felt that they themselves could be obstacles for the client to make healthy choices. Indeed, some participating stylists may be in the same stage in their lack of readiness to change as their clients, as many stylists are members of the vulnerable community that the campaign is targeting.

I'm a thick girl so sometimes I don't want to lead nobody in the wrong direction if I'm not doing it. You know what I'm saying so I can't be like oh girl, "eat such and such." Cause I'm not going to be doing it. I can't do that. I'm not a hypocrite. -#22

Additionally, many salons support other local businesses or vendors, and some of these existing relationships contradict the messages the campaign is trying to promote. For example, one LA Area stylist allows a community member to sell desserts at her salon on the weekends:

You know ...I'm probably gonna have to stop her, she's really nice. I don't mind helping her but you know she sells really nice desserts. You know so when she

comes in other people buy them...there are like peach cobbler, banana pudding, you know stuff like that. She's nice and I was just trying to help because of the economy but it don't help me [laughter]. -#16

Another consideration is that a stylist may feel that they are too busy to even learn about the campaign and become a part of the effort. Competing life demands in a difficult economy may impact initializing the campaign in needed locations. One stylist put it this way:

You know that they are too busy and they don't have time. They are in their shop and they are just doing their work and they don't have the time to stop and talk or they don't have the time. Or whatever you're doing is your business. They don't have time because they're trying the make money to live. -#15

Although some stylists described how some of the characteristics of the salon, themselves and other staff might create challenges to having a salon-based health education campaign, some respondents did not feel there would be any challenges to implementing a salon-based campaign. Indeed, the overwhelming response by the stylists was to see the salon as a good space for the Network's campaign, as salons are most often trusted spaces.

I don't think it would be hard, I think it would be something that everybody would not be immune to doing if it's something that comes about of the salon. I think people would be willing to do it if it's something that's into a salon establishment. -#22

Client Characteristics as a Barrier

Stylist responses also reveal that some of the challenges that lie ahead in implementing the campaign in salons lie within the characteristics of the target community. Although stylists indicate that the salon is a trusted space, it is patronized by women with diverse personalities, desires and levels of information. Some women have no problem sharing their lives with their long-time stylist, stylists they meet for the first time, or other clients present in the salon. However, as was often a response by stylists to many of the questions posed in their interview, "it all depends on the customer". Some clients come in ready to talk while others don't feel the need to, and some treat their time in the salon as a time to relax.

Participation amongst the women. Most women are very shy to participate in

programs like that, or they'll hurry up and make an excuse so it would have to really work on that. -#26

Cause some of them don't even care. Some of them going to be looking about you like, "girl I just wanna get my hair did." They gotta be people that's motivated. Cause its some women that come in here that just don't talk. They just want to get their hair did. Some people come in here and they like to talk. It depends. -#34

Additionally, sometimes the client's current health habits create a barrier themselves. It creates a challenging situation to broach a potentially sensitive subject.

You know and sometimes it's also kinda like, people come in and they are not clean and it's difficult for you to say something about cleanliness, health. But we always have a way of talking to them. I do. -#32

Most of the women here are for it, it's just that we have to fix our head up and do it. Mostly everyone that comes in here are health conscious but we have a lot of them that aren't. So you have to be careful on what you say when other people are around. You know when you're dealing with a lot of different people you don't know what they come from or what they have. You don't know. You know we have some really, really large women. So you have to be careful when you say certain things. -#16

Challenges may arise not only with stylists, the salons, or the clients themselves, but due to the physical environment of the community that the campaign is targeting. In both the Los Angeles Region and the San Francisco Bay Area where many of the African American Beauty Salons are located, fresh and healthy food options are scarce and often inaccessible. These low-income communities that are the target areas for the campaign are often known as 'food deserts', with limited or no availability to fresh produce. Instead, the target areas are commonly home to a higher number liquor stores and fast food restaurants than other areas. One stylist summed up these issues this way:

Challenges faced by the community the salons are in and where their clients reside. It's not that the campaign would be salon-based but the challenge of promoting health in an area where solutions are hard to demonstrate or try. Just the demographic area of what the foods they offer. And then what they promote more on corners. I live in [Los Angeles District]. I find more Trader Joes, Fish places, Baked and everything is more healthy there and when I come to LA [low-

income district] to work, which is where my establishment is, all I find is fried chicken and fast foods and donut shops. And I went into one of the supermarkets here and I'm an organic fruit eater and I got ready to ask the man, "Oh my God, I'm dying, where are the organic fruits? And the first thing he said to me was, "I have an organic carrot and I was like" and I was like, "Oh God." -#24

Additionally, safe open space in which people can be active is often limited or non-existent in the target communities, making it more difficult for women to increase physical exercise.

4. Conclusion

In summary, all of the key informant interviews with stylists in both the San Francisco Bay Area and Los Angeles Region were in agreement that a salon-based campaign to improve nutrition, exercise and physical activity was a promising idea from which the community, including themselves could greatly benefit. Thus, getting stylists and salons on board should not be a great challenge in the beginning. However, protocols will need to be established to determine in which sites to roll out the campaign and what the specific actions and efforts will be for the salons and stylists. Measures will also need to be taken to address the issues regarding stylists serving as role models for their delivered messages.

Furthermore, the community context such as availability of fresh food alternatives and options would have to be considered in order for this to be a more viable campaign. However, we believe the greatest challenge to rolling out the campaign will be in crafting appropriate and non-judgmental messages that are able to meet the community 'where there are' in their readiness to make changes, in addressing so many individuals at different stages, of different ages, in different states of health, and with varied salon habits.

Target Audience Focus Groups

This section describes the results of focus groups conducted with African American women, the target audience of the intervention.

1. Qualitative Data Collection and Analysis

Participant Recruitment

Recruitment of the focus group target audience, low-income African American women between the ages of 18 and 54 years residing in the San Francisco Bay Area (SF) and Los Angeles (LA) Region began while interviews were being conducted with beauty salon stylists. Recruitment cards were provided to those stylists and supply stores who volunteered to aid in the recruitment efforts, including locations where stylists declined participation in the one-on-one interview. An incentive of $10.00 per client (up to three clients each) was offered to stylists who referred woman who participated in a focus group. While several stylists referred clients to the study, only one (LA Area) client was income-eligible to participate in the focus group.

Participants were also recruited by a DYJA research assistant through interactions with the community at local government assistance offices and retail areas serving low-income clientele. In addition to passive recruitment by salons and active recruitment by DYJA staff, an advertisement was placed on the Craigslist website in both SF and LA areas. The Craigslist posting generated the bulk of eligible participants in both regions. Upon contacting DYJA, interested persons were asked a series of questions in order to determine their eligibility; eligible participants were invited to participate in a focus group.

Interview Methods

Bay Area focus groups were held in downtown San Francisco offices of DYJA to allow for easy access of participants traveling from all over the region. In the Los Angeles region, focus groups were held at a rental office space in the City of Los Angeles that was central to the region. Participants received $50.00 for their participation in the hour long focus group which included compensation for their travel. Additionally, Los Angeles participants received supplementary compensation for parking ($2.00 for a nearby lot) since driving was necessary. Childcare was provided as needed.

Upon arrival, participants completed a brief questionnaire regarding their salon and beauty supply store practices, and additional basic demographic information. Focus groups sessions were audio recorded. At the conclusion of the focus group interviews, participants were given a copy of the Network's Soulful Recipes cookbook.

Analysis Methods

As with the Key Informant Interviews with staff members from past Beauty Salon Intervention Projects, African American Beauty Salon Stylists, and Beauty Supply Stores, data analysis of the transcribed interviews were analyzed using thematic content analysis (Hsieh & Shannon, 2005; (Krippendorff, 1980), with NVivo (version 8) used for consistency and storage. Cross-case (Patton, 1990) and constant comparative analysis (Silverman, 2000) were employed, and quotes extracted to illustrate the collective and unique themes that arose from the data.

This section will discuss thematic patterns that emerged from the Target Audience Focus Groups conducted in the San Francisco Bay Area and Los Angeles Region.

2. Participant Information

In all, six focus groups were conducted before reaching thematic saturation, four in the Bay Area and two in the Los Angeles Region creating a total of 41 participants. Of the 41 participants, 28 (68.2%) were in the San Francisco Bay Area and 13 (31.7%) from the Los Angeles Region. The sample included 43.9% aged 18-30; 29.3% aged 31-40; and 26.8% aged 41-54. The average age for the Bay Area participants was 32.2 and for the Los Angeles Region the average was 32.7. In the Bay Area, 71.4% of participants had at least some college education compared to 84.6% in Los Angeles.

In regards to their hair care habits, two (4.8%) participants have not been to see stylist in the past year while 76.9% utilize salon services at least several times a year. The majority of participants did have a regular stylist that they have visited at least once in the past six months, but 53.6% have also utilized home-based independent stylists for their needs and not salons in the past six months. Almost all of the participants indicated that they visited a beauty supply store at least once a month where they primarily purchased their hair care products, hair extensions, and

accessories.

3. Qualitative Themes

Beauty Salon and Stylists

According to Focus Group participants, salons represent arenas for social interaction, exchanges of information, and lay therapy while one sits in the stylist chair. Participants reported sharing their lives and experiences with stylists. Participants also indicated that salons provided exposure to the latest trends and that stylists represented an important confidant in many women's lives.

> *It's already a hub, you know, the salon. Sometimes even though you may not talk to people outside of there, but if you have similar schedules and you see each other all the time, you end up catching up on whatever you missed [unclear]. -54*

> *A stylist is one of the people you trust with your life... If you're gonna trust them with your hair, you know obviously you tell them just like the bartender. You telling them things you don't tell some other people.... -56*

While degree of trust and the great likelihood of seeking or following advice varied among participants, they were open to at least listening to what their stylist had to share with them. Overall, respondents indicated that beauty salons and client/stylist dialogues created a valuable opportunity to share information about healthy eating and exercise that might have an impact.

> *If you go to a hair stylist and she's helping you and you always there anyway. You always going to the hair salon. You are always getting your hair done. And she keep saying, "Are you keeping up with your diet? Fruit?" You're sitting in the chair; y'all know when y'all go to the hair shop y'all there how many hours? So if she's giving you good advice you're going to take that in. 'Cause remember, it's in your ear for that eight hours... Yeah it's reliable information if you're sitting there. -44*

> *I feel like it might work though because a lot of young girls go to the shop to get their hair done and this and that. So it's like when they are there, there's nothing else for them to do. So you just start talking and this and then okay you know they start listening after a while. If they keep going there and then you like keep talking about it, they are going to start listening after a while. -67*

Because you're sitting in that chair for 10 hours and you run out of things to talk about. [Laughter]. You go over everything. -66

I'm trusting her with my hair too, that's like something I'm pretty vain about and it's hard to hide if they mess it up. So if I trust her with that, I trust at least her skills and her sense. You know I would listen to her. -65

However, despite being open to listening to advice from their stylist, many indicated that they would conduct their own review and research regarding information that they found credible before following it. This seemed to be particularly true for respondents under the age of 30.

Beauty Supply Stores

While respondents indicated supply stores influenced what types of products people purchase to care for their hair and look good, these stores apparently do not have much impact on other choices women are making in their lives. None of the participants indicated that the beauty supply store currently had a role in encouraging healthy living and for the most part, participants did not buy health supplies like vitamins from these establishments. The primary role of the beauty supply store was to simply provide the products for a hair style, healthy looking hair, or increase hair growth. When participants shop at a beauty supply store, they typically know exactly what they are going to buy, so they buy it and leave spending very little time in the store and minimal time interacting with the staff. If conversations do occur, it is usually around the products they sell with very little small talk.

You're normally don't be in there too long. I mean I don't personally. I go, get in, and get out. Like it's nothing for me to talk about. –63

In addition to beauty supply store shopping habits, participants reported that cultural barriers affected interactions between store staff and customer. Participants indicated that they shopped at beauty supply stores that are in the African American community but also noted that they were rarely staffed by African Americans. Many of the beauty supply stores were usually staffed by only a few who are able to communicate in English which limited their engagement to the discussion of products carried in those establishments.

I think maybe like a communication barrier. Because like a lot of people at the

beauty supply that I go to don't really speak that much English. They will be the 3 main people that are like, 'oh this is 25% off or you know the Remi hair is on sale today.' It might be them 3 people but for the most part the people are at the cash registers and don't really say much to me. They just scan me, get my money, get my change and then they will have somebody over there in that area that will help translate if I'm asking a question. So I think there maybe will be a communication barrier. -64

While there were a few women who described meaningful interactions in their supply stores, there were mixed feelings on whether they would fully trust the health information they received as compared with hearing it from stylists. Indeed, most women could not imagine receiving health information in this milieu. In fact, for many participants the idea of receiving information from the stores seemed very odd and unlikely.

I couldn't even imagine them saying those things. -65

In addition to cultural barriers, the transaction oriented interaction also a created a feeling among participants that the beauty supply business owners are not invested in caring for the well-being of the community. Participants often mentioned that the foreign (largely Korean) ownership of the supply stores were focused more on making money and didn't care about or respect them as people. Given this current sentiment, health messages within these settings represent a definitive challenge for the intervention.

I'm not listening to Asians. I'm not listening to them. I know they don't care. They just want the money. -74

Some felt that in beauty supply stores, customer service could greatly be improved. Some participants mentioned they were not treated well and that despite the stores targeting their community, that the African American community was generally treated with distrust. In general, a sense of community between the African American population and those who did business in the community seemed to be largely missing.

Not to be prejudiced but I don't really listen to those Asian people. I'm just like 'just show me where the stuff is I'll get it myself.' -66

I'm not aware of any African American beauty supply stores and every time I go

into those Korean beauty supply stores, they are very rude and racist. [Crosstalk about the comment, ventures into racism, spurs discussion]. -59

Beauty supply stores provide a function and space that vastly differs from the salon. Nonetheless, these settings may still play some sort of a role in promoting the proposed intervention.

Sources of Information

Many of the participants relied primarily on trained health experts such as physicians, holistic practitioners, and nutritionists for their health information in addition to what they hear from family and/or friends. Sometimes information was gathered from what was read in fitness magazines, books, or health and style magazines. Government funded social services and existing agencies in the community were also considered trusted and reliable sources for information.

Television was also a mentioned source for health information. The daytime television show "Dr. Oz" was mentioned by a great many of participants in both California regions as a very trusted source of health information.

Dr. Oz, I believe what he says. It's good. Like Dr. Oz has the best remedies for anything... Like he's really, really good. Some of the stuff I've tried. Like I wrote some of the things that he says like you can eat and it's okay. It's you know, good to try it. If he says it's good, I think it's good. -50

I trust Dr. Oz sometime. I mean to me, he has different things for different people. ... I like him a lot. -PARTICIPANT

Most trusted the health information and tips on the on the show and many indicated that they had tried some of Dr. Oz's recommendations. Many even reported having watched the show while at the salon as television watching is quite common at salons.

Even though participants rely on beauty supply stores to get their favorite hair care products and accessories, currently that is as far as trust carries. As indicated previously, in a majority of their experiences, little time is spent in the stores and the staff interaction is at a minimum and

cursory.

> *I think it's not the beauty supply setting that's the problem it's just the ones I've been to. But like she said, if there was some one where I was more like had a relationship with and I felt like they kind of understood or knowledgeable about their craft and their products instead of just hocking me stuff. Then I'd be more likely to try stuff. -65*

However, despite trusting Dr. Oz, health care specialists, or what they've read in their favorite magazines, some still questioned whether they would try information or might question whether certain recommendation were 'for them'. Although little was discussed about the internet, it was the one source (internet research) that was deemed the least reliable.

Potential Benefits of the Campaign

Overall the salon setting was seen as an opportunity for the exchange of important and accurate information while sitting for long hours in their stylist's chair. It provides an opportunity for women to learn about solutions to help them live longer and healthier lives. Instead of going to the doctor when problems occur, participants were enthusiastic about learning how to prevent health problems in the first place.

> *You can kind of see a healthcare professional without having insurance and stuff like that which is a lot more expensive and complicated. -61*

Providing more than paid services may also create a sense that their stylist care about them and not just their client's money. Furthermore, given the sentiment that their stylist cares about them, this may in fact increase business for the salon. This perspective may also function in beauty supply stores, thereby shifting the current attitudes held about them.

> *So even just pushing it like that. The owner of the beauty supply store can decide whether or not they wanna be a part of it and then all of a sudden it goes from just being you know, you have a poster in your store, to you can also be a hub and it will bring more customers to your shop because people will think, "Alright, you're not just in it for the money. You actually wanna be a part of this." You know so you can offer it to them and see how many people take you up on that.-54*

> *I think it will be effective with having it in multiple places. Like having it in the*

salon as well as the beauty supply stores. You're hearing it from more than one source. So if you guys are training people that way—oh they are saying the same thing that my stylist says. I think eventually it'll grab people's attention more and more. There may be something to this. Maybe let me try that out. As far as the exercise situation I don't know... -72

Hairstyle Barriers and Exercise Friendly Hairstyles

Hairstyle Barriers

Knowing that going to get one's hair done at the salon is or can be a big household spending decision, preserving salon hairstyles was seen as the priority.

> *I was gonna say I sweat profusely. And my hair like—you know how I get it done, I'm tryna make it last at least a week you know when it's in a up-do. So I purposely don't do activities that's gonna make me sweat. I don't work out at the gym or anything. I'm always under a fan. Like, I don't like to be hot. -59*

> *Like if I exercise, like if I do. I have to flat iron, wrap, tie it up. Then tie it up again with something else and it's a lot. You just can't put it in a ponytail and go. No, it's work. -63*

Some women who might be willing to exercise more frequently, find the ordeal of protecting their styles from being sweated out, too much to deal with. Their appearances or "looking good" trumps other considerations:

> *I'm like vain; I like go to the gym and leave my hair down and it will get messed up. [Laughter] Because I don't want to look busted when I put it up. I'm like "Ugh I don't want to walk in there like this..." But it's more work later. Like I'll be in the bathroom trying to blow dry it before I go home and really like fix it. But I'm the vanity is still more there when I exercise. Plus you're doing stuff that's like not really cute. You're like struggling and sweating. [Laughter] I'm trying to like stay as cute as possible with my hair... When you're going to the gym and you're like damn I gotta come with this bandana. I don't want to walk by the basketball courts [laughter]. -65*

Caring and styling African American hair can take time. Many women have jobs and families and having to make additional time to care for their hair because of physical activity can be daunting.

That's what I do the most though is weaves. As a stylist I can say, especially women who work every day and have something to do every single day don't have time to do their hair in the morning. Especially if they have kids also it's like in order for some black women to work out we would have to have a weave. 'Cause we're gone to have to get up and take our kids to school and go to work. If we have to do our hair in the morning that's kind of like out of the question. -73

Exercise Friendly Hairstyles

Almost all of the participants knew of hairstyles that are exercise friendly. Sew-in weaves and braids were the most frequently named solutions for women wanting to exercise and many of the focus group participants wore those styles. Natural styles were also a popular among focus group members and also recommended.

Well for me personally, when I work out. I just usually wear my hair straight back. I won't really try to put too much heat on it. I don't try to blow dry it. I just keep it simple. Pull it back and just wear that. I don't wear it down or straighten it or anything like that. I like want to keep it healthy so I keep it to a minimum, no heat. Or I just wear braids. -70

Accessories like scarves were also mentioned as hair savers for women who are willing to sweat.

... exercising every week, a lotta times the wrap style works best when you're exercising extremely. 'Cause you could have your hair wrapped up you know in your do-rag or whatever and then, you know kinda just blow dry it out a little bit. But if you have like a style-style and you're exercising faithfully, it's hard to keep that style. -57

Some indicated that they were able to exercise with styles that were deemed 'exercise unfriendly' hairstyles (i.e. flat ironed). What they are willing to do depends on how they manage their hair, the texture of their hair, how much they sweat, and the type of exercise they choose to engage in. Overall, it's a decision that is dependent solely on the individual, how they wanted to look, and what they could afford. If they want to exercise they could find a way to make it work.

... I was never one to get near water I can't swim. But after I found out about water aerobics, or I discovered water aerobics-- I have my sister girls, those are my wigs. Now that's what I will do because I enjoy being in that water. And so if I have to—I press my hair. I tried natural; I can't do it [laughs by all]. It's not for

me. I spend more time trying to go natural. It was so time consuming, it was just unbelievable. But I will snatch a sister girl and put her on and I will do my water aerobics. Because it's fun and I love it, and you know I can move in the water [laughs]. Yeah, it's worth it. -51

Potential Campaign Challenges

Beauty Supply Stores – Not a Trusted Space

Most of the concerns regarding the campaign rest primarily with the supply store component. Despite the frequency of shopping at their local beauty supply store, it does not seem to be a trusted place in general. Participants also noted that for the owners of beauty supply stores, promoting healthy eating and exercise to help with beauty concerns could pose a conflict with business goals. By promoting health their customers may begin to stop buying their products. One participant put it this way:

You know how they have that vitamin Hair, Skin, and Nails, and it's supposed to like—so if they sell that, then you're telling them, "Oh, guess what? Avocado contains all of these." They probably wouldn't like that too much. -54

Many participants indicated that success in making a personal transformation regarding their health through the campaign would require follow-up and accountability. The nature of beauty supply store does not necessarily lend itself to providing that needed support.

Beauty Salons – Skepticism and Buy-In

Cosmetologists/stylists are trained in providing salon services. That is why women seek their services and that is typically what they are trained to do. While at times they may share what they have learned about health and nutrition based upon their experiences with their clients, for some clients it may be difficult to also see them as reliable health information resources. Buy-in by the community may take time. Reliability regarding the information they are conveying to their clients would need to be established.

I was thinking—I'm tryna imagine the whole concept as far as, you know, going to a beautician and you know that topic coming out of her mouth.... But my point is, okay, as far as listen to what they have say. You know seeing them as beautician; I'm thinking would I really follow her advice. Or the thing is too, you mentioned something about flyers. Maybe she knows a program or something, or

someone that she could be like, "Hey, you know this is something you know that might work for you." I mean I don't know 'cause I'm tryna get across the concept of not seeing that person just as a beautician but seeing them as you know, relaying the information to me. And I'm thinking would I really listen to her knowing she just really knows how to do hair. And then me going to her being a professional, she probably wouldn't know that if I had told her. But would I listen to her and that's I guess coming from me because of what I do. But I'm just—I don't know. -57

In order for the campaign objectives to be successfully met, the community needs to be ready to make the needed changes. Upon exposure, some consumers may not be open to the ideas, perhaps not until it matters personally in their lives. The challenge will be how to make the information relevant to everyone regardless of their current health status. Among the participants in the focus groups, women of the varying ages agreed on most points. However, women participants in the 18-30 year age range indicated that younger women in the community may be more difficult to reach.

A lot of people are in denial. When you are in denial you don't want to hear it. It's the way a person come at you. It's how you come towards that person. That will listen. You just can't go, 'you know you need to lose weight.' They don't want to hear that. It's a lot of people in denial. Till something happen and then they say, 'she been trying to tell me all this time.' After something happens. -44

Like I don't know how to say this without saying it rude. But like in every shop it's a ghetto person. Like "Don't believe them. Like "You look good girl." You have those people that try to not be rude to big girls but its like just leave it alone. It is what it is. Like no don't lose no weight you're going to look crazy skinny. It's always one of them in the shop. -63

I think it will not actually work at 18 and 19. Like when I was that age. Cause nobody could really tell me anything cause I was 18. I was 19, I had a job, and I moved out. You know I was paying my own bills. Like it was worse. That's even worse when you're like 16-17. -65

The stylists themselves would need to be considered a major component of any campaign and success lies upon their buy-in for the campaign to accomplish its goals. This may be even more of a challenge for young stylists. Stylists must be invested in helping to create the needed shift and changes in the community and culture.

Well, I think it depends on who you go to, to do your hair. Like a young girl, she wouldn't be talking to you about fruits and vegetables. If you go to somebody like in their 40s or 50s, they might be open to it. But a young person, I don't think so. -PARTICIPANT

You know in black salons that would really be a miracle. I'm sorry I'm just telling the truth. It would really be a miracle because most stylists aren't worried about your hair or how much you exercise. They're worried about getting they money and getting you out they chair. They not worried about your hair care or exercise. Now I'm going to make the racial difference. I've seen in white salons, they might give you some pointers here on some hair care as well as 'you might want to do this more. You know try that.' But black salons... -75

Its some beauticians that not really interested like I'm only worried about doing your hair, getting my clientele, doing these hair shows. I'm not really like interested in like learning about health and stuff. -64

Participating in the campaign is going to require more than what they typically provide to their clients and more on their part in taking the time to learn. Being empowered to help the community may not be incentive enough when an operator is struggling economically.

Yeah like if you charge for that advice. Then you'll make a lot of money cause if they find a way that they can make a profit off of it then they'll be like okay we could definitely do it. But like free stuff, you know like how you can just walk up to a booth like what could I do to like, I don't think it will take off. That's just me personally. -63

While the salon serves as a social venue, it also provides an opportunity for women to relax and be pampered. Being spoken to about how to be healthy may potentially be offensive and unwanted for many reasons. Since, it's a place of casual conversation, an agenda driven conversation may affect the client-stylist relationship.

Sometimes .... I don't want to hear nothing medical period. You just don't want to hear it. -45

I can see some people may be taking offense to it. Thinking that it is not the stylists or the beautician's place to be giving them health advice and things like that. Instead of taking it as honest concern, like some people getting offended. Especially, if they don't like what they are telling them. -61

I think it all depends on the person per se like if it's somebody who for example like she said, how she already got high self esteem about herself. Then they can really see what you saying for what it is but if it is somebody who's already down on they self and already thinking negatively then they going to feel like, "Oh you're just adding on." Like being negative towards me and you know will take it the wrong way. So I just think it depends on the person. -64

Stylists as Role Models

An important component of the intervention will be having the stylist model the ideas of the program. A stylist who's observed habits are contrary to the message they're trying to convey could be detrimental to the proposed campaign.

I think it would depend on what my stylist looked like before I decide if I'm gonna trust their health you know, advice. Because [crosstalk] it would be very inappropriate to have an unhealthy stylist or person in a store anywhere to advise on health unless they're using themselves as an example. And most people won't use constructive criticism with themselves but I think it's very inappropriate for an unhealthy person to advocate health. Appearance-wise it's not good. Okay, I can hear what you're telling me and I can understand what why you're telling me to eat healthy or eat this fruit or that fruit, but where's your application? You know so for me it really depends on the individual regardless if they're a hairstylist, a doctor, they could be a lawyer—my best friend for that matter. If I know they eat worse than I do, I'm not gonna take health advice from them on what to eat and what not to eat. -56

Sometimes stylist they'll have their lunch breaks in the salon. If I see how you're eating and you're telling me something else. I'm just observing you and what you do in your life style. You're telling me to do something that you're not doing. So no I'm not going to trust that. -72

Not only might the stylist personal eating habits matter, but so does their skill as a stylist-including managing their own hair. Trust comes with the ability to do hair well. A bad stylist may not have credibility to successfully disseminate ideas to many of her clients.

If I see my stylists and her clients, I pay attention. I just don't pay attention to my hair. I pay attention to other's hair as well. If I see that her client, their hair is breaking off. You'll be like 'man she had a lot of hair, now she bald headed or

she's close to being bald.' You're like what happened? That's going to make me feel very weird. That's going to make me not trust her word. You know like why is your client's hair falling out? -75

And then like she said, if your stylist's hair looks—that's my major thing too. People always say they are a hair stylist but then you look at their hair and they don't look like they do hair at all. So it's like man, if you are a hair stylist then I think you should definitely represent what you are about and even if you are—and me I'm strictly about healthy hair. -73

Not only may the stylist's appearance and presentation matter, but the salon atmosphere itself may affect the community's receptiveness. The interaction among the staff and customers, as well as the hygienic conditions, is just as important.

It kind of goes back to the influence of the stylist. You know some people they talk the talk but do they walk the walk? If my stylist wasn't trying to look or get healthy herself what could she tell me? Like I can say my stylist is pretty fit and she's very into taking care of herself cause she's trying to prepare for her husband. I'd like to know that it was more reason for it than that behind it. By her body being very fit she could probably tell me something but if somebody was trying to suggest this and they didn't look fit then it would be like okay, what's the motive here? -PARTICIPANT

When you go to the salon you want to be putting into a comfort zone. You want to get away from your kids. You're getting your hair done, this is me time [laughter.] So for me that's big. Cleanliness as well. If I see combs that's not clean, you got hair and you're trying to put that comb in my hair-- You know got some stylists that aren't clean. I've seen them. They get through combing; they got wax all in the combs and throw it right back in there and use it on the next person. That's nasty. -75

Some salons support community businesses which might include vendors of unhealthy food. Often, stylist and clients eat unhealthy foods (usually based on the kinds of foods immediately available) together. Some participants reported that their salon provides donuts for their customers and that fast food is often shared between clients and stylists. Although, the sense of community and exchange in a salon is a benefit to the campaign; if unhealthy habits are a part of that culture, it poses a challenge as well.

An additional challenge for the Network's proposed campaign is that the location of the salons and beauty supply stores for the targeted intervention are often known to be food deserts. While liquor stores, convenience stores, and fast food restaurants are abundant in these areas, grocery stores, produce markets, and other retailers for healthier choices are often scarce.

> *Probably the area because like outside of my house it's a beauty supply right across the street, and then there's [pizza restaurant], [fried fish restaurant]. And then I think if you go up the street, its more places to eat so probably like the area. -50*

> *I just also wanna say in terms of the neighborhoods, like low-income neighborhoods tend to not have access to healthier foods versus more affluent neighborhoods. So I think where you live at is also a issue because in like West Oakland, when I lived in West Oakland there was no grocery store so I had to go to Emeryville or Alameda just to stop. So my neighbors like when I lived in the projects, they would just go to the liquor store and buy whatever because they didn't have transportation, or whatever. Or they didn't have the money. -59*

Additionally, cost was often mentioned by participants to be a deterring or prohibitive factor for those attempting to make positive changes.

> *But if you go to Safeway and you know some people see a bag of grapes for like $8 and then you're like a bag of grapes for $8 or (a bag of chicken for a dollar). -66*

In addition to licensed business locations, consideration must be taken regarding the many women who utilized home-based stylists. Thus, much of the target audience may not be exposed to the information put forth by the campaign or get the follow-up needed to maintain change if necessary.

Another challenge is that a stylist taking part in the campaign may end up driving her own business away. For example, a woman who gets her hair flat-ironed every week, may switch to braids which is more activity oriented, which does not require weekly maintenance.

> *...then they'll be like no more weaves or no more these. I don't know how they would be gaining from this...She's losing money. It's going to be tough. -74*

Overall, the campaign needs to be prepared to take on the challenge of engaging and meeting the needs of a very diverse community. Proposing a variety of practical solutions that work with the complex lives and tastes of the community will be necessary to make the campaign a success.

> *I think generally people are open to the idea of doing more for themselves. So I think it would be that you're not gonna find a lotta resistance, I think the hardest thing isn't necessarily convincing that they should eat more fruits and vegetables, and exercise more, it's just helping them figure out how to do that. I think that's where we sorta fall short in figuring out; okay does it really take this much time? Does it really take this much money? Like is it really that difficult? Because if everybody else is doing it—no not everyone else, but if other people are doing it, how are they find the way to do it? And the time, and the money, and the energy to do? So there's gotta be a way, just we don't know what it is. -54*

> *People don't want to be lectured to. They don't want to be told that you're fat. That just makes them shut down. They just shut down and say well I'm mad now. I don't want to do anything. And you don't have to cut out everything. Like a lot of times, they say you have to cut out everything. Of course nobody is going to follow that. I mean I'm all for healthy eating. It's just that something's I know are still healthy and you can't tell me any different. Like the day I put turkey in my greens, it will be never. -42*

Recommended Campaign Marketing Strategies

Participants reported much more skepticism around interventions taking place in beauty supply stores. However, despite the concerns, most of the women felt that those locations could serve as spaces for supportive resources in conjunction with the salon portion of the campaign. At both types of locations providing literature such as informative pamphlets and booklets related to common health issues would allow people to make healthier choices and educate themselves and reinforce what may have been discussed during a hair appointment. Importantly, showing the relationship to how healthier habits are related to healthier hair and beauty could be particularly effective.

However, the intervention literature should not be in the form of standard 'doctor's office' brochures. Most participants found this literature boring:

> *Literature is boring. And it turns you off. 'Cause we just been talked to too much*

and to lectured about it. And we so if we had more recipes, more things to make people to want venture out of the norm instead of high blood pressure and diabetes. You hear it all the time and it just makes you want to go get a slice of cake. It's an addiction. Food is an addiction and people don't want to accept that. It's the hardest thing for people to accept. And the more they talk about it and shove it down their throat; it's just like talking to an alcoholic... So if we can make it fun. Then we can slickly put it through there. More recipes, more farmer's markets. You know you just have to introduce things in a slick way to get people to understand it...They don't want to believe that healthy food tastes better than they think it does. So you just have to find a way to maneuver and make it fun. Not make it so doctored and lectured and that way we can get it done. -41

Any material made available for the campaign must be developed creatively so that the community would find it easy to embrace. For example, the Network's cookbooks were very well received by participants.

An educational corner was also suggested specifically for the beauty supply store setting. Having materials readily available within a particular space and area in the salon, would allow customers to seek the information on their own.

So I think it would have to be—of course it would have to be a separate little sector. It can't be by the braids ... or something like that. But I think it'll be awkward at first. But if they had a set off corner or something, somewhere set aside to where that could be don-- Just like some of the beauty supply places have little hair things ... but I think if you have like a section or somewhere set aside. Maybe a little corner to where they could talk about that. And it doesn't have to be a forceful thing, someone's gonna go and look around and see what's there. Then they can present that in that manner. And I think it'll probably be a little bit more welcoming. -56

Many participants recommended beauty supply stores provide educational materials similar to their current process of providing samples for customers. Also by placing the materials in their customer's bag at checkout such as samples, coupons, or recipes might prove helpful.

One of the things that I look forward to is you know, when you buy something and they give you those little samples of stuff. But if they have maybe like a little coupon or something that give you maybe something off on getting something

fresh from the grocery store. Like maybe 50 cent off a bag of lettuce or something. Maybe that might keep that going. -51

Maybe it's stupid or just not possible but maybe if they had foods in there as well or something. I don't know. Kind of incorporate—'cause everything's natural now. A lotta body products and hair products [unclear] so can they have food in there. I mean I don't know, that might help a little bit. -48

Role models are an important component for the campaign's success. Whether celebrities or stylists and other clients in the community, being able to see the results with real women is critical. For example, several participants noted the significant weight loss of singer Jennifer Hudson as being inspirational.

I just wanted to say using local celebrities as well is a good idea. They'll listen. If you got Too Short or whatever talking. Like real local celebrities that reach a group of people and tell them what they're doing. And focus on preventative versus amputation. Cause a lot of these things, you already sick. -42

The notion of adopting a more "flexibly" targeted campaign structure may be a key aspect of the campaign. Individuals must be able to find their own balance for their lives and their own personal situations based upon where they are in their readiness to make change. Flexibility here refers to some allowance for prevention intervention variations that may be required given the varying levels of client receptiveness to and perceived abilities to heed health promotion messages delivered by stylists and supply stores. Furthermore additional variations may be required based on variations in the level of interest and ability on the part of stylists.

And encouraging the balance of the—you can do it. I mean if I can do it—I always say if I can do it, I'm the laziest person you'll ever meet, anyone can do it. And just finding the balance of okay, healthy foods and exercise. I don't have time in the day to do either. Or the food is expensive and I just don't really have the time for it, but there is a way. It's not impossible to do it and I think that in our community, sometimes it's shown to be, "Oh, I can't do it because you know, we don't' have fresh vegetables in my community." Well, maybe you walk a little bit farther outside your community to get your vegetables. Whatever it is, just to find the balance, that it is possible. Instead of showing the negative side of how hard it is. Nothing in this world is worth anything if it's not hard. It's gonna be hard but it's possible. -48

Where possible, any campaign would need to deliver the intervention in separate or incremental components as changing multiple areas of their personal habits and functioning may seem overwhelming to some women:

> *It's supposed to be healthy eating first and then see how you do it before I do exercising. Cause the exercising is too much. Just start with the healthy eating and then put exercising in it. Cause it's like three different things: hairstyle, healthy eating, and exercise. It's like 3 different things. -74*

4. Conclusion

Overall, participants from both the San Francisco Bay Area and the Los Angeles Region had a positive response to the campaign. However as indicated by the stylists, committing to personal change is an individual matter and may pose the most significant challenge for the campaign. While beauty supply stores were not generally seen as trusted locations or spaces as were beauty salons, supply stores could serve to reinforce health promotion messages.

Changing lifestyles and habits among the African American community is a major endeavor but the salon as a trusted space and the role of the stylists may be helpful to initiate positive practices in place. The challenge will be in motivating the women to make the changes which can be done by providing needed health information, making it readily available, modeling the solutions to show that they are doable, and most importantly in supporting women to take action.

From the perspective of African American women, an incremental approach which is adaptable to multiple conditions and responses at the salons seems critical. Within the salons, campaign interventions would need to target interventions at three key issues, hairstyles conducive to healthy activities, nutrition and exercise. Responses to these by the community need to be incremental and that any involvement in one or more of these could be promising. Staging responses based on the differential responses would maximize intervention efforts at the salons.

Stylists are important models but their involvement may require training as well as a commitment and efforts to adopting a healthier lifestyle. This process may be a precursor to any intervention aimed at women who utilize the salon or homes where they frequent. Lastly, beauty

supply stores have the potential to have an adjunctive and supportive role in any campaign aimed at the salons. Their reinforcement of any potential messages at the salons may prove to the women that this is a coordinated message thereby compounding and highlighting its importance.

Key Informant Interviews with Beauty Supply Store Staff

This section describes the results of Key Informant Interviews with Beauty Supply Store Staff.

1. Qualitative Data Collection and Analysis

African American Beauty Supply Store management and staff were recruited between June and August 2011 in the San Francisco Bay Area and Los Angeles Area Regions based upon online searches and reviews of beauty supply store locations in identified low-income areas, and by chance due to their close proximity to other identified African American salon locations. Beauty supply store management and staff were asked to participate and if necessary, verbal consent was obtained from beauty supply store owners and/or managers of the locations. Most of these beauty supply stores seem to market to African American community. Subsequently, a majority of their business was with the African American salons and stylists.

Beauty supply store management and staff, who formally consented to participate, engaged in a 10-15 minute audio-recorded interview. Respondents shared information about the characteristics of the community and the beauty supply store, perspectives about and suggestions for the Network's proposed campaign. Beauty supply store interviewees were each given $25.00 cash compensation for their participation. Transcribed interviews were analyzed using thematic content analysis (Hsieh & Shannon, 2005; Krippendorff, 1980). Using an analytic qualitative software, Nvivo 8, the subject domains of the interview instrument were employed as an analysis guide. Cross-case (Patton, 1990) and constant comparative analysis (Silverman, 2000) were used, and quotes extracted to illustrate the collective and unique themes that arose.

This paper describes the main thematic patterns that emerged from the African American Beauty Supply Store interviews conducted in both California regions. It describes the overall response of beauty supply store respondents to the campaign idea, motivators to participation, current marketing strategies, and perceived challenges to program implementation.

2. Participant Information

In the San Francisco Bay Area, twelve beauty supply store sites were visited, of which a total of 6 supply store interviews were conducted at 5 locations. Of these 5 supply store locations, four were local businesses and one was a chain beauty supply store (Sally Beauty Supply).

In Los Angeles, ten locations were visited with five beauty supply store interviews completed at three supply store locations, one of which was a chain beauty supply store (Sally Beauty Supply).

Of the eleven total beauty supply store interviews conducted, eight were with managers, two were with store staff, and one with a store owner.

3. Qualitative Themes

Beauty Supply Stores as 'Good Spaces'

At the heart of these interviews was the issue of the feasibility of a successful health campaign for African American women in the beauty supply store or location setting. Respondent opinions on this varied, depending largely on the pace of the particular store setting. For those that felt supply sites could be a good space for health dialogues, it was generally because they saw an almost 'naturalness' of such a campaign. One respondent succinctly summed it up this way:

> *Just because I think it's beneficial for women to know about their health, pretty much. INT: And so this would be a good place to talk about things like that? Respondent: Yeah, I'm sure a lot of women would be interested in it. -#30*

Overall, there was feeling that a health campaign of some sort could find a place in supply stores. However, the one store owner in our sample was much less positive about the idea:

> *I don't think so, it's not gonna work in the beauty supply. Nnn nnn.... individually we're not gonna just go for the one to one to the customers to explain their hair care and exercising, or something like that. I don't know. -#36*

Compared to the stylist respondents, the general feeling among most supply store participants, while generally positive, was much less enthusiastic. One manager even described not even seeing a connection between health and beauty:

> *You know I don't see much connection between beauty versus the healthy. ... I really don't see that connection. -#23*

Women frequently purchase beauty products, such as hair, skin and nail products at beauty supply stores. The quality, duration and ease of consumer interactions in these settings can create or discourage the potential for education. In some of the busier and less impersonal businesses, customers rush in and out of the store, making one-on-one interactions and education less feasible. Some respondents felt that an active exchange in health knowledge would be difficult in environments where consumers tend to spend a small amount of time in the store, know what they want, and don't ask questions. Such consumers are often not seeking health advice, but rather particular beauty products.

However, even in the busy stores, customers were estimated to spend at least 10-15 minutes shopping, and may spend up to an hour in stores that offer beauty treatments, perhaps creating ample time for interventions. Some staff members felt comfortable allowing discussions with consumers to go beyond products and treatments to general beauty tips, life issues, and occasionally health issues, such as illness or weight. Those interviewees who mentioned feeling comfortable speaking with customers about life, health, or body issues also tended to feel that the store could potentially serve as a beneficial space for a health intervention.

> *INT: Do you ever recommend things like eating, or maybe you need to drink more water for the condition of your hair? Do you ever talk that in-depth or is it more product related?*
>
> *Respondent: ...mostly only for the product, sometimes we talk about those kinds of stuff too. Absolutely you have to eat and get the right amount time of relax and the right time of the sleep. And it's very important to drink a lotta waters. Absolutely, myself I'm drinking a lotta water too. So yeah..." -#36*

Since most consumer-staff interactions in this milieu are centered on beauty (hair, nails, skin, weight and dieting), it seems clear that a connection could be made between beauty and health to

make beauty supply stores appropriate spaces for health education interventions. Some respondents had already made some connection between health and beauty, such as using vitamins for nail health, drinking water or using hair masques for hair health and exercise and dieting for weight control. These clear connections between health and beauty could potentially be extended to a more general health campaign.

Motivators for Beauty Supply Stores to Participate

Several managers described being motivated to participate based on the idea that it could bring more customers into the stores:

> *I think it would motivate us as far as customers coming in. More customers bringing customers in and that may bring more products as far as health into the store. Not only just beauty products but like I said, for instance when we had the diet pills. Maybe we'll be able to bring more stuff as far as health-wise. Not only just the beauty, but as far as the health. -#31*

> *What motivates me to participate in a health campaign? I mean you know, for myself if you could send us like a samples I have absolutely no problems to pass out to the customers. While we have a conversations with the customers sometimes we do talk about the different things besides hair. -#23*

> *Well, me I'm just kinda like a people's person. I kinda care about people's well being. So just knowing that I could just help someone would motivate me just enough. Just to know that I'm helping someone. -#11*

Some interviewees expressed interest in the project simply because they "thought it was important" to their customers and community.

> *Just because it helps with everything, pretty much. You know it helps with their hair, it helps with their skin, it helps with pretty much anything that—usually it's your diet or your type of thing that helps improve either your skin texture or your hair. -# 12*

The benefits interviewees foresaw from a health campaign pertained to the business, the customers, and the larger community. Perceived benefits to businesses included improved sales and consumer base, and an improved business image as not only money-oriented, but as a community-oriented business that cares about their customers' health. Perceived benefits to

consumers were improved health, health knowledge, and improved appearance. It must also be noted, however, that some respondents did not believe there were any benefits inherent to the proposed health campaign.

Current and Recommended Health Education and Marketing

Health and beauty topics currently discussed by respondents in the supply store setting included weight, nutrition, dieting, exercise, and hair, skin and nail health. One store even participated annually in breast cancer awareness month. Current marketing tools used in these settings included providing free samples to paying customers; posters, flyers and other media; beauty conventions for supply store staff; beauty demonstrations for consumers; and informal education through advice from staff to customers.

Respondent recommendations for the proposed health campaign were similar in nature to current beauty and health marketing strategies. These included flyers, posters, free samples of nutritious food or vitamins, demonstrations or events for consumers, and participation in beauty conventions to educate and motivate store staff to discuss health issues with customers.

Overall, supply store respondents felt that a health campaign in some form or another could be feasible and potentially effective in this setting. Flexibility and creativity will be imperative to work with site-specific needs and restrictions, and the Network will need to adequately assess the potential sustainability of an intervention in each supply store site.

Potential Challenges of a Beauty Supply Store-Based Campaign

Many challenges stem from the culture of the particular store. The most common challenge appears to be the pace of the retail space. Staffs feel that the pace of very busy stores will prevent a health campaign from being successful. One interviewee felt that passive media or group demonstrations may be effective, but one on one education would be difficult or impossible. Connected to this issue is the nature of consumer relations. In contrast to most stylist respondents, some staff reported having impersonal or strictly business-based relationships with customers. Such customers were reported to come to the store to buy only what they knew they wanted, and did not ask questions or spend much time in the retail space.

... it can get kinda busy. It depends also on what day, 'cause Mondays is usually our shipment day, so that might a little bit crazy. Like we won't be able to really there and you know, doing the boxes, helping the customers, ringing people up. So that'll be kind of hectic like if we do it on certain days. -#30

INT: What about are there any challenges to getting people interested, do you think?

Probably like I said, a lot of people sometimes are like, "Oh, I'm in hurry." Or "I can't do it right now." Or "No, I'm not interested." Or whatever might be the case. -#30

The staff from these stores were less likely to feel they could comfortably discuss health issues with customers. This often seems to go hand in hand with a busy business pace:

"Well, the thing is, we're really busy here. That's the only thing. It'll probably get in the way of our busy time. It'll have be probably when—'cause that wouldn't be good if you come when we're slow cause most people are not gonna get the information that they need. But when it's busy in here, it's really busy. Like we have long lines and it'll probably just cause a little more congestion when we have somebody tryna promote something." -#4

Another potential challenge to implementing a successful health campaign is the attitude of the staff and owners. Some interviewees expressed ambivalence or disinterest in participating in a health campaign. Some did not see a connection between health and beauty, and did not feel a supply store was an appropriate space for beauty interventions. Clearly, motivation on part of supply store stakeholders will be crucial to the success of the campaign, as their commitment will be clearly be required to make the program sustainable.

Interestingly, one interviewee implied a possible conflict of interest between selling products and providing free health advice. For example, would a supply store owner prefer to sell moisturizing hair masques, or inform consumers that staying hydrated can improve their hair health? This financial conflict was not discussed in detail, but may be worth further investigation to help prevent the creation of health campaigns that counter supply store stakeholders' financial interests, thus affecting the likelihood of their participation.

Still other respondents were simply not interested in health campaigns and education or felt uncomfortable delivering health education messages for fear of telling customers something incorrect. The following respondent expressed reticence at giving out health information due to fear of negative consequences if "something didn't work".

> *we don't wanna give them anything that might be wrong. We can give them our opinion. We're like well, it probably could be there or that, but I'm not a 100% sure. 'Cause I don't them to say, "Oh, well, you told me it's this."*

Additionally, in corporate supply store settings, staff members reported that a health campaign may be difficult to implement due to difficulty acquiring corporate approval. Obtaining corporate support would be beneficial to the proposed campaign to reach this market segment.

4. Conclusion

In general, while there was some interest among respondents in regards to implementing the proposed campaign, there was also much more resistance to the idea than was the case among salon respondents. This may indicate that supply store locations may represent a more difficult setting in which to implement the proposed campaign. The primary differences between these milieus that seem to speak to this difference is the average amount of time spent in these locations by clients/customers, and the types of relationships developed in each setting. In addition, unlike in the salon setting, where most stylists believe healthier clients will enhance their business, there may be a perceived conflict in the supply store setting to improving customer health and selling beauty products. In other words, healthier customers may indeed mean reduced sales for supply stores. There is also the possible impact of racial and ethnic differences due to the fact that all of our stylist respondents were African American, while most supply store respondents were Asian American- as most beauty supply stores catering to the target population are owned by Korean immigrants. Given these important distinctions, a targeted intervention for supply stores will be required to encourage participation in this setting.

Recommendations

1. General Recommendations

- Involvement of a Community advisory board
- Care in presenting messages (Clients expressed not wanting to feel lectured to, nor wanting to be bored)
- Partnerships with local community based health organizations and local churches
- Dividing intervention- working to increase healthy eating at some sites/ physical exercise at others
- Pre-post test surveys to measure client level change

2. Salon/Stylist Recommendations

- Taking into account salons as busy work spaces
- Flexibility to allow for Variations in levels of interest and ability among stylists
- Novel techniques train stylists to deliver messages (eg. Storytellers)
- Adequate incentives for stylist training
- Use of discussion trigger materials (eg. Mirror messages)

3. Supply Store Recommendations

- Corporate partnerships/ advertising
- Consistent presence to build relationships
- Partnering with suppliers
- Work to establish trust/community connection
- Targeted intervention for supply stores to encourage participation in this challenging setting

References

Bennet, G. &. Wolin, K. (2006). Satisfied or unaware? Racial differences in perceived weight status. *International Journal of Behavioral Nutrition and Physical Activity, 3* (40).

Capers, C.F., Baughman, K., & Logue, E. (2011). Behaviors and characteristics of African American and European American females that impact weight management. *Journal of Nursing Scholarship , 43* (2), 133-44.

Casagrande, S.S., Wang, Y., Anderson, & C. Gary, T.I. (2007). Have Americans increased their fruit and vegetable intake? Trends between 1998 adn 2002. *American Journal of Preventive Medicine , 32*, 257-63.

Centers for Disease Control and Prevention (CDC). (2010). *Defining Overweight and Obesity*. Retrieved 10 16, 2011, from Centers for Disease Control and Prevention: http://www.cdc.gov/obesity/defining.html

Centers for Disease Control and Prevention. (nd). *Diabetes Data & Trends--California-Percent of Adults with Diabetes Who Are Obese, 1995-2009*. Retrieved 10 15, 2011, from Centers for Disease Control and Prevention: http://apps.nccd.cdc.gov/ddtstrs/Index.aspx?stateId=6&state=California&cat=riskfactors&Data=data&view=TO&id=20&trend=obese

Centers for Disease Control and Prevention. (2011, 07 19). *Overweight and Obesity*. Retrieved 10 16, 2011, from Centers for Disease Control and Prevention: http://www.cdc.gov/obesity/data/adult.html

Eyler, A.E., Wilcox, S., Matson-Koffman, D., Evenson, K., Sanderson, B, Thompson, J., et al. (2002). Review: Correlates of physical activity of women from diverse racial/ethnic groups. Journal of Women's Helath & Gender-based Medicne , 11 (3), 239-53.

Grier, S.A. & Kumanyika, S.K. (2008). The Context for Choice: Health Implications of Targeted Food and Beverage Marketing to African Americans. American Journal of Public Health , 98 (9), 1616-29.

Hawkins, B. (2007). African American Women and Obesity: From Explanations to Prevention. Journal of African American Studies , 11, 79-93.

Hsieh, H.-F., & Shannon, S.E. (2005). "Three Approaches To Qualitative Content Analysis." *Qualitative Health Research*. 15(9): 1277-1288.

Kumanyika, S.K., Whitt-Glover, M.C., Gary, T.L., Prewitt, E., Odoms-Young, A.M, Banks-Wallace, J. et al. (2007). Expanding the obesity research paradigm to reach African American communities. Prevention Chronic Disease Public Health Research, Practice, and Policy, 4 (4), 1-22.

Lin, J. (2010). Californians growing heavier, more obese and diabetic. California Watch. National Cancer Institute. (2004, 03 16). National Cancer Institute Factsheet--Obesity and Cancer: Questions and Answers. Retrieved 10 16, 2011, from National Cancer Institute: http://www.cancer.gov/cancertopics/factsheet/Risk/obesity

Krippendorff, K. 1980. *Content Analysis: An Introduction to Its Methodology.* Newbury Park, CA: Sage.

National Cancer Institute . (2004, 03 16). National Cancer Institute Factsheet--Obesity and Cancer: Questiosn and Answers. Retrieved 10 16, 2011, from National Cancer Institute: http://www.cancer.gov/cancertopics/factsheet/Risk/obesity

Office of Minority Health. (2005, 11 23). Health Status of African American Women. Retrieved 10 17, 2011, from Office of Minority Health: http://minorityhealth.hhs.gov/templates/content.aspx?ID=3723

Patton, M. Q. 1990. *Qualitative Evaluation and Research Methods* (2nd ed.). Newbury Park, CA: Sage Publications, Inc.

Powell, L.M., Slater, S., & Chaloupka, F.J. (2004). The relationship between community physical activity settings and race, ethnicty, and socioeconomic status. Evidence-Based Preventive Medicine , 1 (2), 135-44

Silverman, D. (2000). Doing Qualitative Research: A Practical Handbook. Thousand Oaks, CA: Sage.

U.S. Census Bureau. (2011, 06 03). State and County QuickFacts. Retrieved 10 17, 2011, from United States Census Bureau: http://quickfacts.census.gov/qfd/states/06000.html

Appendices

Appendix A. Key Informants

Deborah Bowen, PhD dbowen@bu.edu
Boston University

Laura A. Linnan, ScD linnan@email.unc.edu
University of North Carolina

Penny Ralston, PhD pralston@fsu.edu
Florida State University

Georgia Salder, PhD gsadler@ucsd.edu
UC San Diego

Nicole A. Vaughn, PhD Nicole.A.Vaughn@drexel.edu
Drexel University

Tracey Wilson, PhD tracey.wilson@downstate.edu
SUNY Downstate University

Appendix B. Stylist Interview Guide

Stylist Screener Questions

- How long have you been a stylist?
- How long have you been licensed?
- How long have you worked in this shop?
- Do you serve African American women between the ages of 18-54?

Stylist Questions

- Do you ever talk with your clients about health related topics?
- What might motivate you to participate in the Network's health education intervention?
- How much do you think beauty salons and the talks you have with your clients are good spaces to promote nutrition and physical health?"
- If you wanted to get low-income African American women between the ages of 18-54 to eat more fruits and vegetables and be more active, what are some things you could you do in your salon to help them with this goal?
- From your point of view as a stylist, what makes it hard for your clients to eat healthy and move more? What things encourage them to eat healthy and move more?"
- What are some ways you and other stylists can help your clients make healthy choices?"
- What would you say are some potential challenges of the beauty salon setting in running a campaign that encourages healthy behaviors?
- What would you say are some benefits of the beauty salon setting in running a campaign that encourages healthier choices? What would get in the way or make it hard to run this kind of campaign in a beauty salon?"
- How much time do you normally spend on a client in a typical visit? ***(Acknowledge question might be difficult to answer because it depends on the type of work being done. But what they guess their average client time is.)***
    - Less than 30 minutes
    - 30-60 minutes
    - 1-2 hours
    - 2-3 hours
    - 3-4 hours
    - More than 4 hours

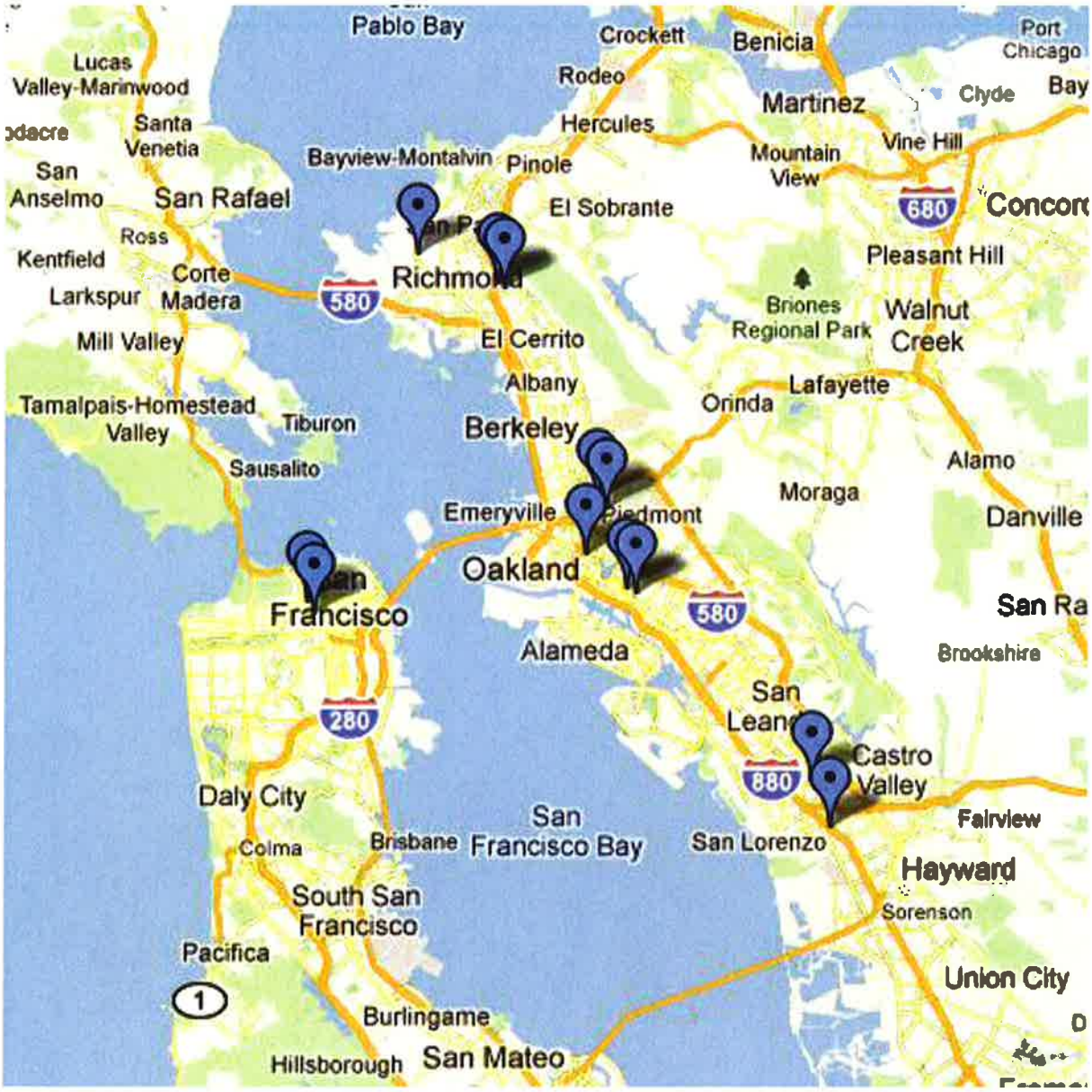
- How much time, if any, do you feel you could realistically devote to educating one client about eating more fruits and vegetables or doing more physical activity?? (Describe the possibility of breaking information up into sections for example, talk to the client when they first arrive, then talk to the client again after they leave the shampoo bowl and then share more information with them after the dryer time is over…)

- Can you describe popular hairstyles that make it easier to exercise and be physically active?
- Would you be willing to recommend these hairstyles to your clients? Why or why not?
- What impact do you think you could have on the eating and physical activity habits of your clients?

Appendix C. Map of Stylist Interview Locations

* Due to confidentiality, markers are place within zip codes of salon sites and not actual locations.

Bay Area Locations: San Francisco, Richmond, Oakland, and San Leandro



Los Angeles Region Locations: Los Angeles, Long Beach, Compton, and Carson.

Appendix D. List of Participating Key Informants

* All project participants were numbered as they were encountered and not based upon type of key informant interview (stylist, supply store employee, or focus group participant).

Stylist: #01 San Francisco, CA 94198
Stylist: #02 San Francisco, CA 94198
Stylist (Braider): #03 San Francisco, CA 94115
Stylist: #05 Oakland, CA 94606
Stylist: #06 Oakland, CA 94606
Stylist: #08 Richmond, CA 94805
Stylist: #09 Richmond, CA 94801
Stylist: #10 Richmond, CA 94805
Stylist: #14 Carson, CA 90745
Stylist: #15 Carson, CA 90745
Stylist: #16 Long Beach, CA 90806
Stylist: #17 Long Beach, CA 90806
Stylist: #18 Long Beach, CA 90801
Stylist: #21 Compton, CA 90222
Stylist: #22 Compton, CA 90222
Stylist: #24 Los Angeles, CA 90047
Stylist: #25 Los Angeles, CA 90047
Stylist (Braider): #26 Los Angeles, CA 90047
Stylist: #27 Los Angles, CA 90047
Stylist: #28 Los Angeles, CA 90008
Stylist: #29 Los Angeles, CA 90008
Stylist (Braider): #32 Oakland, CA 94609
Stylist (Braider): #33 Oakland, CA 94612
Stylist: #34 Richmond, CA 94801
Stylist: #35 Oakland, CA 94609
Stylist: #37 San Leandro, CA 94580
Stylist: #38 San Leandro, CA 94580
Stylist: #39 San Leandro, CA 94580
Stylist (Braider): #68 Los Angeles, CA 90008
Stylist (Braider/Stylist): #69 Los Angeles, CA 90044

Appendix E. List of Exercise Friendly Hairstyles from Beauty Salon Stylists

1. Braids
2. Full sew-in weaves
3. Natural (with natural product applied) or pulled back
4. With relaxers (tie hair with a wrap)
5. Wet set
6. Pony tails
7. Wave nuevo
8. Curls
9. Twisties
10. Close cuts/very short hair
11. Wigs over natural hair

Appendix F. Focus Group Interview Guide

BEAUTY SALONS AND YOUR STYLIST

MARKETING BY YOUR SALON/ /STYLIST:

- What type of materials or activities (flyers, freebies, posters, etc) in your **salon** would appeal to you and motivate you to eat more fruits and vegetables? Or exercise?

EXERCISE FRIENDLY HAIRSTYLES:

- How does/would exercise affect your hairstyle choice?
- What hairstyles work best when you want to exercise?
- Do you like them? Why or why not?
- Does wearing these hairstyles make you feel comfortable exercising more?
- What hairstyles make it difficult to exercise? Explain.

SOURCE OF INFORMATION:

- Where do you currently get your information about healthy eating and physical activity/exercise?
- Which do you find to be the most reliable?
- The least reliable?

INFLUENCE OF STYLISTS/SALONS:

- Do **beauty salons** or hair stylists influence your healthy eating or active living?

GOOD IDEA/BAD IDEA/NO OPINION:

- How would you feel about receiving healthy living messages in a beauty salon or beauty supply store?
  - Probes: Would you appreciate it, be annoyed, indifferent?
  - Would it influence your decision to go to return as a customer?
- How does/would exercise affect your hairstyle choice?

CHALLENGES:

- If we were to do a health campaign in a beauty salon setting what are some of the challenges we would encounter? What are the benefits?
- Is there anything about a salon/stylist/supply store that might make feel like the health information you receive might be unreliable?
- What would make you feel confident that you were getting good information from a reliable source?

BEAUTY SUPPLY STORES

- Do **beauty supply stores** currently play any role in your life encouraging healthy eating/active living?

- If we were to do a health campaign in a **beauty supply store** setting what are some of the challenges we would encounter? What are the benefits?

- What type of materials or activities (flyers, freebies, posters, etc) in your **beauty supply store** would appeal to you and motivate you to eat more fruits and vegetables? Or exercise.

- How would you feel about receiving healthy living messages in a beauty supply store?

CLOSING: Healthy Eating vs. Exercise: Is one more difficult than the other?

Appendix G. Focus Group Recruitment Proof (4X5 Card)

Are you a diva about your hair?

Be a diva about your health.

If you are an African American woman 18-54, we'd love to hear your opinions and suggestions about a campaign to partner with stylists and hair care specialists to increase exercise and the healthy eating habits in the community.

$50 for just one hour of your time.

Please call for more information:

(415) 243-0380

Childcare available

Appendix H. Craigslist Recruitment Advertisement

Are you a diva about your hair? Be a diva about your health.

Date: 2011-09-12, 12:32PM PDT
Reply to: *your anonymous craigslist address will appear here*

If you are an African American woman 18-35, we'd love to hear your opinions and suggestions about a campaign to partner with stylists and hair care specialists to increase exercise and healthy eating habits in the community.

WHO ARE WE LOOKING FOR? : Low-income African American women 18-35 yrs of age who live in [REGION].

WHAT DO I HAVE TO DO AND HOW LONG WILL IT TAKE? : Participate in a 1-hour small group discussion (6-8 women total) about a health education campaign for the African American community.

WHERE?: TBD in [CITY].

WHEN?: [DATE]

WHAT TIME?: [TIME]

COMPENSATION? : We are offering $50 for just one hour of your time.

HOW DO I PARTICIPATE? : If interested, please call (510) 393-4744. You will be asked a few brief questions to determine if you are eligible to participate. Childcare available upon request and advanced notice required.

Phone calls only please.

A partnership of DYJA and the Network for a Healthy California-African American Campaign

Appendix I. Focus Group Questionnaire

Name: _____ Age: _____

Date & Time of Focus Group: _____

- What is the highest-grade level you have completed? **CIRCLE ONE**:
  - Less than 9th grade
  - 9th-12th grade
  - High school graduate or GED
  - Some College (no degree)
  - Associate Degree
  - Bachelor's Degree
  - Graduate or Professional Degree

- Please estimate your yearly household income. **CIRCLE ONE**:
  - $0 - $25,000
  - $25,000 - $50,000
  - $50,000 - $75,000
  - $75,000 +

- In the last 6 months, have you visited: **CIRCLE ALL THAT APPLY**:
  - Beauty Salon
  - Braid Shop
  - Home-Based Stylists
  - None

- On average, how often do you visit the stylist/braider?
  - Weekly
  - 2 times a month
  - Once a month
  - Several times a year
  - Once a year
  - Never

- Do you have regular stylist?
  - Yes
  - No
  -

- If yes, how long have you gone to your stylist or braider? **(PLEASE SKIP QUESTION IF YOU DO NOT HAVE A REGULAR STYLIST)**

  _____

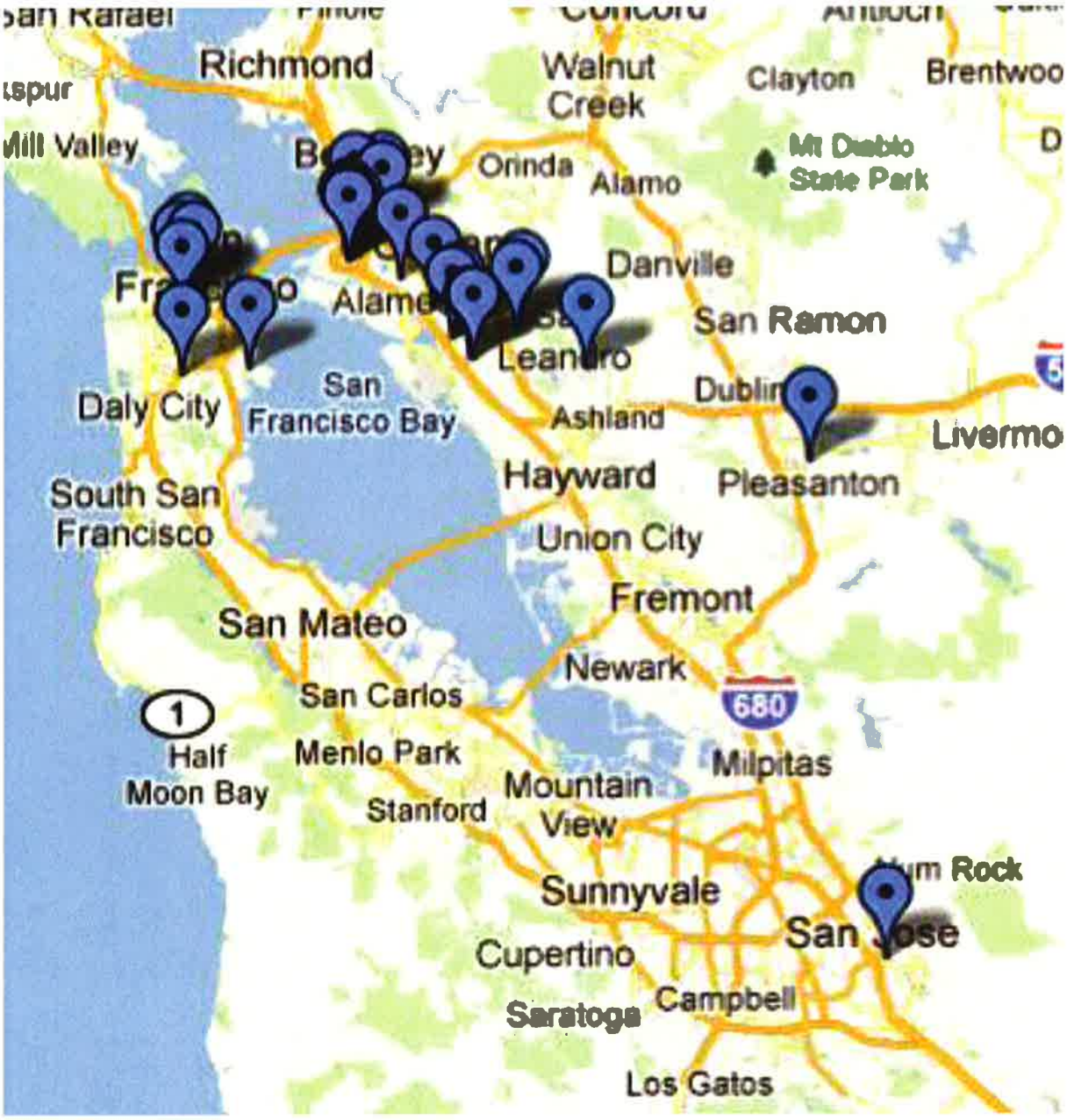
- How often do you visit the beauty supply store? **CIRCLE ONE:**
    a. More than once a week
    b. Once a week
    c. 2-3 times per month
    d. Once a month
    e. Several times a year
    f. Once a year
    g. Never

- What types of items do you purchase at the beauty supply store? **CIRCLE ALL THAT APPLY:**
    a. Hair Products (e.g. grease, shampoo, hair accessories, hair coloring)
    b. Skin Care Products (e.g. bleaching creams, skin health)
    c. Accessories (nail polish, earrings, make-up)
    d. Vitamins
    e. Hair Extensions (e.g. wigs, track hair, braid hair)

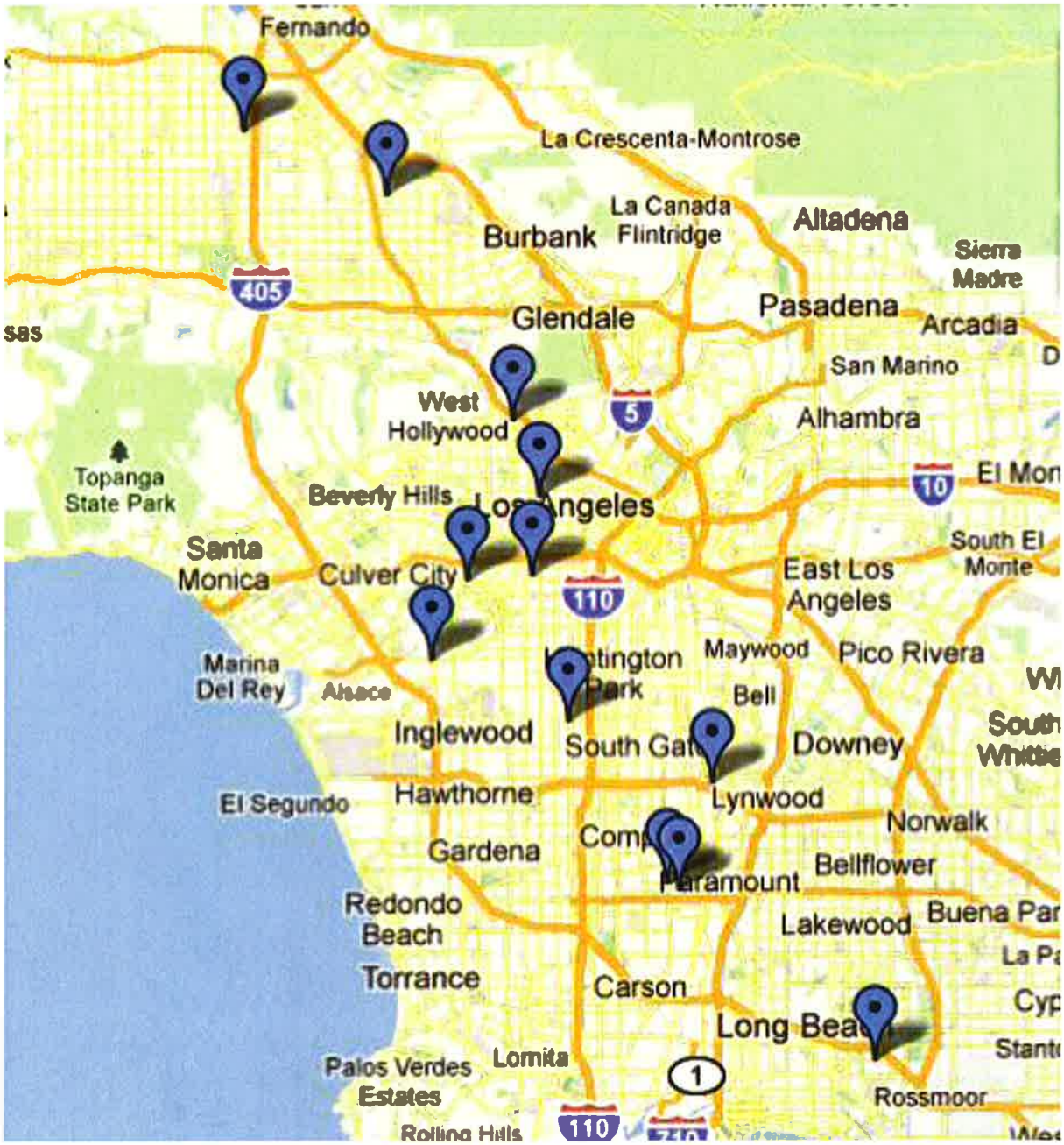
Appendix J. Map of Focus Group Participants

* Due to confidentiality, markers are place within zip codes of salon sites and not actual locations.

Bay Area Locations: San Francisco, Richmond, Oakland, and San Leandro, San Jose



Los Angeles Region Locations: Los Angeles, Long Beach, Compton, and Carson.



Appendix K. List of Exercise Friendly Hairstyles from Target Audience

1. Short styles: doesn't require wrapping
2. Ponytail: put hair in ponytail. Wrap pony tail around itself [into bun]
3. Ponytail: hair accessory
4. Natural: wear a hat, wrap it, wear a wig, pinned up with bobby pins, apply gel or condition and let it 'crinkle' up so sweating doesn't matter
5. Braiding: small braids, singles, 'twisties'
6. Full weave: sew-in weave only
7. Accessories (i.e. scarves): wrapped scarf will absorb moisture and help preserve hair; good for intense exercise
8. Old hair styles: styles that are 'done', in between relaxers or touch-ups and will be redone in the salon shortly
9. Cornrows
10. Hair jam or other products: apply to hair, keeps hair moisturized
11. Rod set
12. Wave Nuevo/Wet Set (looks like a Jerri Curl)

Appendix J. Supply Store Interview Guide

Staff Screener Questions

1. Does your store serve African American women between the ages of 18-54? Approximately what percentage of your clientele is African American?

Staff Questions

1. To what extent do you think beauty supply stores might be good spaces for promoting nutrition and physical health? For example, what kind of mediums do you use? I.e., posters, coupons, take-home flyers, mobile texting promotions, email or facebook promotions, etc.?

2. From a store-based marketing standpoint, we want to know what works and what doesn't. Can you identify any beauty supply store-based marketing strategies that are successful with low-income African American women between the ages of 18-54?

3. Would you be open to food sampling demonstrations, hair demonstrations, physical activity demonstrations, etc. at your store? *Probe*: What components of the campaign would they be most open to?

4. Can you envision potential challenges and benefits of the beauty supply store setting in administering a health promotion campaign to African American women?

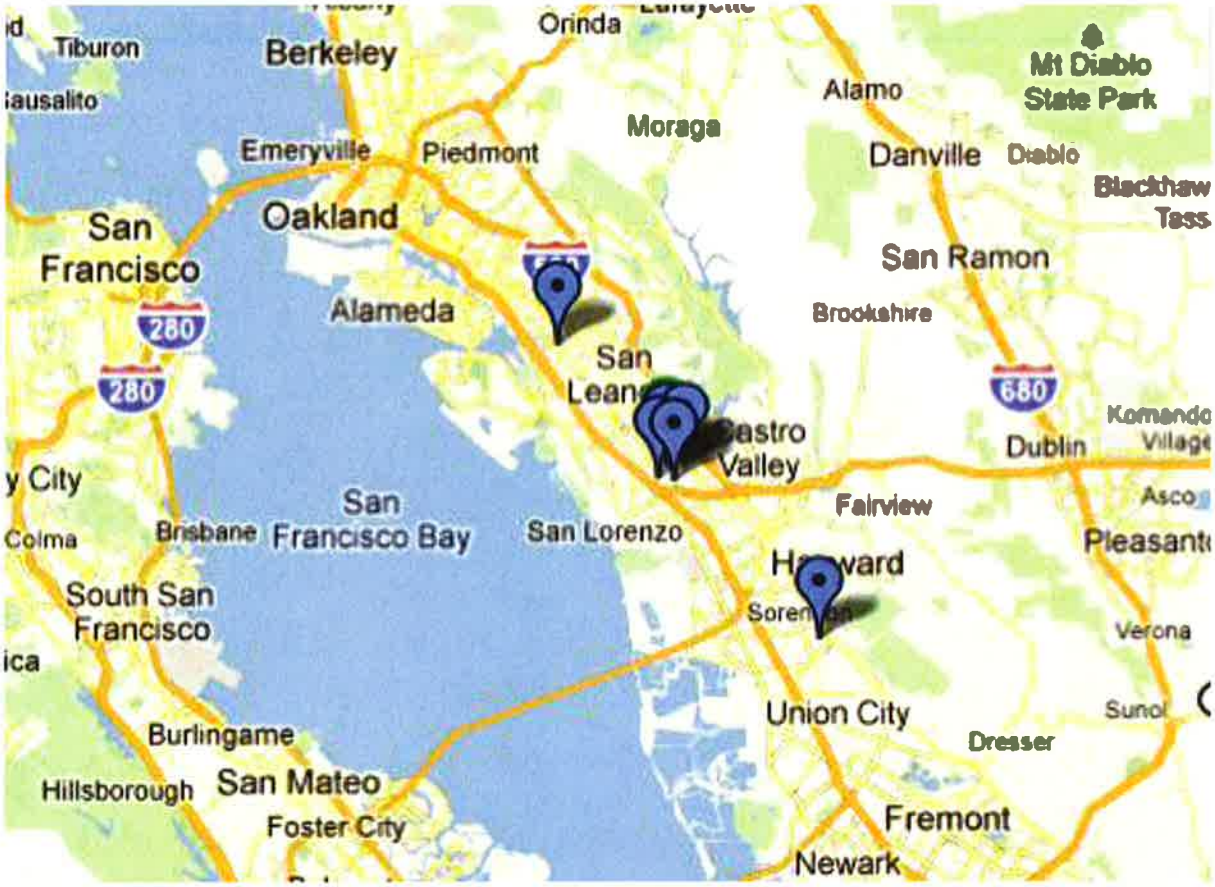
5. What might motivate beauty supply stores to participate in the *Network's* health education intervention?

6. In your experience, what do African American customers typically do once they enter the store? For example, do they take a long time examining products, do they browse, or do they go directly to one product, buy it and leave? What is the average amount of time an African American female customer will spend in your store?

Appendix L. Map of Supply Store Interview Locations

* Due to confidentiality, markers are place within zip codes of supply store sites and not actual locations.

Bay Area Locations: Richmond, Oakland, and San Leandro



Los Angeles Region Locations: Los Angeles, Long Beach, Compton, and Carson.

X. Network Combined Optional Appendices

1. Staff/Partner Trainings—

REU staff conducted 31 ATF webinars in FFY 2011 for LIA/NIA/LFNE projects and RN contracts for EARS and other Network process data collection, providing training for 730 contractors and staff.

State-level trainings – Campaigns and Programs conducted training for Regional Network campaign and program staff on November 16-17, 2010 and March 9-10, 2011, as well as monthly teleconferences or webinars for each campaign/program; Local Food and Nutrition Education contractors; *Network* Statewide Collaborative trainings

Regional Network skills-based trainings overall, 25 different topics were covered during FFY 2011. Pre/post and, to the extent feasible, post-post follow-up evaluation was conducted. (See section 6 below, Supporting Documentation for Regional Trainings)

Due to the lapse of services from the State Media contract media trainings were conducted by the State. The *Network* Communication's staff with assistance from the California Department of Public Health's Office of Public Affairs staff conducted three media trainings for contractors in April, June, and September 2011.

CX3 Trainings - CX3 Research Scientist I conducted face-to-face trainings covering GIS mapping (Tier 1) and Field Survey Data Collection (Tier 2). Trainings provide skills-based methods and in were designed as Train-the-Trainer for local health departments to have either staff and/or community residents examine and document local food availability conditions for nutrition education and program planning. Tier 1 dates for FFY2011 include: 10/21/10, 12/2/2010, Tier 2 Dates for FFY2011 include: 2/4/2011. Evaluation was conducted for all trainings.

Nutrition Education Consultants (NECs) conducted 3 workshops on strategies for Weaving Nutrition Education into the School Day reaching LIAs and other funded partners in Southern California (Los Angeles, 1/24/11; Eureka, 5/4/11; Fresno, 9/8/11). Evaluation was conducted for all trainings.

Nutrition Education Consultants (NECs) hosted 2 webinars on California's Health Education Content Standards and 1 webinar on Building Strong Nutrition Education by Using Local School Wellness Policy. These webinars were presented by staff from the California Department of Education. Evaluations were conducted for all webinars.

Nutrition Education Consultant (NEC) conducted 3 workshops on Eight Steps to Effective Nutrition Education (based on CA Nutrition Competencies) and 1 workshop on Maximizing School-based Resources and Showcasing Effective Nutrition Education Practices in Southern California. Evaluations were conducted for all workshops.

The Center for Collaborative Solutions (CCS), in partnership with the BOOST (Beyond Out Of School Time) Collaborative, co-sponsored the first annual Healthy Behaviors Conference ~ Changing Lives, Saving Lives, targeted at afterschool programs in California (December 8 – 10, 2010). Over 200 attended, including representatives from several states.

Center for Collaborative Solutions Consultants and Healthy Behaviors Initiative Learning Center After School trainings (see list that follows)

California Healthy Kids Resource Center provided exhibits and assisted with planning and delivery for the *Weaving Nutrition Education into the School Day* workshops for *Network* LIAs. Training introduced LIAs to the Nutrition Competencies, Pacing Guides, and levels of Integrated Instruction.

California Healthy Kids Resource Center developed four online training modules:

- *Foundations of Nutrition: MyPlate*
- *Teaching to Standards in Nutrition*
- *Foundations of Nutrition: Five Things Students Need to Know to Read the Food Label*
- *Dietary Guidelines for Americans 2010.*

California Healthy Kids Resource Center delivered the following staff development trainings to Network Program Managers and other Network state staff:

- Weaving Nutrition Education into the School Day
- Evidence-based School Nutrition Programs
- Connecting with Teachers-Resources for Integrated Instruction

California Healthy Kids Resource Center presented three online orientations to health, nutrition, and physical education teachers.

FFY 2011 Trainings and Conference Presentations by Center for Collaborative Solutions (CCS) Consultants and Healthy Behaviors Learning Center Programs

Name/Program	What	Date
Mt. Diablo CARES	Presentation on After School Staff Role in Obesity Crisis at 2010 CalSAC (California School Age Consortium) Conference	10/14/10
A World Fit For Kids	Presentation on Healthy Behaviors at 2010 CalSAC Conference	10/14/10
Fresno FRESH	Nutrition workshop on Integrating Nutrition and Math for Central USD and Clovis USD sites	10/21/10
CCS	Learning Community Meeting/Training on building nutrition education and evaluation capacity.	11/16/10
Mt. Diablo CARES	Presentation at After School Regions 1 and 2 Thriving and Growing Conference: The Garden as a Living Classroom	11/13/10
A World Fit For Kids?	Workshop session on Mentors in Mindfulness (eating and physical activity) at Healthy Behaviors Conference	12/8/10
Fitness 4 Life	Workshop session on Youth Developing Skills for a Healthier Future at Healthy Behaviors Conference	12/8/10
Mt. Diablo CARES	Workshop session on Growing Healthy Kids: Using Gardens to Improve Nutrition at Healthy Behaviors Conference	12/9/10
CalSERVES	Workshop session on Growing a Health Fair (How to organize your community) at Healthy Behaviors Conference	12/9/10
SF ExCEL	Workshop session on The Benefits of Program Evaluation	12/9/10
Fitness 4 Life	Workshop on Healthy Behaviors Afterschool: Exemplary Programming in Nutrition and Physical Activity	1/26/11
Mt. Diablo CARES	Presentation at After School Region 4's Bridging the Bay Conference on Planting Seeds of Health: Fun and Easy Nutrition Activities	1/28 -29/11
CCS	Presentation at CDE's After School Program Regional Leads meeting on strategies for promoting nutrition and physical activity, including the marketing of the Healthy Behaviors Learning Centers.	2/11/11
Mt. Diablo CARES	Presentation on Utilizing Health and Wellness Partnerships at the CA Park and Recreation Society Conference	3/11/11
Fresno FRESH	Workshop for Central USD and Clovis USD sites on Garden-Enhanced Nutrition Education	3/14/11
CCS	Presentation at CDE's After School Program Regional Leads meeting on improving food availability and nutrition using the after school meal option now available through CACFP and promoting summer meal programs through after school venues.	5/13/11
Mt. Diablo CARES	Presentations (2) at After School Region 2 Be A	8/2/11

Name/Program	What	Date
	Hero Conference: Planting Seeds of Health (How to infuse nutrition and physical activity into your afterschool program)	
CCS and A World Fit for Kids!	Presentation on Healthy Behaviors Initiative in Action in California's After School Programs at the 2011 Childhood Obesity Conference	6/30/11
A World Fit for Kids!	Workshops (2) at LA County Office of Education for LA Regional After School Programs on Incorporating, Physical Activity, Healthy Eating and Other Healthy Lifestyles into All Components of After School Programs	8/5/11
Madera Club Y.E.S.	Two half-day trainings at Corcoran USD's Y's Kids After School Program on Classroom Cooking and Nutrition	8/9-10/11
A World Fit for Kids!	Presentation for Los Angeles After School Program Learning Community on Mentors in Mindfulness (Nutrition and Physical Activity)	8/27/11
Mt. Diablo CARES	Presentation at After School Region 5 ReV Up Conference on What's Cooking: Fun and Easy Nutritious Cooking For After School Programs	9/24/11

2. Conference presentations and journal publications

Conference Presentations

M. Serrano. Eat, Move, Live: A community-based nutrition and physical activity program for cancer risk reduction 2010. City of Duarte. International Cancer Education Conference, San Diego, CA, 10/25-27, 2010

J. Huffaker, R.D. The Ugly Vegetables (Make n Take Session) Alhambra USD. CA Foundation for Agriculture In The Classroom Annual Conference, 11/ 4-6, 2010

Amanda Linares, Patrick Mitchell. 2007 soda and sweetened beverage consumption among children and adults in California: What factors really make a difference? (Poster). American Public Health Association Annual Meeting. Denver, CO, 11/6/10.

Valerie Quinn, Alyssa Ghirardelli, Sharon Sugerman. Access to Fast Food around Schools- Exposures in California's Low-Income Neighborhoods. American Public Health Association Annual Meeting, Denver, CO, 11/9/10.

Mary Casagrande, Reducing inequities of access to health information and resources for Latino communities: A newsletter series promoting healthy lifestyles (Poster). San Mateo County. American Public Health Association Annual Meeting, Denver, CO, 11/6/10.

J. Huffaker. Healthy Snacks Workshop. Girl Scouts of America Annual 2011 Volunteer Conference, February 12, 2011

C. Wolff. The Legacy of Healthy Eating/Active Living Programs: Tools for Sustaining Your Efforts. California Conference for Local Health Department Nutritionists, March 2011

K. Lenhart. Presentation: Building a Healthy Child Care Environment: Nut and PA Self Assessment. CC Settings. First 5 CA conference, 3/2/2011

Lydia Guzman. "My Hero" Program: Empowering Male Role Models in Diverse Communities: 12th Annual Fatherhood and Families National Conference, March 4, 2011

Paula James. Presentation: Best Practices in Nutrition and PA in Child Care Settings. FRAC Annual Conference (Food Research Action Center), March 7, 2011.

K. Lenhart. Presentation: Nutrition and PA Self Assessment: An Essential Step For Change. CA Child Development Administrators Association Conference (CCDAA), 3/14/11

Mayra Serrano. Eat, Move, Live: A community-based nutrition and physical activity program for cancer risk reduction .11th Annual Rachmiel Levine Diabetes and Obesity Symposium, Pasadena, CA, March 20-23, 2011

Patrick Mitchell. The Changing Measure of Fruits and Vegetables in Low-income Californians (Poster). Annual BRFSS Conference, Atlanta, GA, 3/23/11.

Patrick Mitchell. Self-reported BMI Change and Juice Consumption by Poverty Status in California. Annual BRFSS Conference, Atlanta, GA, 3/23/11.

Paula James. Presentation: Best Practices in Nutrition and PA in Child Care Settings Child Care Resource and Referral Associations Conference, 3/25/11.

C. Wolff. Worksite Wellness. California WIC Annual Conference, April 2011.

B. Betty, S. Bianco-Simeral, M. Frigaard, K. Goto, C. Wolff. Fruit and Vegetable Program Supports Nutrition Related Changes for Students and Teachers. California Dietetic Association Annual Conference, Pasadena, CA. 4/28-30/11.

A. Waite, C. Wolff, K. Goto, M. Frigaard, S. Bianco-Simeral Impact of the Harvest of the Month Program on School Cafeteria Lunch Selection among K-6 Students. California Dietetic Association Annual Conference, Pasadena, CA. 4/28-30/11.

E. Ramsey, C. Wolff, A. Waite, M. Frigaard, S. Bianco-Simeral, K. Goto Challenges and Opportunities in Promoting Locally Grown Food Products among Economically Diverse Consumers in Rural Northern California Dietetic Association Annual Conference, Pasadena, CA. 4/28-30/11.

Katharina Streng. Provide California Child Nutrition Directors with an experience and overview of HOTM and identify strategies for involving HOTM in the students' school day. California Department of Education Child Nutrition Director Summer Institute, Sacramento, CA 6/21/11

6th Biennial Childhood Obesity Conference; *Celebrating Success and Moving Toward Health in All Policies*
Multiple posters and presentations (please see list that follows), San Diego, CA, 6/28-6/30/11.

- Alyssa Ghirardelli, Valerie Quinn, Sharon Sugerman. CX3 Use of GIS: Mapping to Mobilization. California Childhood Obesity Conference; 6/28/2011
- Vanessa Zaifan. Farm to Fork: Moving from Theory to Practice and the role of Harvest of the Month. Childhood Obesity Conference. San Diego, California 6/30/11
- Alyssa Ghirardelli, Valerie Quinn. CX3 School Neighborhood Scoring: Beyond School Walls to the Surrounding Community. (Poster) California Childhood Obesity Conference; 6/29/2011
- Angie Keihner. What Factors Predict Increasing BMI Among 9 – 11 Year-Old Children in California? (Poster) California Childhood Obesity Conference; 6/30/2011
- Carolyn Kitzmann, Sharon Sugerman, Mark Hudes. California Teens Reversing Obesity Trend but Substantial Disparities Remain: Examining Risk Factors for Obesity Among California Adolescents. (Poster) California Childhood Obesity Conference; 6/29/2011
- Judy Vang, Betty Sun, Elle Mari and Steve Kempster. Beating the Summer Slump: *Network for a Healthy California* Children's Power Play! Campaign Power Up Your Summer! Challenge. (Poster) California Childhood Obesity Conference; 6/29/2011
- Kamaljeet Singh-Khaira. Student Presenters: Katie Quick, Juan Gamez. Inspiring Youth as Partners. (Poster) California Childhood Obesity Conference; 6/29/2011.

- B. Cheung, C. Wolff, S. Bianco-Simeral, K. Goto, A. Waite and M. Frigaard. Harvest of the Month Implementation Supports Student Receptivity to Fruits and Vegetables. (Poster) California State University, Chico, Center for Nutrition and Activity Promotion. California Childhood Obesity Conference; 6/29/2011
- M. Frigaard, J. Crozier, A. Waite, C. Wolff, S. Bianco-Simeral, K. Goto Associations between Blood Pressure and BMI among Low-Income Fifth Grade Students. California State University, Chico, Center for Nutrition and Activity Promotion. (Poster) California Childhood Obesity Conference; 6/29/2011
- M.Buran, Physical Activity Policy in Action: Preventing Obesity in Preschool Settings. California State University, Chico, Center for Nutrition and Activity Promotion. (Poster) California Childhood Obesity Conference; 6/29/2011
- Waite, K. Goto, C. Wolff, B. Cheung, M. Frigaard and S. Bianco-Simeral. Impact of the Harvest of the Month on School Cafeteria Lunch Selection among K-6 Students. California State University, Chico, Center for Nutrition and Activity Promotion. (Poster) California Childhood Obesity Conference; 6/29/2011
- A Del Leon Mendoza student. Del Norte High School Youth-led nutrition education project session: Taking the Lead: How Youth are Creating Change. California Childhood Obesity Conference; 6/29/2011
- K. McDevitt. Be Healthy Family Night. (Poster) San Diego and Imperial County Region. California Childhood Obesity Conference; 6/29/2011
- A. Goins-Ramirez. Star Pick Retail Pilot. (Poster) San Diego and Imperial County Region. California Childhood Obesity Conference; 6/29/2011
- A. Goins-Ramirez. Latino Health Awareness Month (Poster) San Diego and Imperial County Region. California Childhood Obesity Conference; 6/29/2011
- Paula James. Nutrition and PA in Child Care Settings. (Poster) Contra Costa Childcare Council. California Childhood Obesity Conference; 6/29/2011
- M. Linh Tompkins. Healthy Staff, Healthy Schools: Worksite Wellness in the School Environment" (Poster) Gold Country Region. California Childhood Obesity Conference; 6/29/2011
- Karemi Alvarez. Latino Health Awareness Month. (Poster) *Network for a Healthy California, Latino Campaign*, San Diego Region. California Childhood Obesity Conference; 6/29/2011
- B. Muro, T. Gonzalez. Rx For Health. (Poster) Central Valley Health Network. California Childhood Obesity Conference; 6/29/2011
- B. Muro, Dr. R. Sheikh. Childhood Obesity Prevention Provider Action Network. (Poster) Central Valley Health Network. California Childhood Obesity Conference; 6/29/2011
- J. Muldrew. Youth Speaks Panel: Healthy Choices Fruit Harvest Project. Health Education Council. California Childhood Obesity Conference; 6/29/2011
- J. Muldrew, D. Villanueva. Healthy Choices Fruit Harvest Project. (Poster) Health Education Council. California Childhood Obesity Conference; 6/29/2011
- Larissa Johnson, Kate McDevitt, and Blanca Melendrez. *San Diego Children's Power Play! Campaign* and Local Elementary Schools Conduct Be Healthy Family Nights! (Poster) *Network For a Healthy California*, UC San Diego Pediatrics. California Childhood Obesity Conference; 6/29/2011

C. Wolff. Shaping Choices: Dietary Guidelines and Choose MyPlate. Network for a Healthy California – Sierra Cascade Region Annual Face to Face, July 2011

P.Trivedi, K. Goto, C. Wolff, S. Bianco-Simeral. Promoting Fruit and Vegetable Attitudes among Low-income Hispanic and White Elementary School Students. Society for Nutrition Education Annual Meeting, Kansas City, KS, 7/23-26/2011

Paula James Presentation: Best Practices In Nutrition and PA in Child Care Settings. NAFCC Annual Conference (National Association for Family Child Care), 7/22/11

Christine Boynton. Project EAT (Educate, Act, Thrive) Integrating Garden Based Nutrition Education and Physical Education Into and Beyond Schools for Positive Behavior Change. Office of Safe and Drug Free Schools Conference, Making the Connection, Washington, DC, 8/ 8/11.

P. Gray, Wellness for our Kids: Connecting the Classroom, Cafeteria & Community: Wellness Policies and Nutrition Education. *2011 Regional Leadership Conference Stepping up to the Challenge—Creating a Healthy School Environment* 10/5/11 Turlock, 10/12/11 Fort Bragg, 10/24/11 Riverside, 10/26/11 Ventura.

Mai Linh Tompkins Preventive Health and Wellness for the Workplace - Panel presentation: The California Wellness Foundation's Work & Health Conference 9/22/11

Judy Huffaker. MyPlate In The Garden (Make n Take Session). CA Foundation for Agriculture In The Classroom Annual Conference, 9/24/11

Victor Paz. Food Day Promotion. (Table) American Dietetic Association Annual Food and Nutrition Conference and Expo, San Diego, CA, 9/24-27/2011.

Elle Mari and Judy Vang. Give Your Kids the Power to Play!: Infusing Nutrition Education and Physical Activity Into Your Afterschool Program. Healthy Behaviors Conference, San Diego, CA, 12/8-12/10/2010

Keirsten Mihos, Using Readability Principles to Improve Print Materials for African American Churches. 11th Annual Health Literacy Conference. Irvine, CA, 5/9-5/11/2011.

Center for Collaborative Solutions Consultants and Healthy Behaviors Initiative Learning Center After School Conference Presentations (see list that follows)

California Healthy Kids Resource Center Presentations:

- Coordinated exhibits and displayed materials for the California Childhood Obesity Conference and the Bay Area Physical Activity Forum reaching more than 2,250 participants.
- Provided *Nutrition Education That Works* presentation at the California Childhood Obesity Conference preconference session.
- Provided displays and poster sessions at the California Association for Health, Physical Education, Recreation, and Dance (CAHPERD), and the California Department of Education School Child Nutrition Directors' Training.

Journal Publications (See Attached .pdf Journal Articles)

Journal of Nutrition Education and Behavior - Network for a Healthy California: Evaluation Results of Multi-Level Nutrition Education through SNAP-Ed; July 2011 - August 2011; 43(4 Suppl 2).

Backman, D, V Scruggs, S Bowie, AA Atiedu, L Bye, A Dennis, M Hall, A Ossa, S Wertlieb, and SB Foerster. 2011a. "Using a Toolbox Educational Lessons to Improve Fruit, Vegetable, and Physical Activity Behaviors among African American Women in California." *Journal of Nutrition, Education and Behavior* 43:S75-S85.

Backman, D., J. Cheung, D. Francis, S. Sugerman, and C. Granger. 2011b. "Catering Trucks in California Promote Healthy Eating in Low-Wage Worksites." *Journal of Nutrition, Education and Behavior* 43:S155-S157.

Backman, D., G. Gonzaga, S. Sugerman, D. Francis, and S. Cook. 2011c. "Effect of Fresh Fruit Availability at Worksites on the Fruit and Vegetable Consumption of Low-Wage Employees." *Journal of Nutrition, Education and Behavior* 43:S113-S121.

*Broyles, Shelia L. Howard L. Taras, Kari Herzog, Justine Kozo, Jesse Brennan. Cultural Adaptation of a Nutrition Education Curriculum for Latino Families Promote Acceptance. *Journal of Nutrition Education and Behavior*: Supplement 43:S158-S161.

*Farfan-Ramirez, Lucrecia, Lisa Diemoz, Elizabeth J. Gong, MaryAnn A. Lagura. Curriculum Intervention in Preschool Children - Nutrition Matters! Journal of Nutrition Education and Behavior: Supplement 43:S162-S165.

Fourney, A, J Gregson, Sharon Sugerman, and A Bellow. 2011. "Building Evaluation Capacity in Local Programs for Multi-site Nutrition Education Interventions " *Journal of Nutrition Education and Behavior* 43:S130-136.

Ghirardelli, A., A. Linares, and A. Fong. 2011. "Usage and Recall of the Food Stamp Office Resource Kit (FSORK) by Food Stamp Applicants in four California Counties." *J Nutr Educ and Behavior* 43:S86-S95.

Ghirardelli, A., V. Quinn, and S.B. Sugerman. 2011. "Reliability of a Retail Food Store Survey and Development of an Accompanying Retail Scoring System to Communicate Survey Findings and Identify Vendors for Healthy Food and Marketing Initiatives." *J Nutr Educ and Behavior* 43:S104-S112.

Gregson, J, M Sowa, and H Kohler Flynn. 2011. "Evaluating Form and Function of Regional Partnerships: Applying Social Network Analysis to the Network for a Healthy California, 2001-2007." *Journal of Nutrition Education and Behavior* 43:S67-S74.

Keihner, A.J., R. Meigs, S. Sugerman, D. Backman, T. Garbolino, and P. Mitchell. 2011. "The Power Play! Campaign's School Idea & Resource Kits Improve the Determinants of Fruit and Vegetable Intake and Physical Activity among Fourth- and Fifth-Grade Children." *Journal of Nutrition, Education and Behavior* 43:S122-S129.

MkNelly, Barbara, Stephanie Nishio, Peshek Cynthia, and Michelle Oppen. 2011. "Community Health Centers – A Promising Venue for Supplemental Nutrition Assistance Program Education in the Central Valley." Journal of Nutrition Education and Behavior: Supplement 43:S137-S144.

Stone, Matthew. 2011. "Enhancing Delivery of Supplemental Nutrition Assistance Program Education (SNAP-Ed) through Geographic Information Systems." *Journal of Nutrition Education and Behavior*: Supplement 43:S148-S151.

Sugerman SB, Foerster SB, Gregson J, Linares A, and Hudes M. In review. "California adults increase fruit and vegetable consumption from 1997-2007." *Journal or Nutrition Education and Behavior*. 43:S96-S103.

Sugerman, Sharon, Desiree Backman, Susan B. Foerster, Alyssa Ghirardelli, Amanda Linares, Amy Fong. Using an Opinion Poll to Build an Obesity-Prevention Social Marketing Campaign for Low-Income Asian and Hispanic Immigrants: Report of Findings. *Journal of Nutrition Education and Behavior: Supplement* 43: S53-S66.

Trivedi, P, Goto, K, Bianco-Simeral, S, Wolff, C, Promoting Fruit and Vegetable Attitudes among Low-Income Hispanic and White Elementary School Students. *Journal of Nutrition Education and Behavior: Supplement* 43: S15-16.

*Voorhees, Julia, Keiko Goto, Stephanie Bianco-Simeral, Cindy Wolff. Impact of the Harvest of the Month Program on Low-income Hmong and White Middle School Students. *Journal of Nutrition Education and Behavior*: Supplement 43:S152-S154.

*Wood, Lara, Cindy Wolff, Stephanie Bianco-Simeral, Keiko Goto. Impact of a Kindergarten through Eighth Grade Nutrition Education Program on Student, Teacher, and School-wide Practices. *Journal of Nutrition Education and Behavior*: Supplement 43:S145-S147.

Other Journals

Ghirardelli A, Quinn V, Foerster SB. Using geographic information systems and local food store data in California's low-income neighborhoods to inform community initiatives and resources. 2010. AJPH; 100(11): 2156-2162.

Vue, W. Wolff, C. Goto, K. Hmong Food Helps Us Remember Who We Are: Perspectives of Food Culture and Health Among Hmong Women with Small Children. *Journal of Nutrition Education and Behavior.* Vol. 43, Issue 3 May 2011-June 2011. Pages 199-204.

California Women's Health Survey Data Points

Sugerman SB, Mitchell P. Disparities in Prevalence of Obesity among California Women, 2007. In California Women's Health Survey Data Points, Issue # 6, Office of Women's Health, CDHCS and CDPH, Winter 2011.

Herrndorf A, Haydu S, Mitchell P, Sugerman SB. Overweight and Obesity among California Women Trying to Become Pregnant, 2006/2007. In California Women's Health Survey Data Points, Issue #6, Office of Women's Health, CDHCS and CDPH, 2011.

MkNelly B, Sugerman SB, Mitchell P. California Hispanic Women's Fruit and Vegetable Consumption by Years in the United States, 2007. In California Women's Health Survey Data Points, Issue #6, Office of Women's Health, CDHCS and CDPH, 2011.

MkNelly B, Sugerman SB, Mitchell P. Health of California Women Receiving Food Stamps, 2006-2007. In California Women's Health Survey Data Points, Issue #6, Office of Women's Health, CDHCS and CDPH, 2011.

MkNelly B, Sugerman SB, Mitchell P. California Women's Diet Quality by Household Food Security Status, 2007. In California Women's Health Survey Data Points, Issue #6, Office of Women's Health, CDHCS and CDPH, 2011.

3. Curriculum Development/Adaption

None to report. The Network encourages the use of tested, evaluated materials and has an extensive resource guide that project and contractors use.

4. Partnership activities

Network partners participate in collaborative activities many agencies, including: Schools; State, County and City Offices of Education; First 5; Head Start; Food Banks; Local Health Departments; Community/School Health Clinics; Human Service Agencies; WIC; Migrant Education and Migrant Child Development Centers; Farmworker and Rural Health Clinics; American Indian Groups; Parks and Recreation; Farm Bureau and Growers' Associations; Public Libraries; Local Media; Local Farmers; Local Businesses; Master Gardener; 4H; Community Centers; Grocery Stores and Supermarkets; Health and Nutrition Councils; Sports Organizations; Food Systems Organizations; Farm to School/Table; YMCA; County Nutrition Action Plans; Farmers Markets; Churches and Ministries; CalFresh Offices; Colleges and Universities; Boys and Girls Clubs; Dairy Council; Chronic Disease Voluntary Organizations (Heart, Cancer, Diabetes, Lung); State, University; and Community Foundations; The California Endowment; Kaiser Permanente.

5. Awards

Recognition of the work being done through the Center for Collaborative Solutions' (CCS) Healthy Behaviors Initiative included:

- Who's Who awarded the 2011 Professional of the Year (Educational Consulting Industry) to Dr. Andi Fletcher, the Chief Afterschool Consultant for CCS and author of *Changing Lives, Saving Lives ~ A Step-by-Step Guide to Developing Exemplary Practices in Nutrition, Physical Activity and Food Security in Afterschool Programs.* September 2011

- Gold Status award, part of the School Wellness Recognition Program from the American Cancer Society and the CA PTA, awarded to ER Taylor Elementary (San Francisco USD), one of the Healthy Behaviors Learning Centers. April 2011
- 2011 Governor's Council on Physical Fitness and Sports Spotlight Award ~ Silver Medal for Event of the Year awarded to Fitness 4 Life (Pajaro Valley USD) for their annual triathlon that features over 500 students but trains far more than that throughout the year. September 2011
- 2011 Governor's Council on Physical Fitness and Sports Spotlight Award ~ Silver Medal awarded to Mt. Diablo CARES.
- 2011 BOOST Out-of-School Time Innovations (OSTI) Pioneer Award presented to Dr. Andi Fletcher for her leadership in the afterschool field. The OSTI awards were established in 2007 to honor out-of-school time individuals and programs that provide innovative approaches to support students, families and communities. April 2011
- 2011 Community Leadership Award, President's Council on Fitness, Sports and Nutrition presented to Normandie Nigh, Executive Director for A World Fit for Kids! for her work as part of the Healthy Behaviors Initiative. This annual award is given to no more than 50 individuals nationwide who improve the lives of individuals within their community. May 2011
- 2010 Food Bank of Contra Costa and Solano Counties Volunteer of the Year Award presented to Debra Mason, Mt. Diablo CARES.
- 2010 High School Innovator Award for Youth Development and Leadership presented to Normandie Nigh, Executive Director for A World Fit for Kids! for being a visionary leader in her fight against childhood obesity and empowering young people with leadership and youth development training. This award is sponsored by the CA After School Network. November 2011
- National Coalition for Promoting Physical Activity (NCPPA) highlighted A World Fit for Kids! Healthy Behaviors Afterschool Program as a successful example for Strategy 5 (afterschool) in Make the Move 2010-11 ~ Implementation of the U.S. Physical Activity Plan, which provides measurable outcomes and objectives for change, valuable resources, and stories of success.

Awards Reported by *Network* Contractors

Award	Awarded to	Awarded for	Awarded by	Date Received
Central Valley Champion Public Health Partner	Kathleen Grassi	Her commitment to creating healthy environments by increasing access to locally grown fruits and vegetables, facilitating collaboration efforts in order to reduce risks for chronic diseases such as obesity, diabetes, heart disease, and providing local and statewide leadership supporting healthy food access.	Central Valley Health & Nutrition Collaborative	September 2011
Central Valley Champion Afterschool Program	City of Dinuba Community Services	Providing Nutrition and Physical Activity education to both the After School and Summer Programs. This past year Dinuba served as a *Power Play! Campaign* Power Partner and has provided both children and parents with nutrition education resources as well as opportunities for increased physical activity through events and structured activities.	Central Valley Health & Nutrition Collaborative	September 2011

Award	Awarded to	Awarded for	Awarded by	Date Received
Central Valley Champion Food Service Director	Terri Soares	Improving the nutritional quality of meals offered to students in Merced City School District including eliminating juice and the number of times dessert is served per week, increasing the amount of fresh produce and products that contain at least 50% whole grains and increasing the nutritional standards to support the USDA Dietary Guidelines.	Central Valley Health & Nutrition Collaborative	September 2011
Central Valley Champion Business	Save Mart	Working with over forty percent of the Retail Program's stores throughout the region. In all of these stores, Save Mart works to increase fruit and vegetable consumption by partnering with the Retail Program so that those stores in low-income communities receive merchandising items and store promotions.	Central Valley Health & Nutrition Collaborative	September 2011
Central Valley Champion Community Based Organization	UC Cooperative Extension, Fresno County	Enrolling 100 teachers and 4,000 4th and 5th grade students in their program and then providing the *Children's Power Play! Campaign* School Idea and Resource Kit. Through providing this information over 2,000 4th and 5th grade students received lessons on increasing their fruits and vegetable intake as well as physical activity.	Central Valley Health & Nutrition Collaborative	September 2011
Central Valley Champion Teacher	Carol Montag	Being the lead teacher for the Nutrition Advisory Council, a team of 4th and 5th grade students focused on implementing nutrition education in their school. She coordinates activities for these students during the school day such as presenting Harvest of the Month to K-5 classes and healthy cooking demos. She also started a parent education class at the school.	Central Valley Health & Nutrition Collaborative	September 20, 2011
Central Valley Champion Pastor	Pastor Paul Binion, Sr.	Deciding to make healthy changes in his own life and as a result has lost weight, is Diabetes FREE and no longer taking blood pressure medication. He has also chosen to encourage the African American community to make healthy lifestyle changes through serving as a spokesperson for the *African American Campaign*.	Central Valley Health & Nutrition Collaborative	September 20, 2011
Central Valley Champion Youth	SASH Youth Team	The Youth at Mt View Middle School worked with local officials to express their concerns about walk-ability issues in Lamont. They asked for improved sidewalks and roads in their community near the school. The repairs were made in the fall.	Central Valley Health & Nutrition Collaborative	September 20, 2011

Award	Awarded to	Awarded for	Awarded by	Date Received
Rx for Health Proclamation	Rx for Health Team	Their work in the community of Madera prescribing free to low cost physical activity and nutrition to children in an effort to decrease childhood obesity.	The City of Madera	November 3, 2010
Madera HEAL Zone Initiative	Central Valley Health Network	Kaiser recognized the work of the Collaborative and its partners already being done within the city of Madera and invited the Collaborative Coordinator to apply for additional funds to expand this work.	Kaiser	July 1, 2011
Healthy Schools Program	El Monte City School District	1 Silver, 1 Gold	Alliance for a Healthier Generation	June 2011
Healthy Schools Program Silver recognition level	F.D. Roosevelt Elementary School Lawndale Elementary School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Silver recognition level	Kit Carson Elementary School Lawndale Elementary School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program	Lucille J. Smith Elementary School Lawndale Elementary School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Silver recognition level	Mark Twain Elementary School Lawndale Elementary School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Silver recognition level	William Anderson Elementary School Lawndale Elementary School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011

Award	Awarded to	Awarded for	Awarded by	Date Received
Healthy Schools Program Bronze recognition level	York Elementary School Hawthorne School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Bronze recognition level	Zela Davis Elementary School Hawthorne School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Bronze recognition level	Ramona Elementary School Hawthorne School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Bronze recognition level	Eucalyptus Elementary School Hawthorne School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Silver recognition level	Aloha Health Medical Academy ABC Unified School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Silver recognition level	Ella P. Melbourne Elementary School ABC Unified School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011
Healthy Schools Program Silver recognition level	John F. Kennedy Elementary School ABC Unified School District	School sites implemented changes in order to create healthier school environments. Schools met best practice criteria established by the Healthy Schools Program Expert Panel and outlined in the Healthy Schools Program Framework.	Alliance for a Healthier Generation.	June 2011

Award	Awarded to	Awarded for	Awarded by	Date Received
CA Foundation for Agriculture In The Classroom Teacher Feature	Judy Huffaker	Teacher Feature of the Month	CA Foundation for Agriculture In The Classroom	June 2011
Model Practices Award	Santa Barbara County Public Health Department	For our bilingual public access TV shows *Healthy for Life/Una Vida Saludable*. Several of the shows related to healthy eating and included cooking demonstrations using recipes from the *Everyday Healthy Meals* Network cookbook.	NACCHO (National Association of County and City Health Officials)	July 21, 2011.
Unsung Hero Award	Lupe Covarrubias -Martinez	For her work bettering her community, highlighting the ways she takes her Latino Campaign above and beyond in serving the low-income Latino community.	Monterey County United Way	February 17, 2011
Golden Carrot Award	Watsonville mobile Catering and Reyna's mobile catering	For going the extra mile to assist fieldworkers in living healthy lifestyles by offering and promoting healthy menu options. The award is given to restaurants that meet specific criteria for providing healthy food options to patrons.	Santa Cruz County United Way	June 30, 2011
California Fit Business – Bronze	Ray Stone, Inc.	Innovative worksite wellness program	Taskforce on Youth and Workplace Wellness	November 4, 2010
California Fit Business – Bronze	SupHerb Farms	Innovative worksite wellness program	Taskforce on Youth and Workplace Wellness	November 4, 2010
Healthiest Employer of 2011 – Small Company Category	Ray Stone, Inc.	Innovative worksite wellness program	Sacramento Business Journal	August 19, 2011
2011 Cultivator Award – Regional Award – Youth Leader Award	Stay Alive, Stay Healthy Team, SASH	Community service pantry work and the photo voice project.	Central California Regional Obesity Prevention Program	January 2011
Childhood Obesity Conference Youth Scholarship	Franklin High School's Healthy Choices Youth Group	Efforts to combat childhood obesity through their fruit harvest campaign	Project LEAN At The Childhood Obesity Conference	June 28-30, 2011

Award	Awarded to	Awarded for	Awarded by	Date Received
Star of Hope Award	Network for a Healthy California in San Diego	Was awarded to the Network for a Healthy California in San Diego for its outreach in the community via events, CBOs, churches, worksites , etc.	American Cancer Society	July 2011

USDA Healthy US Schools Challenge Let's Move Campaign – 242 *Network* schools

School	Network	PP!
1st Street Elementary School (Bronze)	X	
4th Street Elementary School (Bronze)	X	
6th Avenue Elementary School (Bronze)	X	
10th Street Elementary School (Bronze)	X	
42nd Street Elementary School (Bronze)	X	PP!
49th Street Elementary School (Bronze)	X	
52nd Street Elementary School (Bronze)	X	
54th Street Elementary School (Bronze)	X	
59th Street Elementary School (Bronze)	X	
61st Street Elementary School (Bronze)	X	
66th Street Elementary School (Bronze)	X	
68th Street Elementary School (Bronze)	X	PP!
75th Street Elementary School (Bronze)	X	PP!
92nd Street Elementary School (Bronze)	X	
93rd Street Elementary School (Bronze)	X	PP!
95th Street Elementary School (Bronze)	X	
96th Street Elementary School (Bronze)	X	
99th Street Elementary School (Bronze)	X	
107th Street Elementary School (Bronze)	X	PP!
112th Street Elementary School (Silver)	X	
116th Street Elementary School (Bronze)	X	PP!
186th Street Elementary School (Bronze)	X	
232nd Place Elementary School (Bronze)	X	
Aldama Elementary School (Bronze)	X	PP!
Alexandria Elementary School (Bronze)	X	PP!
Allesandro Elementary School (Bronze)	X	
Alta Loma Elementary School (Bronze)	X	
Ambler Elementary School (Bronze)	X	PP!
Amestoy Elementary School (Bronze)	X	
Anatola Elementary School (Bronze)	X	PP!
Annandale Elementary School (Bronze)	X	
Aragon Elementary School (Bronze)	X	
Arlington Heights Elementary School (Bronze)	X	
Arminta Elementary School (Bronze)	X	
Ascot Elementary School (Bronze)	X	
Aurora Elementary School (Bronze)	X	
Avalon Gardens Elementary School (Bronze)	X	

School	Network	PP!
Bakewell Primary Center (Bronze)	X	
Baldwin Hills Elementary School (Bronze)	X	
Bandini Elementary School (Bronze)	X	
Banneker Special Education Center (Bronze)	X	
Barrett Elementary School (Bronze)	X	
Beethoven Elementary School (Bronze)	X	
Bellingham Elementary School (Bronze)	X	
Belvedere Elementary School (Bronze)	X	
Bertrand Elementary School (Bronze)	X	
Braddock Drive Elementary School (Bronze)	X	PP!
Breed Elementary School (Bronze)	X	
Brentwood Science Magnet School (Bronze)	X	
Bright Elementary School (Bronze)	X	
Broad Elementary School (Bronze)	X	
Brockton Elementary School (Silver)	X	PP!
Brooklyn Avenue Elementary School (Bronze)	X	
Bryson Elementary School (Bronze)	X	PP!
Burbank Elementary School (Bronze)	X	
Burton Elementary School (Bronze)	X	
Bushnell Way Elementary School (Bronze)	X	PP!
Cabrillo Elementary School (Bronze)	X	PP!
Camellia Elementary School (Bronze)	X	PP!
Canoga Park Elementary School (Bronze)	X	
Cantara Elementary School (Bronze)	X	
Canterbury Elementary School (Bronze)	X	
Castelar Elementary School (Gold Award of Distinction)	X	PP!
Chandler Elementary School (Bronze)	X	
Chase Elementary School (Bronze)	X	PP!
Cheremoya Elementary School (Bronze)	X	
Cienega Elementary School (Bronze)	X	
City Terrace Elementary School (Bronze)	X	
Clifford Street Elementary School (Bronze)	X	
Cohasset Elementary School (Bronze)	X	PP!
Columbus Avenue Elementary School (Bronze)	X	
Commonwealth Elementary School (Bronze)	X	PP!
Compton Elementary School (Bronze)	X	
Corona Elementary School (Bronze)	X	
Dayton Heights Elementary School (Bronze)	X	
Dominguez Elementary School (Bronze)	X	
Dorris Place Elementary School (Bronze)	X	PP!
Dyer Street Elementary School (Bronze)	X	
Eagle Rock Elementary School (Bronze)	X	
Eastman Elementary School (Bronze)	X	
El Dorado Elementary School (Bronze)	X	
El Sereno Elementary School (Bronze)	X	PP!
Elizabeth Learning Center (Bronze)	X	
Elysian Heights Elementary School (Bronze)	X	

School	Network	PP!
Enadia Elementary School (Bronze)	X	
Erwin Elementary School (Bronze)	X	PP!
Evergreen Avenue Elementary School (Bronze)	X	
Fair Elementary School (Bronze)	X	PP!
Farmdale Elementary School (Bronze)	X	PP!
Fletcher Drive Elementary (Bronze)	X	PP!
Ford Boulevard Elementary School (Bronze)	X	
Foshay Learning Center (Bronze)	X	
Frances Blend Special Education Center (Bronze)	X	
Fries Elementary School (Bronze)	X	
Fullbright Elementary School (Bronze)	X	
Garden Grove Elementary School (Bronze)	X	
Garvanza Elementary School (Bronze)	X	
Garza Primary Center School (Bronze)	X	
Gault Elementary School (Bronze)	X	PP!
Glassell Park Elementary School (Gold Award of Distinction)	X	
Gledhill Elementary School (Bronze)	X	
Glenfeliz Boulevard Elementary School (Bronze)	X	
Graham Elementary School (Bronze)	X	PP!
Granada Elementary School (Bronze)	X	PP!
Grand View Elementary School (Bronze)	X	PP!
Grape Street Elementary School (Bronze)	X	
Gridley Elementary School (Bronze)	X	
Griffin Elementary School (Bronze)	X	
Haddon Elementary School (Bronze)	X	
Harding Elementary School (Bronze)	X	
Harmony Elementary School (Bronze)	X	PP!
Harrison Elementary School (Bronze)	X	
Hart Street Elementary School (Bronze)	X	PP!
Harvard Elementary School (Bronze)	X	
Haskell Elementary School (Bronze)	X	
Hawaiian Elementary School (Bronze)	X	
Herrick Elementary School (Bronze)	X	
Hillcrest Drive Elementary School (Bronze)	X	
Hillside Elementary School (Bronze)	X	
Hoover Elementary School (Bronze)	X	
Humphreys Elementary School (Bronze)	X	
Hyde Park Elementary School (Bronze)	X	
Kingsley Elementary School (Bronze)	X	
Kittredge Elementary School (Bronze)	X	
La Salle Elementary School (Bronze)	X	
Lake Street Primary School (Bronze)	X	
Lankershim Elementary School (Bronze)	X	
Lemay Elementary School (Bronze)	X	
Lexington Avenue Primary Center (Bronze)	X	
Ligget Elementary School (Bronze)	X	PP!
Loma Vista Elementary School (Bronze)	X	

School	Network	PP!
Loreto Elementary School (Bronze)	X	PP!
Los Feliz Elementary School (Bronze)	X	
Lovelia Flournoy Elementary School (Bronze)	X	
Loyola Village Elementary School (Bronze)	X	
Malabar Elementary School (Bronze)	X	
Manchester Elementary School (Bronze)	X	
Marlton Elementary School (Bronze)	X	
Marvin Elementary School (Bronze)	X	
Mayall Elementary School (Bronze)	X	
Mayberry Elementary School (Bronze)	X	
Menlo Elementary School (Bronze)	X	
Micheltorena Elementary School (Bronze)	X	
Miramonte Elementary School (Bronze)	X	
Multnomah Elementary School (Bronze)	X	
Napa Street Elementary School (Bronze)	X	PP!
Nevada Elementary School (Bronze)	X	PP!
New Open World Academy (Bronze)	X	
Newcastle Elementary School (Bronze)	X	
Normandie Elementary School (Bronze)	X	PP!
Normont Elementary School (Bronze)	X	PP!
Norwood Elementary School (Bronze)	X	PP!
Nueva Vista Elementary School (Bronze)	X	
O'Melveny Elementary School (Bronze)	X	
Osceola Elementary School (Bronze)	X	
Pacific Boulevard Elementary School (Bronze)	X	PP!
Palms Elementary School (Bronze)	X	
Park Western Elementary School (Bronze)	X	PP!
Playa Del Rey Elementary School (Bronze)	X	PP!
Plummer Elementary School (Bronze)	X	
Point Fermin Elementary School (Bronze)	X	
Primary Academy for Success (Bronze)	X	
Queen Anne Elementary School (Bronze)	X	
Ramona Elementary School (Bronze)	X	
Ranchito Elementary School (Bronze)	X	PP!
Reseda Elementary School (Silver)	X	
Richland Elementary School (Bronze)	X	
Rio Vista Elementary School (Bronze)	X	
Rockdale Elementary School (Bronze)	X	PP!
Roscoe Elementary School (Bronze)	X	
Rosemont Elementary School (Bronze)	X	PP!
Rowan Elementary School (Bronze)	X	
San Antonio Elementary School (Bronze)	X	PP!
San Fernando Elementary School (Bronze)	X	
San Gabriel Elementary School (Bronze)	X	
San Miguel Elementary School (Bronze)	X	
San Pascual Elementary School (Bronze)	X	
San Pedro Elementary School (Bronze)	X	

School	Network	PP!
Sara Coughlin Elementary School (Bronze)	X	
Saturn Elementary School (Bronze)	X	PP!
Selma Elementary School (Bronze)	X	
Sharp Elementary School (Bronze)	X	PP!
Short Avenue Elementary School (Bronze)	X	
Sierra Vista Elementary School (Bronze)	X	PP!
South Park Elementary School (Bronze)	X	
South Shores Elementary School (Bronze)	X	PP!
State Elementary School (Bronze)	X	
Stonehurst Elementary School (Bronze)	X	PP!
Stoner Elementary School (Bronze)	X	PP!
Strathern Elementary School (Bronze)	X	
Sylmar Elementary School (Bronze)	X	
Telfair Elementary School (Bronze)	X	
Trinity Elementary School (Bronze)	X	
Tweedy Elementary School (Bronze)	X	PP!
Union Elementary School (Bronze)	X	
Valley Alternative Magnet School (Bronze)	X	
Van Deene Elementary School (Bronze)	X	
Van Ness Elementary School (Bronze)	X	PP!
Vanalden Elementary School (Bronze)	X	
Vena Elementary School (Bronze)	X	PP!
Vermont Elementary School (Bronze)	X	PP!
Victory Elementary School (Bronze)	X	
Wadsworth Elementary School (Bronze)	X	PP!
Walnut Park Elementary School (Bronze)	X	
West Vernon Elementary School (Bronze)	X	
Western Avenue Elementary School (Bronze)	X	
Westport Heights Elementary School (Bronze)	X	PP!
Wilshire Crest Elementary School (Bronze)	X	
Wilshire Park Elementary School (Bronze)	X	
Wilton Place Elementary School (Bronze)	X	
Windsor Hills Math-Science-Aerospace Magnet School (Bronze)	X	PP!
Winnetka Elementary School (Bronze)	X	
Anna Kirchgater Elementary School (Gold)	X	PP!
Barbara Comstock Morse Elementary School (Gold)	X	PP!
Charles E. Mack Elementary School (Gold)	X	
David Reese Elementary School (Bronze)	X	PP!
Florin Elementary School (Gold)	X	PP!
Franklin Elementary School (Gold)	X	PP!
Herman Leimbach Elementary School (Gold)	X	PP!
Irene B. West Elementary School (Silver)	X	PP!
Isabelle Jackson Elementary School (Silver)	X	PP!
James A. McKee Elementary School (Bronze)	X	
John Reith Elementary School (Gold)	X	PP!
Mary Tsukamoto Elementary School (Gold)	X	PP!
Prairie Elementary School (Gold)	X	PP!

School	Network	PP!
Robert J. Fite Elementary School (Silver)	X	PP!
Roy Herburger Elementary School (Silver)	X	PP!
Samuel Kennedy Elementary School (Gold)	X	PP!
Sierra Enterprise Elementary School (Gold)	X	PP!
Union House Elementary School (Gold)	X	PP!
Paradise Elementary School (Gold Award of Distinction)	X	PP!
Cherrylee Elementary School (Silver)	X	PP!
Cleminson Elementary School (Silver)	X	PP!
Cortada Elementary School (Silver)	X	PP!
Durfee School (Silver)	X	PP!
Gidley School (Silver)	X	PP!
Legore School (Silver)	X	PP!
Potrero School (Silver)	X	PP!
Rio Hondo School (Silver)	X	PP!
Rio Vista Elementary School (Silver)	X	PP!
Shirpser Elementary School (Silver)	X	PP!
Wilkerson Elementary School (Silver)	X	

Governor's Council on Physical Fitness and Sports, Governor's Challenge Schools – 36 *Network* schools

School	Network	PP!
Bennett/Kew Elementary	X	PP!
Fremont Elementary	X	PP!
James A. Whitaker Elementary	X	PP!
Kinoshita Elementary	X	PP!
Lydia Romero-Cruz Elementary	X	PP!
Prairie Elementary	X	PP!
Willows Intermediate	X	
Ralph Bunche Elementary	X	
Agua Caliente Elementary	X	
Grand Oaks Elementary	X	
Jefferson Elementary	X	
Holbrook Elementary	X	
Del Rey Elementary	X	
Lone Star Elementary	X	
Madison Elementary	X	
Redway Elementary	X	
Elizabeth Learning Center	X	
Plymouth Elementary	X	
San Rafael Elementary	X	
Fort Bragg Middle	X	
Columbus Tustin Middle	X	
Diamond Elementary	X	
Maple Elementary	X	

School	Network	PP!
Orangethorpe Elementary	X	
Richman Elementary	X	
Walker Elementary	X	
Cottonwood Elementary	X	
Georgia Morris Elementary	X	
Pinon Hills Elementary	X	
Fremont Intermediate	X	
Hueneme High	X	
Palm View Elementary		PP!
Osborn Elementary		PP!
Lower Lake Elementary		PP!
North Park Elementary		PP!
Christa McAuliffe Elementary		PP!

6. Supporting Documentation, Regional Trainings

FFY 2011 Regional Network Trainings
A primary role of the 11 Regional Network's is to provide skills-based trainings to intermediary partners serving the SNAP-Ed eligible population in order to improve the ability of these agencies to provide scientifically sound and effect nutrition education and physical activity promotion. Trainings are provided both as stand-alone events as well as activities integrated into other events. Some trainings are provided in support of Regional Collaborative nutrition education initiatives, while others are offered in response to the regional training needs assessment results. Regardless of venue or topic, all trainings are provided within the framework of the SNAP-Ed guidance for allowable activities.

Trainings offered to support use of Network resources:

- Network for a Healthy California-Programs and Resources
- Toolbox Train-the-Trainer
- HOTM and Power Play! Integration

Trainings offered in support of Regional Collaborative Nutrition Education Initiatives:

- ReThink Your Drink
- Rx For Health
- Healthy Checkout Stands

Skills-based trainings in support of physical activity integration into nutrition education:

- Power Up In 10!
- PA Integration
- Nutrition Education for Promotoras
- Shake it!: Promoting Healthy Lifestyles

Skills-based trainings in support of nutrition education in low-resources/qualifying schools:

- Weaving Nutrition Education into the School Day
- Power Play! Integration into Summer Lunch Gardening Curriculum
- Model School Wellness Polices to Support Nutrition Education
- Farmers and Schools, Making the Connection
- Improving Nutrition Education and Increasing Physical Activity through Strong Partnerships with Schools
- Teaching Healthy Cooking in the Classroom
- Maximizing School-based Nutrition Education Resources
- Schools and Communities Working Together
- Fresh Fruits and Vegetables A Centerpiece for a Healthy School Environment

7. List of Print Materials and Work Products

POWER UP IN 10, STRENGTH TRAINING BROCHURE ENG/SPN
CHAMPIONS FOR CHANGE PAPER GOODIE BAG- ENG/SPN
POWER PLAY! COMMUNITY YOUTH ORGANIZATION KIT
POWER PLAY! TRY SOMETHING NEW STICKER BOOKLET (35PK)
CHAMPION MOM BROCHURE & SUCCESS CARDS, ENG
CHAMPION MOM BROCHURE & SUCCESS CARDS, SPN
ACHIEVING STATEWIDE SUCCESS IN NUTRITION EDUCATION & OUTREACH
LOW-INCOME CHILDREN FACE HEALTHY LIFESTYLE BARRIERS
ACHIEVING A HEALTHY LIFESTYLE: LATINO ADULTS, ENG
ACHIEVING A HEALTHY LIFESTYLE: AFRICAN AMERICAN ADULTS, ENG
ACHIEVING A HEALTHY LIFESTYLE: WORKING ADULTS, ENG
ACHIEVING A HEALTHY LIFESTYLE: LATINO ADULTS, SPN
RETAIL STATIC CLINGS
SLIDE GUIDE CHART, ENGLISH (50PK)
SLIDE GUIDE CHART, SPANISH (50PK)
POWER PLAY! FIT DECK POWER CARDS, ENGISH (35PK)
3" *POWER PLAY!* PHYSICAL ACTIVITY STICKERS, ENGLISH (100PK)
3" *POWER PLAY!* FRUIT & VEG STICKERS, ENGLISH (100PK)
3" *POWER PLAY!* I WALKED STICKERS, ENGLISH (100PK)
3" *POWER PLAY!* LOGO STICKERS, ENGLISH (100PK)
3X6.5 RETAIL SHLF MGNTS/6 MGNTS-4 EACH, ENG (24PK)
POWER PLAY! SCHOOL IDEA & RESOURCE KIT 4TH GRADE
POWER PLAY! SCHOOL IDEA & RESOURCE KIT 5TH GRADE
POWER PLAY! COMMUNITY YOUTH ORGANIZATION KIT
POWER PLAY! STUDENT WORKBOOK 4TH GRADE (35PK)
POWER PLAY! STUDENT WORKBOOK 5TH GRADE (35PK)
PQT/RECIPE CARD COMBO (6 CARDS + BEN CARD), ENGLISH
PQT/RECIPE CARD COMBO (6 CARDS + BEN CARD), SPANISH
22X28 SERVING SIZE POSTER-ENGLISH/SPANISH
NETWORK FOLDER
INSTANT RECESS DVD, ENG
SHELF WOBBLER-CHICKEN SALAD- ENG/SPAN (10PK)
SHELF WOBBLER-OATMEAL- ENG/SPAN (10PK)
SHELF WOBBLER-PANCAKES- ENG/SPAN (10PK)
SHELF WOBBLER-PASTA SAUCE- ENG/SPAN (10PK)
SHELF-WOBBLER-SANDWICHES- ENG/SPAN (10PK)
SHELF WOBBLER-SMOOTHIE- ENG/SPAN (10PK)
SHELF WOBBLER-VEGGIES W/CHICKEN- ENG/SPAN (10PK)
SHELF WOBBLER-VEGGIES W/EGGS- ENG/SPAN (10PK)
WIC CO-BRAND WOBBLER SANDWICHES- ENG/SPA (10PK)
WIC CO-BRAND WOBBLER CEREAL- ENG/SPA (10PK)
WIC CO-BRAND WOBBLER BROCCOLI ENG/SPA (10PK)
WIC CO-BRAND WOBBLER STIR FRY- ENG/SPA (10PK)
WIC CO-BRAND WOBBLER QUESADILLAS- ENG/SPA (10PK)
8.5X11 *POWER PLAY* SUMMER F/V WINDOW CLINGS
8.5X11 *POWER PLAY* SPRING F/V WINDOW CLINGS
POWER UP YOUR SUMMER VINYL BANNER
YOUTH EMPOWERMENT LESSONS LEARNED
SOULFUL RECIPES-BULDING HEALTHY TRADITIONS COOKBOOK, ENG
FLAVORS OR MY KITCHEN-LATINO COOKBOOK, ENG
FLAVORS OR MY KITCHEN-LATINO COOKBOOK, SPN

OFFICE OF WOMEN'S HEALTH
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES AND CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

CWHS

Data Points

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Disparities in Prevalence of Obesity Among California Women, 2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

Obesity continues to be a prevalent public health problem. The 2007 national rate for self-reported obesity in adult women in the United States was 24.8 percent.[1] Obesity contributes to several chronic diseases found at disproportionately higher rates among certain race/ethnicities and low-income, less-educated populations.[2,3] The Cancer Control Branch's Network for a Healthy California is one of several California Department of Public Health programs working in the area of obesity prevention, focusing its efforts on the low-income population participating in or eligible for the Food Stamp Program (FSP).

Core questions in the 2007 California Women's Healthy Survey asked women to self-report height and weight, which were used to calculate the body mass index (BMI), a measure for obesity. Obesity is defined as a BMI greater than or equal to 30. Demographic data and use of the FSP and the Women, Infants, and Children Supplemental Nutrition Program (WIC) were also collected. A six-item U.S. Department of Agriculture food security scale was also used to classify women into three groups: food secure (i.e., having access at all times to enough food for an active healthy life); food insecure without hunger; or food insecure with hunger.

Only the 4,667 non-pregnant women who were post-partum one year or more were included in this analysis. The relationship between sociodemographic variables and obesity was initially examined for statistical significance using bivariate statistics. Regression analysis was subsequently performed to adjust for multiple confounding factors. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

The overall obesity rate among California women in 2007 was 24.3 percent. Obesity prevalence varied significantly by respondents' demographic characteristics, household income federal poverty level (FPL), food insecurity, and participation in the FSP or WIC.

- The lowest rates of obesity were among the youngest and oldest women (ages 18-24 at 16.5 percent and ages 65+ at 19.3 percent) than ages 25-34 (26.5 percent), ages 35-44 (24.2 percent), ages 45-54 (28.4 percent), and ages 55-64 (29.2 percent; $p < .0001$).

- The highest rates of obesity were among African American/Black women (35.7 percent) and Hispanic women (33.4 percent), than White women (19.8 percent) and Asian/Other women (13.9 percent; $p < 0.001$).

- The prevalence of obesity was also associated with educational level (see Figure 1). The prevalence of obesity was lowest among college graduates (15.7 percent) than women with some college (24.9 percent), high school graduates (24.6 percent), and women with less than a high school education (38.2 percent; $p<.0001$).

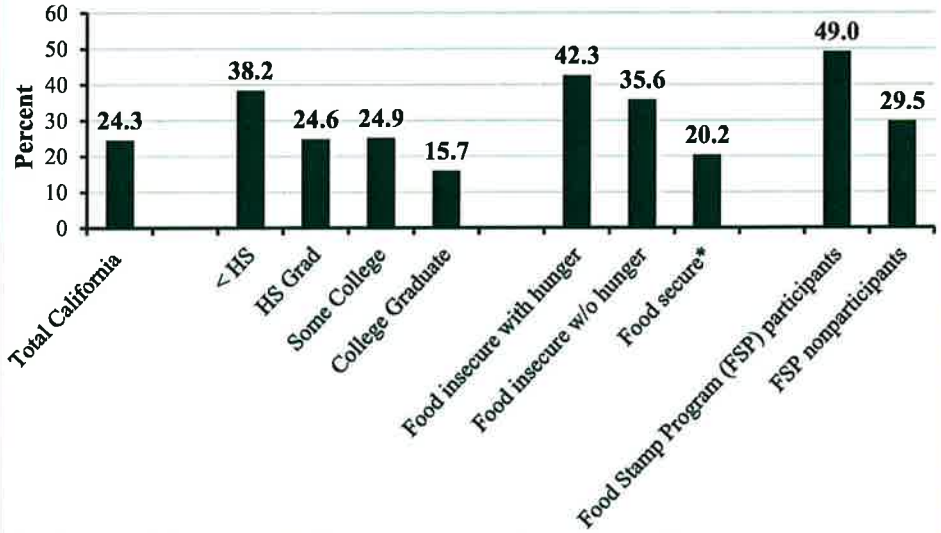
Public Health Message:
Although cross-sectional studies cannot determine causality, disparities in race/ethnicity, socioeconomic status, and education are interrelated, cross-cutting factors that are strongly associated to obesity. Additionally, women who were food insecure and those who were receiving food stamps were at significantly greatest obesity risk. Findings point to the importance of employing a multifaceted public health approach to address disparities in obesity prevalence.

Issue 6, Fall 2010, Num. 20

Disparities in Prevalence of Obesity Among California Women, 2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

Figure 1 **Obesity Prevalence Among California Women, by Education and Poverty-Related Factors, 2007**
N = 4667



*Food secure - having access, at all times to enough food for an active healthy life
Source: California Women's Health Survey, 2007

- Poverty-related factors were highly associated with obesity. Women from households with income reported as less than or equal to 130 percent of the FPL had an obesity prevalence rate of 32.8 percent; those at 131 percent to 185 percent of the FPL, had a rate of 30.1 percent, and those with income above 185 percent of the FPL had a rate of 19.9 percent ($p < .0001$).

- Women from households with reported income at or above 400 percent of the FPL (16.2 percent) were nearly half as likely to be obese as women with income below that level (29.0 percent; $p < .0001$).

- The prevalence of obesity among food insecure women with hunger was 42.3 percent, among food insecure women without hunger 35.6 percent, and among food secure women 20.2 percent. Food insecure women had a combined prevalence rate of 38.2 for obesity ($p < .0001$).

- Women who participated in a major supplemental food program within the past 12 months were more likely to be obese than income-eligible non-participants.[4] Among women meeting the income-eligibility criterion for the FSP, participants had an obesity prevalence of 49.0 percent, while nonparticipants at this income level had a 29.5 percent rate. Among those meeting the criterion for WIC, participants had a 38.0 percent prevalence rate while nonparticipants at the same income level had a 31.3 percent rate ($p< .05$).

- Looking only at WIC-eligible[5] women, significant differences were observed by assistance program combinations, with obesity rates of 49.6 percent for women participating in both the FSP and WIC, 47.5 percent for FSP participation alone, 32.6 percent for WIC participation alone, and 26.4 percent for eligible women who did not participate in either program during the past year ($p < .0001$).

- When poverty level, food insecurity, use of supplemental food programs, education, race/ethnicity, and age were included in a logistic regression model, after taking into account the remaining variables, FPL and WIC were no longer statistically significant. When controlled for the confounders, FSP participants were 2.3 times more likely to be obese than non-FSP users with income less than or equal to 130 percent of the FPL; and food insecure women were 1.6 times more likely than food secure women to be classified as obese. Women who had not graduated from college were 1.6 to 1.9 times more likely to be obese than those who had attained college degrees. White women were 1.7 times, Hispanic women were 2.3 times, and African American/Black women were 3.2 times more likely to be obese than women of Asian/Other background.

1 Galuska DA, Gillespie C, Kuester SA, Mokdad AH, Cogswell ME, Philip CM. State-specific prevalence of obesity among adults --- United States, 2007. *MMWR*. July 18, 2008;57(28):765-768.

2 Atiedu AA, Network for a Healthy California, Health Disparities Action Team. Issue paper: Health disparities in California. Sacramento, CA. California Department of Public Health, Cancer Prevention and Nutrition Section; 2008.

3 U.S. Department Of Health And Human Services. Summary health statistics for U.S. adults: National Health Interview Survey, 2007. Data from the National Health Interview Survey. National Center for Health Statistics. *Vital Health Stat*. 2008;10(240):1-169.

4 Income-eligibility criterion for FSP participation is less than or equal to 130 percent FPL, while income-eligibility criterion for WIC is less than or equal to 185 percent FPL.

5 For WIC participation, only women taking part on behalf of their children less than five years old were included; since women who were pregnant or up to one year post-partum had been eliminated from the sample.

Submitted by: Sharon Sugerman, M.S., R.D. and Patrick Mitchell, Dr.P.H. Network for a Healthy California, California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 449-5406, Sharon.Sugerman@cdph.ca.gov

OFFICE OF WOMEN'S HEALTH
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES AND CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Data Points

CWHS

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Overweight and Obesity Among California Women Trying to Become Pregnant, 2006-2007

California Department of Public Health
Maternal Child and Adolescent Health Division
Cancer Control Branch

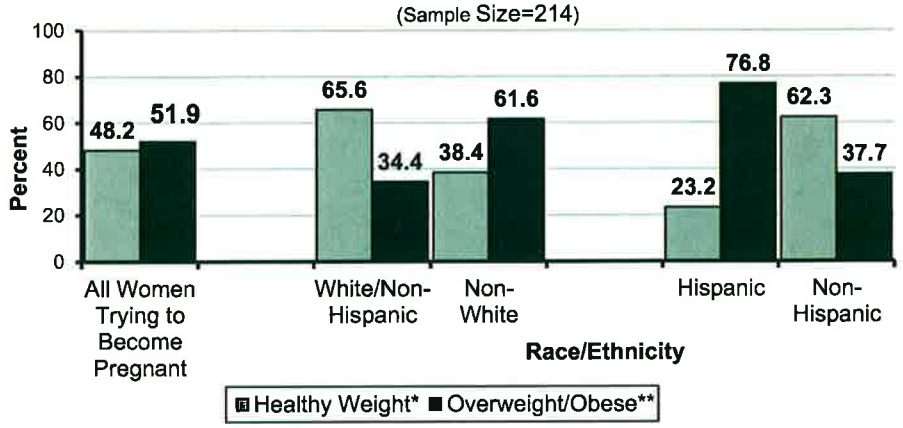
Being overweight or obese increases the risk of hypertension, diabetes, and coronary heart disease as well as endometrial, breast and colon cancer.[1] For women of reproductive age, being overweight or obese poses additional health risks during pregnancy such as gestational diabetes, pregnancy-induced hypertension and eclampsia, giving birth to an abnormally large baby (macrosomia), or having an induced labor or cesarean delivery. Moreover, babies born to women who are overweight or obese prior to conception are less likely to be breastfed and are at increased risk for being overweight themselves, for infant death, and for certain birth defects.[2-4]

Data on weight status among women of reproductive age from the California Women's Health Survey (CWHS) point to an increased trend in combined overweight and obesity over the past ten years, from 38.8 percent in 1997 to 49.1 percent in 2007.[6]

The CWHS asked women about their pregnancy status and intent, their height and weight for body mass index (BMI) calculations, the number of children born to them, and demographic questions. For the current analysis, data from the 2006 and 2007 surveys were combined and limited to women ages 18-44 (n=4,237). Pregnancy intent was measured with the question: *"Are you trying to become pregnant?"* Weight status was categorized into four groups based on the National Heart, Lung and Blood Institute guidelines[7]: *underweight* (BMI of <18.5), *healthy weight* (BMI of 18.5 – 24.9), *overweight* (BMI of >25 – 29.9), and *obese* (BMI of >30).

Figure 1 **Combined Overweight and Obesity vs. Healthy Weight Among California Women Ages 18-44 Trying to Become Pregnant, 2006-2007**

(Sample Size=214)



*Health weight includes women with a BMI of 18.5 - 24.9; underweight women (BMI <18.5) excluded[8]

**Overweight/Obese includes women with a BMI of >25

Source: California Women's Health Survey, 2006-2007

Public Health Message:
Since over 40 percent of births in California are unplanned,[5] the Maternal, Child and Adolescent Health (MCAH) Division encourages all women of reproductive age to maintain a healthy weight to minimize these chronic illnesses and pregnancy-related health risks. MCAH programs encourage women to enter pregnancy at an optimal weight, gain appropriate weight during pregnancy, return to a healthy postpartum weight, and breastfeed, all of which may reduce the risk of childhood obesity.

Issue 6, Fall 2010, Num. 21

Overweight and Obesity Among California Women Trying to Become Pregnant, 2006-2007

California Department of Public Health
Maternal Child and Adolescent Health Division
Cancer Control Branch

Women with missing or unknown BMI or pregnancy intent responses (n=251) were excluded from our analyses. All responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

Among all non-pregnant women of reproductive age

- A little over 3 percent (3.1 percent) were underweight and 48.6 percent were at a healthy weight, while 25.4 percent were considered overweight and an additional 22.9 percent were obese.

Among women trying to become pregnant (N=214; see Figure 1)[8]

- Compared with all non-pregnant women of reproductive age, the prevalence of being overweight and obese combined was similar among the subgroup of women who were trying to become pregnant (48.2 percent versus. 51.9 percent). Obesity, however, was notably higher among women trying to become pregnant (30.2 percent) than all non-pregnant women (22.9 percent).

- Non-White women had a significantly higher prevalence of combined overweight and obesity (61.6 percent) than White/non-Hispanic women (34.4 percent; chi-square test $p<0.0001$).[9]

- Hispanic women had twice the prevalence of combined overweight and obesity (76.8 percent) compared with non-Hispanic women (37.7 percent; chi-square test $p<0.0001$).

- Combined overweight and obesity increased with parity levels; for never pregnant women, the prevalence was 47.0 percent, among women who had given birth to one child the prevalence was 52.4 percent, and among women who had given birth to two or more children the prevalence was 62.9 percent (Mantel-Haenszel chi-square test, $p<0.0001$).

Data from this analysis indicate many California women trying to become pregnant are not at an optimal preconception weight and those most likely to be overweight or obese are Hispanic women and other women of color. In addition, each subsequent pregnancy places women at increased risk for overweight and obesity.

Factors that influence overweight/obesity rates among California women trying to become pregnant are the same as those identified for U.S. women of reproductive age in several population-based studies.[10-13] Given the high proportion of unintended pregnancies in California, promoting healthy weight is warranted among all women of reproductive age for the sake of their own health as well as for the health of any unplanned pregnancy.

1 Health and Human Services, Centers for Disease Control and Prevention. Division of Nutrition and Physical Activity, National Center for Chronic Disease Prevention and Health Promotion. Overweight and Obesity: Health Consequences. http://www.cdc.gov/nccdphp/dnpa/obesity/consequences.htm. Accessed September 2008.

2 Amir LH, Donath S. A systematic review of maternal obesity and breastfeeding intention, initiation and duration. *BMC Pregnancy and Childbirth*. 2007;7:9.

3 Thompson DR, Clark CL, Wood B, Zeni MB. Maternal Obesity and Risk of Infant Death Based on Florida Birth Records for 2004. *Public Health Rep*. July-August 2008;123:487-493.

4 Kent H, Skala J, Desmarais J. Promoting Healthy Weight among Women of Reproductive Age. Washington, DC. Association of Maternal and Child Health Programs. January 2006.

5 California Department of Public Health, Maternal Child and Adolescent Health Division. Preconception Health: selected measure, California, 2005. October 2007. http://www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Documents/MO-PreconceptionHealthOct07.pdf. Accessed June 2008.

6 Unpublished data from the Department of Public Health, Cancer Control Branch, 2008.

7 National Institute of Health. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: the Evidence Report*. NIH Publication No. 98-4083. Washington, DC. National Institute of Health; 1998.

8 Women who were trying to become pregnant and were considered "underweight" (those with a BMI of 18.5 and below) represented a very small group (n=3), and were excluded for this analysis.

9 Non-white women include those who reported their race/ethnicity as one of the following: African American/Black, Hispanic and Asian/Other.

10 Sugerman SB, Adkins S, Foerster SB, Hoegh H. Body weight and obesity-related risk factors and relationships among California women: Findings from the California Women's Health Survey, 1997-2002. *Women's Health Findings from the California Women's Health Survey, 1997-2003. California.2006*. http://www.cdph.ca.gov/programs/owh/pages/default.aspx. Published May 2006. Accessed June 2008.

11 Centers for Disease Control and Prevention. State-Specific Prevalence of Obesity among Adults --- United States, 2007. *MMWR*. 2008;57(28):765-768.

12 Ogden CL, Carroll MD, Curtin LR, McDowell MA, Tabak CJ, Flegal KM. Prevalence of Overweight and obesity in the United States, 1999-2004. *JAMA*. 2006;295:1549-1555.

13 Kim SY, Dietz PM, England L, Morrow B, Callaghan WM. Trends in pre-pregnancy obesity in nine states, 1993-2003. Obes 2007;15(4):986-993.

Submitted by: Aldona Herrndorf, M.P.H. and Suzanne Haydu, R.D., M.P.H., California Department of Public Health, Maternal, Child and Adolescent Health Division, and Patrick Mitchell, Dr.P.H. and Sharon Sugerman, M.S., R.D., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 552-8497, Aldona.Herrndorf@dhcs.ca.gov

OFFICE OF WOMEN'S HEALTH
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES AND CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Data Points

CWHS

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

Several studies have demonstrated an association between acculturation of Mexican-American women in the United States and their reduced fruit and vegetable consumption.[1,2] However, other studies have found opposite trends, which may be explained by different or inconsistent methods in defining acculturation.[3] A systematic review of the literature examining the relationship between acculturation and diet among Hispanics in the United States found several consistent relationships irrespective of how acculturation was measured (e.g., acculturation score, years in the United States, birthplace, generational status, and language use).[4] The less acculturated Hispanics consumed "more fruit, rice, and beans and less sugar and sugar-sweetened beverages" than those who were more acculturated.[4] Typically these studies used multivariate models that controlled for other possible explanatory factors such as age, education, income, and gender.[1-4]

The California Department of Public Health's *Network for a Healthy California (Network)* represents a statewide movement of local, state, and national partners collectively working to improve the health status of low-income Californians through increased fruit and vegetable consumption and daily physical activity. The *Network's Latino Campaign* specifically targets low-income Hispanic adults and their families to help them consume the recommended amount of fruits and vegetables and enjoy physical activity every day.

The 2007 California Women's Health Survey (CWHS) was administered to 5,352 women. From the total sample,1,819 women (34.2 percent) identified themselves as Hispanic. Responses to the questions: *"In what country were you born?"* and *"In what year did you come to live in the United States?"* were used to create five groups of Hispanic women: women living in the United States less than 4 years, from 4 to 9 years, from 10 to 15 years, 16 years or more, and those born in the United States. In the topic area of fruit and vegetable consumption, women were also asked the following two questions: *"A serving is about 1/2 cup of vegetables or fruit, 6 ounces of 100% fruit or vegetable juice, a medium piece of fruit, or 1 cup of green salad. About how many servings of fruits and vegetables do you usually eat or drink on an average day?"* and *"Many people need to eat more fruits and vegetables. What is the one main reason you don't eat more fruits and vegetables?"* In addition to various demographic information, women also responded to a series of six questions drawn from the standard U.S. Department of Agriculture's methodology for measuring food security, meaning access, at all times, to enough food for an active, healthy life for all household members. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

California Hispanic Women's Fruit and Vegetable Consumption by Years in the United States, 2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

Public Health Message:
When defined as solely "years living in the United States," acculturation among California Hispanic women is not associated with lower reported fruit and vegetable consumption. In fact, the diet quality, as measured by food insecurity and lower daily fruit and vegetable consumption, is most at risk among women who have most recently come to the United States. Economic vulnerability as well as education must be addressed by interventions designed to increase fruit and vegetable consumption among Hispanic immigrants.

Issue 6, Fall 2010, Num. 10

California Hispanic Women's Fruit and Vegetable Consumption by Years in the United States, 2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

Highlights of these analyses are as follows:

Length of Residency

- Overall, 7.0 percent of the Hispanic women surveyed had been in the United States less than 4 years; 14.5 percent from 4 to 9-years; 9.7 percent from 10 to 15-years; 34.5 percent 16 years or more; and 34.3 percent were born in the United States.

Country of Birth

- Mexico was the birth place for a majority of the Hispanic women not born in the United States (54.2 percent); however, an additional 25 countries were also mentioned.

Age

- The women's average age was significantly associated with length of U.S residence: 28.9 years for women in the U.S. less than 4 years, 30.6 years for 4 to 9-year immigrants, 34.9 years for 10 to 15-year immigrants, 44.8 years for immigrants of 16 years or more, while the average age for Hispanic women born in the United States was 37.3 years ($p<.0001$).

Children at Home

- Similarly, the three groups with fewer than 15 years in the United States were significantly more likely to have children living in their households (87.2 percent, 87.1 percent and 88.1 percent, respectively) than women who had lived in the United States for 16 or more years (69.3 percent) or who were born in the United States (61.2 percent; $p<.0001$).

Education of Immigrants

- A significantly greater percent of the immigrant women had less than a high school education (54.2 percent of those in the United States less than 4 years; 55.5 percent of 4 to 9-year immigrants; 63.7 percent of 10 to 15-year immigrants; and 56.8 percent for immigrants of 16 years or more) compared to 16.3 percent of Hispanic women born in the United States ($p<.0001$).

Income Adequacy

- Women in the four immigrant groups were significantly less likely to feel they had enough money to meet their basic living needs than women born in the United States: 56.8 percent of women in the United States less than 4 years; 51.7 percent of the 4 to 9-year immigrants; 54.6 percent of the 10 to 15-year immigrants; 58.1 percent of the 16 or more years immigrants, versus 71.8 percent of Hispanic women born in the United States ($p<.0001$).

Food Insecurity

- A consistent and significant association was evident between years in the United States and household food security status. More of the most recent immigrant group was classified as food insecure (66.3 percent) than those in the United States from 4 to 9-years (65.7 percent); 10 to 15-years (54.0 percent); 16 years or more (49.9 percent); and those born in the United States (26.8 percent; $p <.0001$).

Fruit and Vegetable Consumption

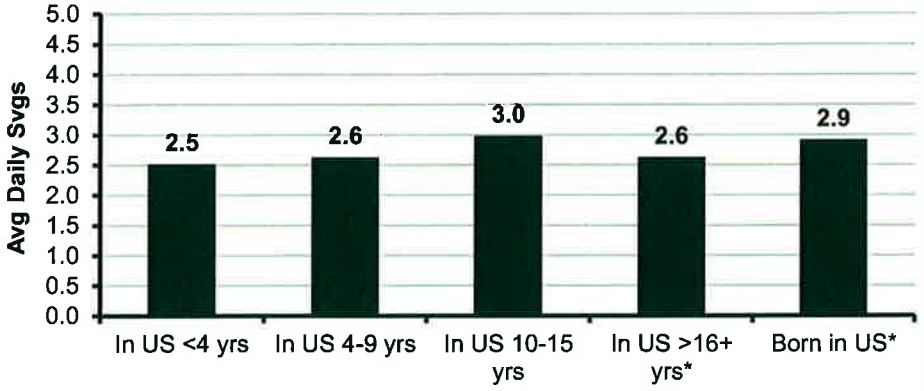
- Years in the United States was not associated with a reported decline in fruit and vegetable consumption (see Figure 1). The only significant difference in average consumption was between women born in the United States and immigrants of 16 years or more (2.9 and 2.6 servings, respectively; $p<.05$).

National Goal

- Similarly, the two groups with fewer than ten years in the United States

Figure 1

Hispanic Women's Daily Fruit and Vegetable Consumption, by Years in the United States, California, 2007



*p<.05
Source: California Women's Health Survey, 2007

were less likely to have eaten five or more fruit and vegetable servings in a usual day compared with Hispanic women born in the United States or who had lived in the United States for ten or more years. However, the difference was not significant.

The main reasons Hispanic women identified for not eating more fruits and vegetables showed both similarities and differences across the immigrant groups.

Habits

- One of the most frequently mentioned main reasons for not eating more fruits and vegetables by women in each group was that they were not in the habit; (28.5 percent of the less than 4 year immigrants; 22.0 percent of the 4 to 9-year immigrants; 27.8 percent of the 10 to 15-year immigrants; 30.9 percent of those living in the United States for 16 years or more years, and 29.4 percent of those born in the United States).

Cost

- The most recent immigrants (those with fewer than 4 years in the United States) were significantly more likely to say fruits and vegetables were "too expensive" (21.1 percent) than the 4 to 9-year immigrants (9.7 percent; p<.01); the 16 and more year immigrants (12.3 percent; p <.05); and the women born in the United States (9.4 percent; p<.001); but, not the 10 to 15-year immigrants (14.3 percent).

California Hispanic Women's Fruit and Vegetable Consumption by Years in the United States, 2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

1 Montez JK. Eschback K. County of birth and language are uniquely associated with intakes of fat, fiber, and fruits and vegetables among Mexican-American women in the United States. *J Am Diet Assoc.* March 2008;108(3):473-480.

2 Neuhouser ML, Thompson B, Coronado GD, Solomon CC. Higher fat intake and lower fruit and vegetables intakes are associated with greater acculturation among Mexicans living in Washington State. *J Am Diet Assoc.* January 2004;104(1):51-57.

3 Norman S, Castro C, Albright C, King A. Comparing acculturation models in evaluating dietary habits among low-income Hispanic women. *Ethn and Dis.* Summer 2004;14(3):399-404.

4 Ayala GX, Baquer B, Klinger S. A systematic review of the relationship between acculturation and diet among Latinos in the United States: implications for future research. *J Am Diet Assoc.* August 2008;108(8):1330-1344.

Submitted by: Barbara MkNelly, M.S., Sharon Sugerman, M.S., R.D., and Patrick Mitchell, Dr.P.H., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 552-9938, Barbara.MkNelly@cdph.ca.gov

OFFICE OF WOMEN'S HEALTH

CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES AND CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Data Points

CWHS

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

On average, 2.1 million people in California received food stamp benefits each month in 2007.[1] The majority of these recipients were children (64.2 percent),[2] but, three-quarters of the adult heads of household receiving benefits were women.[3] A general health profile for women receiving food stamps can be drawn from the California Women's Health Survey (CWHS).

The California Department of Public Health's *Network for a Healthy California* creates 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. These efforts are funded through the U.S. Department of Agriculture Food Stamp Program and focus on food stamp recipients and other low-income families. Income eligibility for the Food Stamp Program and for Food Stamp Nutrition Education is $\leq$130 percent and $\leq$185 percent of the Federal Poverty Level (FPL), respectively.

In 2006 and 2007, a combined total of 655 women answered *"Yes"* to the California Women's Health Survey (CWHS) question: *"Did you receive food stamp benefits in the last 12 months?"* while 9,235 responded *"No."* In both years, women were also asked a series of core questions related to their general health and socioeconomic status as well as a variety of individual and household demographic characteristics associated with health. For example, women were asked to rate their own general health as *"excellent," "very good," "good," "fair," or "poor"*. Women also provided information regarding their physical and mental health, their diets, and their weights and heights. Responses were weighted in these analyses by age and race/ethnicity to reflect the 2000 California adult female population.

Comparison between women who had received food stamps in either or both 2006 and 2007 and those who had not revealed the following:

Prevalence and Employment

- Overall, 6.6 percent of the women interviewed reported receiving food stamps in the previous 12 months while 93.4 percent had not; significantly fewer of food stamp users reported being employed (33.7 percent) than women not using food stamps (51.7 percent; p<.0001).

Marital Status and Children

- Food stamp recipients were significantly less likely to be married (43.8 percent) and more likely to live in households with children (90.3 percent) than women not receiving food stamps (64.2 percent and 48.2 percent, respectively; p<.0001).

Age and Education

- Women receiving food stamps were on average significantly younger (32.9 years) than non-recipients (45.8 years; p<.0001) and a greater percentage had less than a high school education (40.5 percent) than non-recipients (16.6 percent; p<.0001).

Race/Ethnicity

- Women using food stamps were more

Health of California Women Receiving Food Stamps, 2006-2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

Public Health Message:
The Food Stamp Program provides important nutritional assistance to hundreds of thousands of very poor California women, especially single mothers with children at home. Hispanic and African American/ Black women are particularly overrepresented in the program. Health indicators including mental, physical, health care, diet, and socioeconomic characteristics, identify women using food stamps as a segment of California women who need public health interventions to eliminate these health disparities.

Issue 6, Fall 2010, Num. 11

Health of California Women Receiving Food Stamps, 2006-2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

likely to be Hispanic (58.3 percent), African American/Black (11.2 percent) and Indian/Aleut/Eskimo women (2.7 percent) than non-recipients who were Hispanic (33.8 percent), African American/Black (5.1 percent), and Indian/Aleut/Eskimo women (1.1 percent, p<.0001). Recipients were less likely to be White (25.1 percent) or Asian/Pacific Islander (2.8 percent) than non-recipients who were White (54 percent) and Asian/Pacific Islander (6.6 percent; p<.001).

Indicators of health and socio-economic characteristics associated with health also revealed considerable differences between food stamp recipients and non-recipients (see Figure 1):

Income and Health Care

- Almost three-quarters of food stamp recipients (70.6 percent) reported household income at or below poverty (100 percent of the Federal Poverty Level) than non-recipients (15.9 percent; p<.0001). One in four of the food stamp recipients (25.5 percent) reported they had no health care plan while one in six non-recipients reported no health care plan (16.9 percent; p<.0001).

Self-Perception of Health

- More than half of the non-recipients (52.9 percent) described their general health as being "excellent" or "very good"; however, less than a third of food stamp recipients (30.8 percent; p<.0001) did so. Food stamp recipients were much more likely to report "fair "or "poor" general health (31.6 percent) than non-recipients (17.7 percent; p<.0001).

Current Health Problems

- During the previous 30 days, 17.7 percent of the food stamp recipients reported having 15 or more days when their physical health was not good (including physical illness and injury) compared to 10.9 percent of non-recipients (p<.0001).

Mental Health

- More than one in five food stamp recipients (21.4 percent) reported having 15 or more days of the last 30 days when their mental health (defined as stress, depression, or emotional problems) was not good than non-recipients (11.3 percent; p<.0001).

Food Insecurity

- Food stamp recipients were three times more likely to have experienced food insecurity (62.7 percent) than non-recipients (20.6 percent). Food insecurity meant that due to money constraints, they or others members of their household did not have access to enough food for an active, healthy life at some time during the previous 12 months (p<.0001). Food stamp recipients were also significantly more likely to have received food assistance from a food bank in the last 12 months (15.9 percent) than non-recipients (2.4 percent; p<.0001).

Healthy Eating

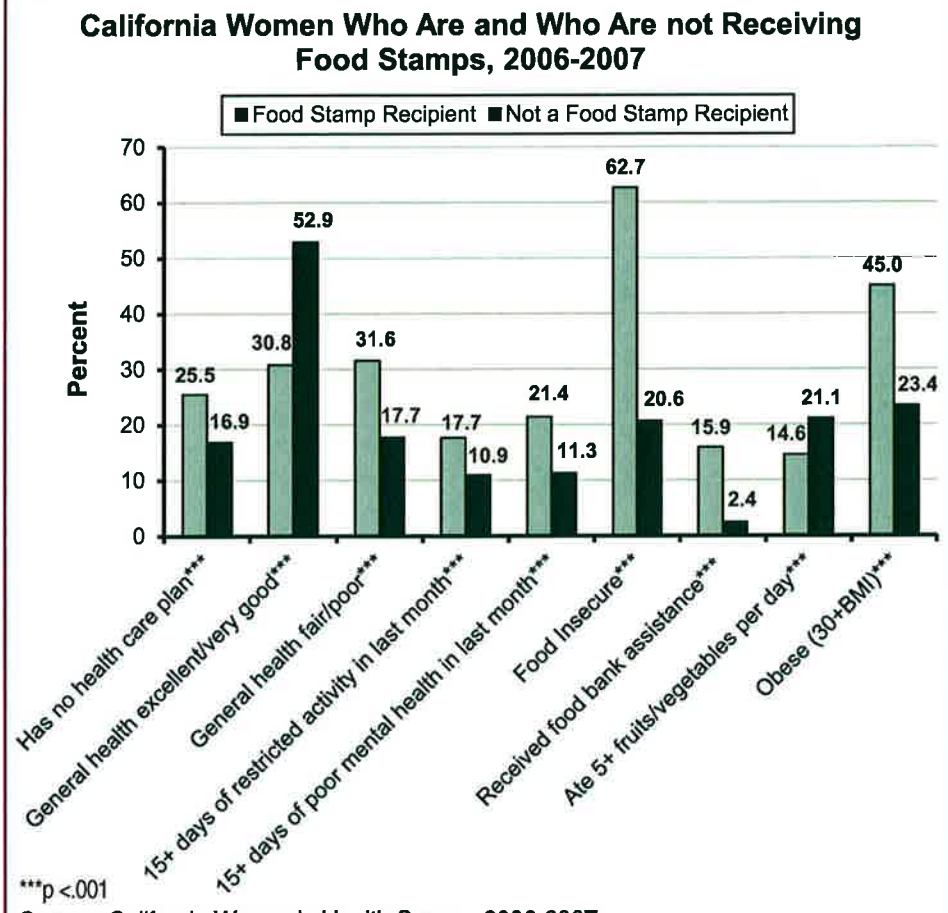
- Only 14.6 percent of the women receiving food stamps reported meeting the combined Healthy People 2010 goals of five or more fruits and vegetables a day than non-recipients (21.1 percent; p<.0001).

Overweight and Obesity

- Based on heights and weights (excluding those who were pregnant), body mass index (BMI) was calculated and more food stamp recipients were identified as being overweight or obese (71.3 percent) than non-recipients (51.6 percent); however, the greatest difference was evident in the prevalence of obesity: 45.0 percent among food stamp recipients

compared to 23.4 perfect among non-recipients (p <.0001).

Figure 1



Source: California Women's Health Survey, 2006-2007

1 California Department of Social Services, *DFA 256: Food Stamp Program Participation and Benefit Issuance Report January-December, 2007.* http://www.cdss.ca.gov/research/PG352.htm. Accessed August 2010.

2 United States Department of Agriculture. Food and Nutrition Services. Characteristics of Food Stamp Households: Fiscal Year 2007. September, 2008. Available at: http://www.fns.usda.gov/ora/MENU/Published/snap/FILES/Participation/2007Characteristics.pdf Accessed March 2009.

3 California Department of Social Services Food Stamp, *Food Stamp Household Profile, Federal Fiscal Year 2007.* Available at: http://www.dss.cahwnet.gov/foodstamps/PG844.htm Accessed March 2009.

Submitted by: Barbara MkNelly, M.S., Sharon Sugerman, M.S., R.D., and Patrick Mitchell, Dr.P.H., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 552-9938, Barbara.MkNelly@cdph.ca.gov

OFFICE OF WOMEN'S HEALTH
CALIFORNIA DEPARTMENT OF HEALTH CARE SERVICES AND CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

Data Points

CWHS

RESULTS FROM THE CALIFORNIA WOMEN'S HEALTH SURVEY

California Women's Diet Quality by Household Food Security Status, 2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

Research has established a clear association between food insecurity and poor-quality diets, leading to worsened nutritional status and health outcomes.[1] Numerous studies have also demonstrated a positive association between fruit and vegetable intake and improved health.[2] The health benefits of fruit and vegetable consumption include a reduced risk of cardiovascular disease, hypertension, stroke, cancer, obesity, and birth defects as well possible reduced risk for type 2 diabetes and delayed onset of some age-related ailments such as cataracts.[2] Fruit and vegetable consumption is a key measure of diet quality.[3] Examination of the relationship between women's household food security status and their fruit and vegetable consumption provides insight into their current, and potentially long-term, health.

The California Department of Public Health's *Network for a 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. Two additional *Network* goals are to increase food security (anti-hunger) and prevent diet-related chronic diseases, including obesity.

The 2007 California Women's Health Survey (CWHS) was administered to 5,352 women using the U.S. Department of Agriculture's standardized methodology for measuring food security with and without hunger.[4] The six-item validated short form of the food security scale was used to classify women into three groups: food secure, food insecure without hunger, and food insecure with hunger. The classifications can also be collapsed into just two groups: food secure verses food insecure. In the topic area of diet quality, women were also asked the following three questions: *"A serving is about 1/2 cup of vegetables or fruit, 6 ounces of 100% fruit or vegetable juice, a medium piece of fruit, or 1 cup of green salad. About how many servings of fruits and vegetables do you usually eat or drink on an average day?"* and *"Many people need to eat more fruits and vegetables. What is the one main reason you don't eat more fruits and vegetables?"* and *"How far, in miles, do you usually travel to shop for groceries?"* In these analyses, responses were weighted by age and race/ethnicity to reflect the 2000 California adult female population.

Highlights of these analyses are as follows:

Prevalence

- Overall, 75.0 percent of the women surveyed lived in households classified as food secure, 15.9 percent were food insecure without hunger, and 9.2 percent were food insecure with hunger.

Household Composition

- Women experiencing food insecurity were significantly more likely to be unmarried (46.5 percent) and live in households with children (66.6 percent) than women classified as food secure (34.1 percent and 47.1 percent, respectively; $p<.001$).

Age and Education

- Food insecure women were on

Public Health Message:
Food insecurity is associated with poorer nutritional quality as measured by fruit and vegetable consumption, a component of a healthy diet. While public health efforts are needed to encourage California women overall to increase their fruit and vegetable consumption, economic barriers such as cost, norms, and availability of fruit and vegetables are constraints for food insecure women, especially those living in households classified as food insecure with hunger.

Issue 6, Fall 2010, Num. 12

California Women's Diet Quality by Household Food Security Status, 2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

average younger (39.7 years) than food secure women (46.5 years; p<.0001). Food insecure women were also much more likely to have less than a high school education (43.1 percent) than food secure women (10.9 percent; p<.001).

Race/Ethnicity

- The highest rates of food insecurity were among Hispanic women (46.2 percent), American Indian/Aleut/Eskimo women (39.8 percent), and African American/Black women (27.5 percent) compared to Asian/Pacific Islander women (14.2 percent) and White women (11.8 percent; p<.0001).

Food Assistance

- Food insecure women were also significantly more likely to have received food stamps (16.1 percent) and assistance from food banks (9.7 percent; p<.0001) in the last 12 months than food secure women (3.7 percent and 1.1 percent, respectively; p<.0001).

Going without Food

- Food insecure women were also significantly more likely (42.5 percent) than food secure women (2.1 percent; p<.0001) to report that at some time in the last year they had eaten less than they had wanted (or had not eaten at all, so that another member of their household would have enough to eat).

Diet Quality

- In terms of diet quality, food insecure women were much more likely to report eating only one-two servings of fruit and vegetables in the average day (63.4 percent) than food secure women (34.9 percent; p<.0001).

National Goal

- Women living in households classified as food insecure without hunger (9.3 percent) and women living in households classified as food insecure with hunger (7.8 percent) were less likely to meet the combined Healthy People 2010 goals of five or more daily servings of fruits and vegetables than food secure women (24.7 percent; p<.0001).

The main reasons women identified why they did not eat more fruits and vegetables also differed across the food security categories (see Figure 1).

Cost

- Food insecure women with hunger (41.6 percent) and without hunger (18.0 percent) were much more likely to say fruits and vegetables were "too expensive" than food secure women (3.1 percent; p<.0001).

Perception

- Food secure women were more likely to state they ate enough fruit and vegetables already (22.3 percent) or that they take too much time to prepare and cook (21.6 percent) than food insecure women without hunger (9.7 percent and 11.7 percent, respectively; p<.0001) or food insecure women with hunger (5.0 percent and 8.3 percent, respectively; p<.001).

Skills

- Very few women in any of the three groups (less than 3 percent) referred to not being sure how to fix or select fruits and vegetables as a main reason why they did not eat more fruits and vegetables.

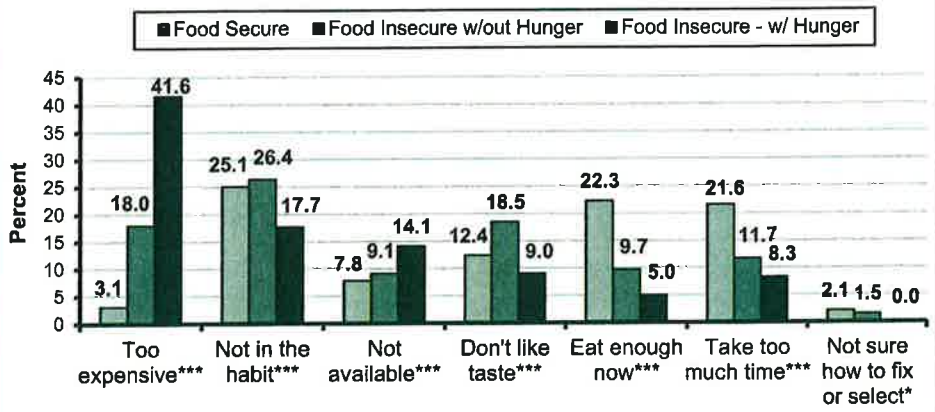
Distance to Shop

- Women classified as food insecure traveled significantly farther to shop for groceries (5.2 miles) than food secure women (4.2 miles; p<.001) possibly indicating either less availability of grocery stores or a higher priority for lower cost options.

California Women's Diet Quality by Household Food Security Status, 2007

California Department of Public Health
Cancer Control Branch
Public Health Institute

Figure 1 **Reasons Why California Women Say They Don't Eat More Fruit and Vegetables, by Household Food Security Status, 2007**



*p<.05, ***p<.001

Source: California Women's Health Survey, 2007

1 Harrison G, Manalo-LeClair G, Ramirez A, Chia YJ, Kurata J, McGarvey N, Sharp M. More than 2.9 million Californians now food insecure one in three low-income, an increase in just two years. *Health Policy Research Brief*, UCLA; June 2005.

2 Hyson D. *The Health Benefits of Fruits and Vegetables: A Scientific Overview for Health Professionals.* Washington, DC. Produce for Better Health Foundation; 2002.

3 Center for Nutrition Policy and Promotion. *Diet Quality of Low-Income and Higher Income Americans in 2003-04 as Measured by the Healthy Eating Index-2005.* Alexandria VA: United States Dept of Agriculture. December 2008. Nutrition Insight 42.

4 Bickel G, Nord M, Price C, Hamilton W, Cook J., *Guide to Measuring Food Security, Revised.* 2000. Alexandria VA: US Dept of Agriculture, Food and Nutrition Service; March 2000.

Submitted by: Barbara MkNelly, M.S., Sharon Sugerman, M.S., R.D., and Patrick Mitchell, Dr.P.H., California Department of Public Health, Cancer Control Branch and Public Health Institute, (916) 552-9938, Barbara.MkNelly@cdph.ca.gov

Using Geographic Information Systems and Local Food Store Data in California's Low-Income Neighborhoods to Inform Community Initiatives and Resources

Alyssa Ghirardelli, RD, MPH, Valerie Quinn, MEd, and Susan B. Foerster, RD, MPH

Objectives. We examined conditions in California low-income neighborhoods that affect obesity to inform program planning, nutrition education, community participation, investment of resources, and involvement of stakeholders.

Methods. Staff members in 18 local health departments were trained to use an online geographic information system (GIS) and conduct field surveys. GIS data were aggregated from 68 low-income neighborhoods of 1 or more census tracts. Data were collected in 2007 to 2009 from 473 grocery stores in 62 neighborhoods.

Results. Thirty-one percent of neighborhoods mapped had no supermarket within any of their census tract boundaries, but health department staff members estimated that 74.2% of residents had access to a large grocery store within 1 mile. Eighty-one percent of small markets sold produce, and 67.6% offered 4 or more types of fresh vegetables.

Conclusions. Small markets and corner stores in California's low-income neighborhoods often have fresh produce available for sale. Stores providing healthy options in typically underserved areas can be part of community efforts to promote healthy eating behaviors. (*Am J Public Health.* 2010;100:2156–2162. doi:10.2105/AJPH.2010.192757)

As the obesity epidemic continues to escalate across the nation,[1–5] community factors most likely to reverse the trend become increasingly important. The Centers for Disease Control and Prevention recently recommended community strategies to prevent obesity, including improving access to healthy local foods, providing incentives for food retailers to carry healthier options, and limiting advertisements of less healthy foods.[6] The American Reinvestment and Recovery Act seeks to mobilize communities to create neighborhoods that sustainably support healthy lifestyles and ameliorate the obesity epidemic.[7]

Reliable data on the local food environment can inform decisions about which actions are appropriate at the community level and which neighborhoods are at highest need for resources. Local data derived from geographic information system (GIS) mapping and field surveys that describe the neighborhood environment and the types of food available in neighborhoods can help guide local efforts. The Network for a Healthy California (the Network) of the California Department of Public Health uses GIS mapping and store surveys to examine food store conditions in low-income neighborhoods as part of the program Communities of Excellence in Nutrition, Physical Activity and Obesity Prevention (CX^3).

The Network for a Healthy California

The Network is a social marketing initiative serving California's estimated 7 million parents and children in households with incomes below 185% of the federal poverty level[8] through local assistance contracts. The Network's contractors carry out public campaigns, community-level classes, and nutrition programs, such as the Network for a Healthy California Retail Program, which provides direct technical assistance, marketing strategies, and materials to help qualifying retailers use point-of-sale marketing to promote fruit and vegetable consumption.[9]

The Network also maintains a statewide GIS with online interactive mapping capability and more than 100 geocoded database layers.[10] The map's main purpose is to enable contractors to identify qualifying areas and locations to provide nutrition education. Features of the map, such as streets, highways, rivers, and parks, can be overlaid with census tracts or zip codes and locations such as schools, worksites, retail food outlets, and nutrition-related local programs. The GIS is the first step in program planning: it identifies local amenities, services, and physical attributes.

The Network developed CX^3 to help local health departments appraise environmental conditions that affect obesity in low-income neighborhoods and to inform local strategies for program planning, nutrition education, community participation, and involvement of stakeholders. CX^3 was initiated to build the capacity of local health departments to collect and use community-level data linked to a series of standardized community benchmarks for healthy communities known as indicators and assets. The CX^3 indicators are used to assess conditions expected to promote healthy food and physical activity environments. CX^3 assets measure the extent of local support from community members, stakeholders, media, and organizations. Local health departments are trained with CX^3 standardized methods to use the GIS and field surveys that link to specific indicators and assets.

Geographic Information Systems and the Retail Food Environment

GIS studies have sparked interest in using this technology to examine spatial relationships of the food environment and capture disparities in food access.[11–14] GIS mapping provides a quick and cost-effective way to examine neighborhood differences without sending researchers in to survey the area. The accuracy of GIS mapping is limited, however, by the variable nature of businesses and by misclassification of data. Maps created with GIS technology may provide only a cursory view of environmental relationships. Although a map view provides an

indication of the types of food that could be present, the view does not provide information about the availability, quality, or cost of foods in stores or other retail food sources.

Grocery stores set the tone for healthy neighborhoods. Supermarkets with the greatest variety and lowest prices are more accessible in middle- and higher-income neighborhoods.[14–19] Access to food sources is important to consider in low-income areas, where car ownership rates are low.[20,21] A positive connection has been identified between proximity to supermarkets and healthy eating,[17,22] and the importance of small neighborhood food stores has also been recognized.[23,24] Point-of-sale nutrition information and targeted marketing strategies to increase the selection of healthy choices are generally successful.[25,26] Documentation of community food environments in low-income neighborhoods and of disparities in access to healthy food is needed to inform the strategies of health leaders and community members.

METHODS

State-level staff working on CX[3] started by developing instruments that could assess the community benchmarks in the neighborhood food environment. Their goal was to create surveys and tracking methods that could be used by local health department staff members working with community members and youths. Among the instruments developed were a series of GIS mapping procedures and field surveys for gathering on-the-ground neighborhood data.

The GIS mapping procedures identified access to supermarkets or large grocery stores, transportation to supermarkets or large grocery stores, access to fast food in a neighborhood and within a half mile of schools, farmers markets in a neighborhood and within 5 miles, and access to small markets and convenience stores within a half mile of schools. The field instruments were surveys dealing with food stores, walkability within 2 blocks of stores, fast-food outlets, outdoor marketing, and food banks and emergency food outlets. Additional methods to identify alternative food sources, such as farm stands, community gardens, and community-supported agriculture, were part of the process. The standardized instruments and methods were developed to capture a complete perspective of the neighborhood food environment to determine whether communities were meeting neighborhood indicators and what community assets were available.

In 2006, all survey instruments and GIS procedures were pilot tested by 6 local health departments in areas ranging from dense urban to rural. Local health departments used their own staff, community residents, or young people to test the store survey in 181 stores. A field protocol was developed for surveyor reference and to improve the quality of data collection. In 2007 to 2009, health departments examined the food store environment in their areas.

Geographic Information System Mapping

GIS mapping provided visual depiction of retail food availability within the overall context of residential areas and in relation to other public infrastructure, such as schools and roads. We trained local health department staff members to use the online system and interpret the maps. The online system used ArcIMS 9.2 and ArcSDE 9.2 (Environmental Systems Research Institute, Redlands, CA). We procured databases represented in the retail food layers from Dun & Bradstreet, Inc (Short Hills, NJ). We considered inaccuracies of retail databases during the mapping process. Local health department staff used other online mapping interfaces to update the mapping data collected when possible and to verify locations identified for the survey phase of implementation. Interpretation of the maps was guided by a series of instruments to record information present on the map viewer from downloaded maps and related data. The initial map views guided many health departments in deciding which areas should receive ground-level survey work.

Census tracts provided the boundaries to identify low-income–qualifying areas with 50% or more of their population (identified from 2000 US Census data[27]) living in households with incomes at or below 185% of the federal poverty level[8] and to designate neighborhoods recognized by residents. Occasionally census block groups were used to incorporate areas that better defined natural neighborhoods. Residential and mixed-use areas were mapped, but zoning designations were not part of neighborhood identification.

A circle with a half-mile radius was drawn that centered on each supermarket and large grocery store (≥20 employees) in neighborhoods to estimate the percentage of residents within walking distance to healthy food. Estimation was roughly calculated by determining the proportion of a census tract's geographic area captured within this defined circle or within several circles and summing for each census tract's geographic area. If no supermarkets or large grocery stores were present, the travel distance needed to access one was estimated by expanding a circular buffer from a center point in the neighborhood. Resident access via public transit routes was mapped separately by overlaying routes found through Internet searching. The number of small markets (<20 employees) and convenience stores located in the neighborhood and within a circle with a half-mile radius centered on schools was also determined.

Each local health department used map data findings and federal poverty level designations in census tracts to select 3 or 4 low-income neighborhoods in which to conduct store surveys. In some cases, other neighborhood characteristics were considered for selecting neighborhoods, such as obesity rates, population density, race/ethnicity, and existence of established partnerships with community organizations. From the GIS map viewer, store information—addresses, store type, and number of employees—was downloaded to develop a list of locations to survey. To address inaccuracies in the retail databases in the GIS, lists were refined and revised as needed from such sources as environmental health data from the local health department, other search engines, and online mapping interfaces such as Google or Yahoo.

Store Surveys

All types of retail food stores were surveyed in the selected neighborhoods. Store types were verified upon data collection. Small markets and convenience stores were confirmed by the presence of fewer than 4 cash registers. Data collection centered on several main topics: exterior and interior marketing, produce quality and availability, and the presence of healthy foods other than fresh fruit and vegetables. To develop the list of other healthy foods, we selected items

that contributed 2 to 3 basic foods from the food groups in the 2005 Dietary Guidelines for Americans[28] that are part of a healthy diet, excluding fats, oils, and sweets. We also considered the US Department of Agriculture's Thrifty Food Plan[29] during development and consulted the California Women, Infants and Children (WIC) program to include certain foods for the revised federal nutrition package on the store survey's list of other healthy foods (oral and e-mail communications with program staff, 2007).

Measures of exterior marketing conditions included the number, size, and type of food-related advertisements posted in windows and doors; the types of ads and food displayed on other parts of the property; and the presence of produce bins on the sidewalk in front of the store. Measures of interior marketing included the presence of ads and of healthy and less healthy foods next to the checkout counter. Participation in the Supplemental Nutrition Assistance Program (SNAP) and WIC, as well as the presence of exterior signage to let customers know whether a vendor accepted the 2 federal programs, was recorded.

We ascertained the availability and quality of fresh fruit and vegetables with a scale adapted from the Food Stores Survey developed as part of the Girls Health Enrichment Multi-Site Study.[30] We coded availability by the number of types of fruit or vegetables (0, 1–3, 4–6, ≥7). A type was defined as an individual form of fruit or vegetable; different varieties of the same form were not considered different types. We coded descriptive assessments for overall fruit and vegetable quality on a scale of 1 to 4, with 4 being the best quality. We collected prices of 7 common, nutritious produce items and recorded the lowest-priced item for each. We also coded the presence or absence of other items from our healthy foods list.

Data from field surveys were collected by local health department staff or by community members. We trained staff members in quality control methods for data collection and provided field practice. Trainees also viewed photographs depicting various types of store conditions. To improve their judgment of the quality of fruit and vegetables, trainees were shown photographs and introduced to terms for spoilage of produce; we developed these materials with guidance from the Postharvest Technology Research and Information Center at the University of California, Davis.[31] We tested the survey instrument for interrater reliability in 2008, and results will be reported in future publications.

Aggregated Samples

GIS data samples. Because the mapping process informed the selection of neighborhoods to examine in depth, we mapped a greater number of neighborhoods than were surveyed. We combined reports from 18 local health departments, which recorded data interpreted from GIS mapping procedures in 71 low-income neighborhoods. Fifty-two neighborhoods composed the sample for the study of small markets and convenience stores located around 133 schools. We compiled a smaller sample for small markets and convenience stores because this mapping procedure was not added until 2008.

Store survey sample. We combined data from 18 health departments, 62 neighborhoods, and 473 stores. Surveys were conducted in 2007–2009 in all stores within neighborhood boundaries defined by census tracts or block groups, thereby providing a relatively complete picture of food markets in 62 low-income neighborhoods across California. Survey data were entered at a central location by state-level Network staff, who used double-entry crosschecking procedures and followed additional quality control protocols to reduce inaccurate or missing data.

Analysis

GIS and store surveys. The Network's research staff analyzed the combined GIS data and store survey data with SPSS/PASW[32] to obtain basic frequencies and cross-tabulations. We tested statistical significance with Pearson χ^2 for cross-tabulations. We entered both fully and partially completed surveys of retail food stores in our analysis. Only 4 surveys were partially completed (0.8%). An α level of .001 was used for all statistical tests unless otherwise stated.

Store scores. To help local health departments with interpretation of survey results and communication to stores, community members, partners, and stakeholders, we developed standardized scoring criteria for all stores surveyed. During score development, a roundtable discussion between the Network's staff and the local health departments implementing CX[3] helped to refine the scoring structure initially developed by the Network's research team. Scores were weighted to reflect specific store conditions considered most likely to influence or support healthy eating behaviors, such as the availability and quality of fresh fruit and vegetables. We used algorithms to calculate scores from the raw data for a localized analysis specific to each store and each neighborhood. Stores could receive a total score of 0 to 100 points. A score of 75 points or higher indicated that a store carried healthy foods and limited the marketing of less healthy food products. Categories in which stores could make improvements were highlighted.

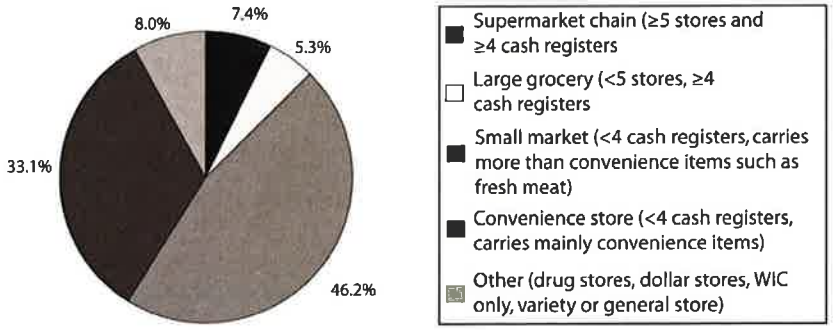
Stores received points for desired conditions and positive attributes, such as carrying more fresh fruit or vegetables, maintaining quality produce, and carrying other healthy foods, as well as for the types and sizes of interior or exterior advertisements and product placement next to the checkout counter. We awarded points for reasonable produce prices if the stores charged less than a calculated price, which we created for each of 7 produce items by analyzing retail scanner data for a designated county. For presentation here, we combined scores from data spanning 2008 to 2009. Because scoring criteria were modified from 2007 to 2008, data variables could not be matched. The scoring analysis was derived from the store surveys, but we compiled and analyzed the aggregated scoring and survey data sets separately. We analyzed scores from 338 stores with descriptive statistics in SPSS/PASW.[32] Description of store scoring criteria and development will be reported in future publications.

RESULTS

Seventy-six percent of the neighborhoods were defined by local health departments as containing 1 or 2 census tracts; a maximum of 5 census tracts defined a neighborhood. Thirty percent of the neighborhoods had no supermarket within neighborhood boundaries, but local health departments reported from GIS mapping that residents of 42.4% of the neighborhoods had access to a supermarket or large grocery store within an estimated half mile and 76.3% had access within 1 mile. Combined estimates of travel distance to a supermarket or large grocery store for most residents

showed a mean distance of 0.86 miles (SD=0.51 with an outlier of 17 miles removed).

Only 9.6% of neighborhoods mapped had no small markets or convenience stores within half a mile of schools. Thirty-one percent had 1 to 3 of these types of stores within a half mile, 46.1% had 4 to 9 stores, and 13.4% had 10 stores or more. Four of the neighborhoods mapped had more than 14 small markets and convenience stores within walking distance of their neighborhood schools; only 2 of those neighborhoods were in dense urban areas.



Note. WIC=Special Supplemental Nutrition Program for Women, Infants, and Children. A low-income neighborhood is a neighborhood having ≥50% of its residents living in households with income at or below 185% of the federal poverty level, as listed in the 2000 US census.

FIGURE 1—Food store types in 62 low-income neighborhoods in California: CX³ Food Availability and Marketing Survey, 2007–2009.

Store Survey

Stores surveyed in the 62 low-income neighborhoods were predominantly small markets—known as corner stores or mom and pops—and convenience stores (Figure 1). We included other stores, such as dollar stores, drug stores, and WIC-only establishments, as food sources in neighborhoods; store types in this category (other) composed more of the sample than did either supermarkets or large grocery stores. Nearly 23% of stores were WIC vendors, and 65.1% were SNAP vendors. A few small markets and convenience stores were recorded as WIC vendors (16.7% and 6.5%, respectively), but many more were SNAP vendors (66.2% and 56.5%, respectively). Thirty-six stores (7.9%) participated in the Network for a Healthy California Retail Program, with most participating in the retail program being supermarkets (47.2%) or large grocery stores (13.9%).

About two thirds of the stores sampled sold fresh fruit or vegetables. Nearly all (98.1%) supermarkets and large grocery stores carried 7 or more types of produce, and of those stores selling produce, quality was rated as all or most good-quality for the majority (75.9% of supermarkets and 69.2% of large grocery stores for fruit, 75.9% and 73.1% for vegetables, respectively). Most convenience stores carried either limited fruit or vegetables (1–3 types) or none at all (90.9%; Table 1).

Contrary to conventional belief, 81.2% of small markets sold fresh produce, and 67.6% contained moderate or better variety (≥4 types) of fresh vegetables. Many small markets (58.8%) carried 7 or more types of vegetables. Fifty-four percent of small markets carried a moderate variety or better (≥4 types) of fresh fruit. Just over 40% carried 7 or more types of fruit. Among small markets that sold produce, the quality of fresh produce was somewhat variable, with only about one third carrying all or most good-quality fruit. The combined categories of more good- than poor-quality and all or most good-quality totaled 69.0%. Overall vegetable quality in small markets selling produce was rated better; 76.0% had more good- than poor-quality or all or most good-quality (Table 2).

Store Scores

The mean score was 43.7 (SD=23.8) total points out of a maximum of 100 possible points. Scores ranged from a high of 90.0 points to a low of 2.5 points. The majority of stores (66.9%) received scores below 60 points; only 14.2% were designated as quality stores, with scores of 75 or above. Nearly all supermarkets (95.7%) received 75 points or higher, as did most large grocery stores (73.7%), but only a few small markets (7.1%), and no convenience stores received a quality score. Small markets had room for improvement: 58.4% of the small markets scored lower than 60 points, and 24% scored under 25 points. However, more than one third of small markets (34.4%) approached the quality standard, with scores over 60 but under 75 points.

DISCUSSION

CX³ store data revealed that a surprising number of small markets in low-income neighborhoods carried produce, that the quality of fruit and vegetables in those markets was variable, and that these types of stores generally did not reach a standard that could be considered as quality stores in low-income neighborhoods. These markets are important targets for local health departments and community groups with marketing efforts and as partners in promoting healthy behaviors. Previous research supports the importance of making healthy foods available in both supermarkets and small grocery stores and of marketing strategies that influence consumption behaviors, as part of the effort to reduce obesity and chronic disease.[33]

Limitations

CX³ is limited to collection of data in neighborhoods where 50% or more of the residents live in households with incomes at or below 185% of the federal poverty level. Because the 2000 US Census data on which these figures are based are outdated, some areas that were known within the community to have poor access to healthy foods may have been excluded. Because only low-income–qualifying census tracts were surveyed and stores in neighboring census tracts were not considered, our data may not have given a complete picture of access. The census tract qualification requirement for data collection also limited the ability to demonstrate disparities in access between neighborhoods of higher income levels.

TABLE 1—Availability of Fresh Fruit and Vegetables in Stores Selling Produce, by Store Type in Low-Income Neighborhoods in California: CX³ Food Availability and Marketing Survey, 2007–2009

	Store Type[b]				
Availability of Fresh Produce[a]	Supermarket Chain Store, No. (%)	Large Grocery Store,[a] No. (%)	Small Market, No. (%)	Convenience Store, No. (%)	Other, No. (%)
Fruit					
None	0 (0.0)	0 (0.0)	58 (26.7)	98 (63.6)	26 (72.2)
Limited	0 (0.0)	0 (0.0)	42 (19.4)	42 (27.3)	3 (8.3)
Moderate	0 (0.0)	1 (3.8)	29 (13.4)	12 (7.8)	0 (0.0)
Wide	29 (100.0)	25 (96.2)	88 (40.6)	2 (1.3)	7 (19.4)
Total	29 (100.0)	26 (100.0)	217 (100.0)	154 (100.0)	36 (100.0)
Vegetables					
None	0 (0.0)	0 (0.0)	44 (20.4)	125 (81.2)	19 (52.8)
Limited	0 (0.0)	0 (0.0)	26 (12.0)	12 (7.8)	9 (25.0)
Moderate	0 (0.0)	0 (0.0)	19 (8.8)	11 (7.1)	2 (5.6)
Wide	29 (100.0)	26 (100.0	127 (58.8)	6 (3.9)	6 (16.7)
Total	29 (100.0)	26 (100.0)	216 (100.0)	154 (100.0)	36 (100.0)

Note. A low-income neighborhood is a neighborhood having ≥50% of its residents living in households with income at or below 185% of the federal poverty level, as listed in the 2000 US census. Numbers of stores vary because of missing data. Percentages may not total to 100 because of rounding.
[a]Limited variety = 1–3 types of fruit; moderate = 4–6 types; wide = ≥7 types.
[b]Large grocery stores had >20 employees or ≥4 registers but were not part of a large chain; small markets had <4 registers and were not part of a large chain; convenience stores sold food items and snacks and possibly gasoline, but no fresh meats.

Crime and safety issues often create a fear of violence that can affect perceived access to food and walkability of a neighborhood.[34] Walkability and safety were evaluated in CX³ measures within 2 blocks of stores, as part of its assessment of safe routes to healthy foods, but only organizations with funding outside of the Network for a Healthy California were able to address any recognized issues.

TABLE 2—Quality of Fresh Fruit and Vegetables in Stores Selling Produce, by Store Type in Low-Income Neighborhoods in California: CX³ Food Availability and Marketing Survey, 2007–2009

	Store Type[b]				
Quality of Fresh Produce[a]	Supermarket Chain Store, No. (%)	Large Grocery Store,[a] No. (%)	Small Market, No. (%)	Convenience Store, No. (%)	Other, No. (%)
Fruit					
None sold	0 (0.0)	0 (0.0)	12 (6.9)	1 (1.8)	7 (41.2)
Poor	0 (0.0)	1 (3.8)	11 (6.3)	8 (14.0)	2 (11.8)
Mixed, more poor than good	1 (3.4)	0 (0.0)	31 (17.8)	14 (24.6)	4 (23.5)
Mixed, more good than poor	6 (20.7)	7 (26.9)	69 (39.7)	16 (28.1)	2 (11.8)
Good	22 (75.9)	18 (69.2)	51 (29.3)	18 (31.6)	2 (11.8)
Total	29 (100.0)	26 (100.0)	174 (100.0)	57 (100.0)	17 (100.0)
Vegetables					
None sold	0 (0.0)	0 (0.0)	1 (0.6)	19 (39.6)	0 (0.0)
Poor	0 (0.0)	1 (3.8)	10 (5.7)	2 (4.2)	3 (16.7)
Mixed, more poor than good	0 (0.0)	0 (0.0)	31 (17.7)	7 (14.6)	4 (22.2)
Mixed, more good than poor	7 (24.1)	6 (23.1)	78 (44.6)	10 (20.8)	2 (11.1)
Good	22 (75.9)	19 (73.1)	55 (31.4)	10 (20.8)	9 (50.0)
Total	29 (100.0)	26 (100.0)	175 (100.0)	48 (100.0)	18 (100.0)

Note. Low-income neighborhood = neighborhood having ≥50% of its residents living in households with income at or below 185% of the federal poverty level, as listed in the 2000 US Census. Numbers of stores vary because of missing data. Percentages may not total to 100 because of rounding.
[a]Poor = all or most of poor quality; good = all or most of good quality.
[b]Large grocery stores had >20 employees or ≥4 registers but were not part of a large chain; small markets had <4 registers and were not part of a large chain; convenience stores sold food items and snacks and possibly gasoline, but no fresh meats.

Future Community Initiatives

Experts have recommended that health departments help direct local resources and create partnerships among city, county, and local organizations to improve the community food environment.[35] Already, corner store conversions (from selling and promoting predominantly unhealthy products to offering more healthy foods) are supported through the Healthy Corner Store Network, a collaboration among the Community Food Security Coalition, the Food Trust, and Public Health Law and Policy.[36,37] Shelf space will inevitably be an issue in persuading stores to carry healthier products,[38,39] but campaigns should be created and incentives offered to encourage stores to carry—and consumers to buy—more healthy products.

CX^3 surveys and methods have extended beyond the Network. They have been used by the Central California Regional Obesity Prevention Program funded by the California Endowment, by the California Convergence, and by projects funded through the California Rural Indian Health Board. The store survey has also been adapted for use in other studies. Altogether, more than half the local health departments in California have used all or some portion of CX^3. With CX^3 data, local health departments can facilitate connections to communities and help provide perspective on the type and level of need. ■

About the Authors

The authors are with the Network for a Healthy California, California Department of Public Health, Sacramento, CA. Alyssa Ghirardelli is also with the Public Health Institute, Oakland, CA.

Correspondence should be sent to Alyssa Ghirardelli, California Department of Public Health, PO Box 997377, MS 7204, Sacramento, CA 95899-7377 (e-mail: alyssa.ghirardelli@cdph.ca.gov). Reprints can be ordered at http://www.ajph.org by clicking the "Reprints/Eprints" link.

This article was accepted July 11, 2010.

Contributors

A. Ghirardelli was lead researcher with CX^3, participated in developing tools and methods and designing the study, trained health departments in data collection methods, managed the data entry process and quality control, conducted the analysis, interpreted findings, and led the writing of the article. V. Quinn provided the main conceptual design for CX^3, contributed to developing tools and methods, training of health departments, interpreting findings, and writing. S.B. Foerster participated in the conceptual design for CX^3 and contributed to writing the article.

Acknowledgments

CX^3 was produced by the California Department of Public Health's Network for a Healthy California with funding from the US Department of Agriculture Supplemental Nutrition Assistance Program (formerly the Food Stamp Program).

We thank the local health departments and their staff who spearheaded CX^3 efforts in low-income communities around California and the residents, youths, and other participants who collected data in neighborhoods to examine local conditions. We also thank Ellen Feighery, MS, Sharon Sugerman MA, RD, FADA, Matthew Stone, MPH, and Jennifer Gregson, PhD, for contributions to CX^3. We thank Lynn Moreno, for data entry, assistance with quality control, technical assistance with local projects, and support with trainings and coordination of CX^3, and Amanda Dauphinee, BA, and Erin McCarty, MPH, for assistance with data cleaning and aggregation of datasets.

Human Participant Protection

No protocol approval was required because no human participants were involved.

References

1. Flegal KM, Carroll MD, Ogden CL, Curtin LR. Prevalence and trends in obesity among US adults, 1999–2008. *JAMA*. 2010;303(3):235–241.

2. Centers for Disease Control and Prevention. Vital signs: state-specific obesity prevalence among adults—United States, 2009. *MMWR Morb Mortal Wkly Rep*. 2010;59(30):951–955.

3. Wang Y, Beydoun MA. The obesity epidemic in the United States—gender, age, socioeconomic, racial/ethnic, and geographic characteristics: a systematic review and meta-regression analysis. *Epidemiol Rev*. 2007;29:6–28.

4. Centers for Disease Control and Prevention. Prevalence of overweight, obesity and extreme obesity among adults: United States, trends 1960–62 through 2005–2006. Available at: http://www.cdc.gov/nchs/data/hestat/overweight/overweight_adult.htm. Accessed October 28, 2009.

5. Centers for Disease Control and Prevention. Overweight and obesity. US obesity trends. Trends by state 1985–2009. Available at: http://www.cdc.gov/obesity/data/trends.html#State. Accessed August 10, 2010.

6. Khan LK, Sobush K, Keener D, et al. Recommended community strategies and measurements to prevent obesity in the United States. *MMWR Recomm Rep*. 2009;58(RR-7):1–26.

7. Centers for Disease Control and Prevention. Funding opportunity announcement: American Recovery and Reinvestment Act (Recovery Act), communities putting prevention to work. Available at: http://www.cdc.gov/nccdphp/recovery/faq.htm. Accessed October 29, 2009.

8. US Department of Agriculture. Supplemental nutrition assistance program education (SNAP-Ed) plan guidance. March 2009. Available at: http://www.nal.usda.gov/fsn/Guidance/2009.1SNAP-Ed%20Guidance.pdf. Accessed August 10, 2010.

9. Network for a Healthy California. Retail campaign. Available at: http://www.networkforahealthycalifornia.net/retail/etc. Accessed November 5, 2009.

10. Network for a Healthy California. Geographic information system. Available at: http://www.cnngis.org. Accessed November 5, 2009.

11. Block JP, Scribner RA, DeSalvo KB. Fast food, race/ethnicity, and income: a geographic analysis. *Am J Prev Med*. 2004;27(3):211–217.

12. Fulfrost B, Howard P. *Mapping the Markets: The Relative Density of Retail Food Stores in Densely Populated Census Blocks in the Central Coast Region of California*. Report to the Second Harvest Food Bank of Santa Cruz and San Benito Counties and the Agriculture and Land-Based Training Association. Santa Cruz: University of California, Santa Cruz; 2006.

13. Morland K, Filomena S. Disparities in the availability of fruits and vegetables between racially segregated urban neighbourhoods. *Public Health Nutr*. Dec 2007;10(12):1481–1489.

14. Zenk SN, Schulz AJ, Israel BA, James SA, Bao S, Wilson ML. Neighborhood racial composition, neighborhood poverty, and the spatial accessibility of supermarkets in metropolitan Detroit. *Am J Public Health*. 2005;95(4):660–667.

15. Morland K, Wing S, Diez Roux A. The contextual effect of the local food environment on residents' diets: the atherosclerosis risk in communities study. *Am J Public Health*. 2002;92:1761–1767.

16. Baker EA, Schootman M, Barnidge E, Kelly C. The role of race and poverty in access to foods that enable individuals to adhere to dietary guidelines. *Prev Chronic Dis*. 2006;3(3):A76.

17. Larson NI, Story MT, Nelson MC. Neighborhood environments: disparities in access to healthy foods in the U.S. *Am J Prev Med*. 2009;36(1):74–81.

18. Moore L, Diez Roux A. Associations of neighborhood characteristics with the location and type of food stores. *Am J Public Health*. 2006;96(2):325–331.

19. Powell LM, Slater S, Mirtcheva D, Bao Y, Chaloupka FJ. Food store availability and neighborhood characteristics in the United States. *Prev Med*. 2007;44(3):189–195.

20. Pucher J, Renne J. Socioeconomics of urban travel: evidence from the 2001 National Household Travel Survey. *Transp Q*. 2003;57(3):49–78.

21. Inagami S, Cohen DA, Brown AF, Asch SM. Body mass index, neighborhood fast food and restaurant concentration, and car ownership. *J Urban Health*. 2009;86(5):683–695.

22. Cheadle A, Psaty BM, Curry S, et al. Community-level comparisons between the grocery store environment and individual dietary practices. *Prev Med*. 1991;20(2):250–261.

23. Bodor JN, Rose D, Farley TA, Swalm C, Scott SK. Neighbourhood fruit and vegetable availability and consumption: the role of small food stores in an urban environment. *Public Health Nutr*. 2008;11(4):413–420.

24. Zick C, Smoth K, Fan J, Brown B, Yamada I, Kowaleski-Jones L. Running to the store? The relationship between neighborhood environments and the risk of obesity. *Soc Sci Med*. 2009;69(10):1493–1500.

25. Glanz K, Yaroch A. Strategies for increasing fruit and vegetable intake in grocery stores and communities: policy, pricing, and environmental change. *Prev Med*. 2004;39(Suppl 2):S75–S80.

26. Pérez-Escamilla R, Himmelgreen D, Bonello H, et al. Marketing nutrition among urban Latinos: the iSalud! campaign. *J Am Diet Assoc.* 2000;100(6): 698–701.

27. US Census Bureau. US Census 2000 data for the State of California. Available at: http://www.census.gov/census2000/states/ca.html. Accessed August 10, 2010.

28. US Department of Agriculture. *Dietary Guidelines for Americans, 2005.* 6th ed. Washington, DC: Department of Health and Human Services; 2005.

29. Carlson A, Lino M, Juan WY, Hanson K, Basiotis PP. Thrifty food plan, 2006. US Department of Agriculture, Center for Nutrition Policy and Promotion. 2007. CNPP-19. Available at: http://www.cnpp.usda.gov/Publications/FoodPlans/MiscPubs/TFP2006Report.pdf. Accessed August, 10, 2010.

30. Kumanyika SK, Story M, Beech BM, et al. Collaborative planning for formative assessment and cultural appropriateness in the Girls Health Enrichment Multi-site Studies (GEMS): a retrospection. *Ethn Dis.* 2003;13(1 Suppl 1):S15–S29.

31. Post Harvest Technology Research and Information Center. Available at: http://postharvest.ucdavis.edu. Accessed November 5, 2009.

32. *SPSS/PASW* [computer program]. Version 16.0. Chicago; 2009.

33. Story M, Kaphingst KM, Robinson-O'Brien R, Glanz K. Creating healthy food and eating environments: policy and environmental approaches. *Annu Rev Public Health.* 2008;29:253–272.

34. Cohen L DR, Lee V, Valdovinos E. Addressing the intersection: preventing violence and promoting healthy eating and active living. Prevention Institute. Available at: http://www.preventioninstitute.org/component/jlibrary/article/id-267/127.html. Accessed August 10, 2010.

35. Kaplan JP, Liverman CT, Kraak VI, Wisham SL, eds. *Progress in Preventing Childhood Obesity: How Do We Measure Up?* Washington, DC: Institute of Medicine, National Academies Press; 2007.

36. The Food Trust. Healthy community store national network. Available at: http://www.thefoodtrust.org/php/programs/store.network.php. Accessed October 29, 2009.

37. Public Health Law and Policy. Getting to grocery: tools for attracting healthy food retail to underserved neighborhoods. Available at: http://www.phlpnet.org/system/files/Getting_to_Grocery_FINAL_090909.pdf. Accessed August 16, 2010.

38. US Department of Agriculture Food and Nutrition Service. Supplemental Nutrition Assistance Program, Healthy Incentive Pilot. Available at: http://www.fns.usda.gov/snap/hip/. Accessed September 16, 2010.

39. Rose D, Hutchinson PL, Bodor JN, et al. Neighborhood food environments and body mass index: the importance of in-store contents. *Am J Prev Med.* 2009; 37(3):214–219.

40. Hennessey-Lavery SSM, Esparza AA, Hrushow A, Moore M, Reed DF. The community action model: a community-driven model designed to address disparities in health. *Am J Public Health.* 2005;95(4): 611–616.

FFY 2011 Final Report
Table of Contents

Binder 1 of 3

I. SNAP-Ed Program Overview
- a. *Network* SNAP-Ed Narrative Annual Report
- b. UC-FSNEP SNAP-Ed Narrative Annual Report
- c. Combined CA narrative, UC + FSNEP
- d. Combined UC/ Network EARS report

II. SNAP-Ed Administrative Expenditures
- a. *Network* Administrative Expenditures
- b. UC-FSNEP Administrative Expenditures

III. SNAP-Ed Evaluation Reports Summary Chart
- a. *Network* Evaluation Reports Summary Chart
- b. UC-FSNEP Evaluation Reports Summary Chart

IV. SNAP-Ed Planned Improvements
- a. *Network* Planned Improvements
- b. UC-FSNEP Planned Improvements
- c. Combined UC/ Network EARS report

V. SNAP-Ed EARS Feedback
- a. *Network* EARS Feedback
- b. UC-FSNEP EARS Feedback

VI. Appendixes

1. Network Evaluation Reports (See Summary Chart)

i. *Network Impact Outcome Evaluation Report- State Aggregated Data FFY 2011*

Binder 2 of 3

ii. Individual Local Contractor Impact/Outcome Evaluation Reports

Binder 3 of 3

iii. *Network* EARS Report
iv. 2010 Benchmark Report Executive Summary
v. Strengthening HOTM: Results of a Survey of California Teachers
vi. Network for a Healthy California Large Store Intervention
vii. Study Shopper Intercept Survey
vii. Food Stamp Office Resource Kit (FSORK), Use of Revised FSORK2 Kit in Food Stamp Offices

viii. Communications Report FFY 11
ix. African American Beauty Salon Supply Store Formative Evaluation Final Report
x. Network Combined Optional Appendixes:

1. Combined Staff Partner Training
2. Conference presentations and journal publications
3. Curriculum development/Adaption
4. Partnership activities
5. Awards
6. Supporting Documentation Regional Trainings
7. Work Products, Nutrition Education Materials (List w/ copies available upon request)
8. Attached PDF Published Journal Articles (1-18)

2. UC-FSNEP Evaluation Reports

   i. UC-FSNEP Optional Appendices

3. Section B: UC-FSNEP SNAP-Ed Reports

VI. Appendixes

1. Network Evaluation Reports

Network-funded contractor:	OC Nutrition Education Committee - Anaheim City School District / Newport Mesa Unified School District
Contract number:	District
Information provided by :	Andrea Caivano-Anaheim City School District / Geoff Ianniello - Newport Mesa Unified School District
Telephone:	Andrea Caivano: (714)517-7526 ext. 4227 / Geoff Ianniello: (714) 424-7557
Date:	7/28/2011
Email:	Andrea Caivano-acaivano@acsd.k12.ca.us / Geoff Ianniello-gianniello@nmusd.us

Section 1

1. Project Description and Goals

Project Name:	Nutrition Institute
Target Population:	18-60
Intervention Target	Parents

Primary Curriculum Used:
LAUSD Parent Workshop Series

Description of Nutrition Education Intervention:

Two groups of parents were pre-identified as the intervention group and the control group from ACSD and one group of parents pre-identified as an intervention group from NMUSD. Parents in the intervention group attended one or more interventions: MyPyramid Lesson, Nutrients Lesson, Reading a Food Label Lesson, Planning Your Meals Lesson, and Eating Out and Snacks Lesson. The parents in the control group did not receive any nutrition lessons. Each session included a cooking demonstration and a physical activity component.

Description of Physical Activity Intervention:

Physical activity was included in each session. These included the Shape of Yoga, Instant Recess, Dancing such as Zumba and Salsa, Kitchen Calisthenics, and other low cost opportunities.

Description of Standardized Training:

ACSD and NMUSD met prior to the intervention to establish common curriculum, class logistics, physical activities to be used, and common cooking demonstrations. Classes at the respective districts were conducted by consistent staff. Ongoing meetings were held to further ensure consistency.

Description of Standard Administration of Data

Pre and post surveys were distributed to parents at schools. Surveys were returned to the Orange County Department of Education (OCDE) for analysis. A total of 275 pre surveys were received from 9 schools in Anaheim City School District and 3 schools in Newport Mesa Unified School District. A total of 195 post surveys were received from the same 12 schools. English and Spanish versions of the Fruit & Vegetable Checklist and Fruit & Vegetable Inventory surveys used have pre-established validity and reliability.

Description of Standardization across all classrooms

Consistent use of pre-determined curriculum and classroom format. Consistent lesson handouts were for all classrooms.

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 100 parents 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

a. What design was used?

Other (Specify in next field)	Specify Other: Anaheim City SD - Pre-test and Post-test with a comparison. Newport Mesa USD- Pre-test and Post-test without a comparison

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	
b. Control:	Convenience Sample	

# of intervention matched pre/post measures collected	122
# of control matched pre/post measures collected	49

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), Fruit and Vegetable Inventory	

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/6/2010	5/5/2011
Post-test:	11/3/2010	6/2/2011
Follow-up:	N/A	N/A

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

c. Describe how the data were collected.

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

How were the surveys administered?

NMUSD: Read aloud to classroom, ACSD: 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.

See results tables and accompanying text at end of report.

b. Description of how evaluation results will be used:

Due to the positive results found with this intervention we will expand our parent nutrition education outreach to additional parents and sites.

7. Point of Contact

Name:	Andrea Caivano-Anaheim City School District / Geoff Ianniello - Newport Mesa Unified School District
Phone Number:	Andrea Caivano: (714)517-7526 ext. 4227 / Geoff Ianniello: (714) 424-7557
Email Address:	Andrea Caivano-acaivano@acsd.k12.ca.us / Geoff Ianniello-gianniello@nmusd.us

8. Relevant Journal References

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

None

c. Did you use the Food Behavior Checklist?	No
Did you use the Fruit and Vegetable Checklist	Yes
Did you use the Fruit and Vegetable Inventory?	Yes

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

Townsend MS, Sylva K, Martin A, Metz D, Wooten-Swanson P. Improving readability of an evaluation tool for low-literate clients using visual information processing theories. J Nutrition Education & Behavior. 2008;40:181-186.

Townsend MS, Kaiser LL. Development of an Evaluation Tool to Assess Psychosocial Indicators of Fruit And Vegetable Intake for 2 Federal Programs. J Am Diet Assoc. 2005; 37: 170-184.

Townsend MS, Kaiser LL. Brief tool is sensitive to fruit and vegetable intervention in low-income communities. J Am Diet Assoc. 2007;107:2120-2124.

Table 1. Number of Pre, Post & Matched Surveys
Table 2. Parent Characteristics by Group (All Participants)
Table 3. Parent Characteristics by Group (Matched Participants)
Table 4. Average Scores for Dietary Behaviors by Group- Pre and Post Survey
Figure 1. Pre and Post Average Scores for Dietary Behaviors- NMUSD Intervention Group
Figure 2. Pre and Post Average Scores for Dietary Behaviors- ACSD Intervention Group
Table 5. Percent Weekly Citrus Fruit or Citrus Juice Consumption by Group- Pre and Post Survey
Table 6. Mean Fruit and Vegetable Servings Eaten Each Day by Group- Pre and Post Survey
Figure 3. Change in the Amount of Fruits and Vegetables Consumed Daily
Table 7. Average Scores for Knowledge, Beliefs, Awareness, and Self-Efficacy by Group- Pre and Post Survey
Table 8. Average Scores for Perceived Diet Quality by Group- Pre and Post Survey
Table 9. Food Purchasing and Preparation Distribution by Group- Pre and Post Survey
Table 10. Average Scores for Readiness to Eat More Fruits and Vegetables by Group- Pre and Post Survey

Table 1. Number of Pre, Post, & Matched Surveys

District/Group	# Pre Surveys	# Post Surveys	# Matched Surveys
Newport Mesa (Intervention)	131	95	80
\naheim City (Intervention)	88	50	50
Anaheim City (Control)	56	50	50
Total	275	195	175

Table 2. Parent Characteristics by Group (All Participants)

	Intervention (NMUSD) N=131		Intervention (ACSD) N=88		Control (ACSD) N=56	
Demographics	N	%	N	%	N	%
Gender						
Male	8	6.10%	6	7.30%	1	1.80%
Female	114	87.00%	76	86.40%	53	94.60%
Age						
18-30 years old	39	29.80%	12	13.60%	16	28.60%
31-40 years old	55	42.00%	37	42.00%	31	55.40%
41-50 years old	27	20.60%	25	28.40%	7	12.50%
51-60 years old	2	1.50%	2	2.30%	1	1.80%
61 years old or more	1	0.80%	0	0%	0	0%
Ethnicity- Hispanic/Latino						
Yes	128	97.70%	84	95.50%	54	96.40%
No	1	0.80%	2	2.30%	1	1.80%
Ethnicity						
African American/Black	0	0%	2	2.30%	0	0%
Asian	0	0%	0	0%	1	1.80%
Caucasian/White	55	42.00%	24	27.30%	14	25.00%
American Indian/ Alaska Native	0	0%	1	1.10%	0	0%
Native Hawaiian/ Pacific Islander	0	0%	0	0%	0	0%
Other	30	22.90%	19	21.60%	12	21.40%
Program Participation						
Food Stamps (SNAP, EBT)	14	10.70%	22	25.00%	13	23.20%
Cal Works	2	1.50%	8	9.10%	6	10.70%
Head Start	2	1.50%	4	4.50%	3	5.40%
Food Distribution on Indian Reservation	1	0.80%	0	0%	0	0%
Free School Lunch/Breakfast	90	68.70%	68	77.30%	37	66.10%
Reduced Price Lunch/Breakfast	5	3.80%	9	10.20%	8	14.30%
Medi-Cal	67	51.10%	48	54.40%	24	42.90%
Supplemental Security Income (SSI)	0	0%	2	2.30%	1	1.80%
Woman, Infants, & Children (WIC)	60	45.80%	31	35.20%	15	26.80%
Class Attendance- Percent Attended						
My Pyramid Lesson	37	28.20%	7	8.00%	8	14.30%
Nutrients Lesson	23	17.60%	5	5.70%	10	17.90%
Reading a Food Label Lesson	41	31.30%	9	10.20%	7	12.50%
Planning your Meals Lesson	31	23.70%	6	6.80%	6	10.70%
Eating Out and Snacks Lesson	5	3.80%	0	0%	2	3.60%

Note. Not all participants completed the demographic questions

Table 3. Parent Characteristics by Group (Matched Participants)

	Intervention (NMUSD) N=80		Intervention (ACSD) N=50		Control (ACSD) N=50	
Demographics	N	%	N	%	N	%
Gender						
Male	3	3.80%	1	2.00%	1	2.00%
Female	72	90%	49	98.00%	47	94.00%
Age						
18-30 years old	20	25.00%	8	16.00%	15	30.00%
31-40 years old	35	43.80%	22	44.00%	27	54.00%
41-50 years old	20	25.00%	12	24.00%	6	12.00%
51-60 years old	2	2.50%	2	4.00%	1	2.00%
61 years old or more	1	1.30%	0	0%	0	0%
Ethnicity- Hispanic/Latino						
Yes	78	97.50%	49	98.00%	48	96.00%
No	1	1.30%	1	2.00%	1	2.00%
Ethnicity						
African American/Black	0	0%	1	2.00%	0	0%
Asian	0	0%	0	0%	1	2.00%
Caucasian/White	34	42.50%	19	38.00%	11	22.00%
American Indian/ Alaska Native	0	0%	1	2.00%	0	0%
Native Hawaiian/ Pacific Islander	0	0%	0	0%	0	0%
Other	20	25.00%	6	12.00%	12	24.00%
Program Participation						
Food Stamps (SNAP, EBT)	8	10%	14	28.00%	13	26.00%
Cal Works	79	100%	4	8.00%	6	12.00%
Head Start	1	1.30%	2	4.00%	3	6.00%
Food Distribution on Indian Reservation	1	1.30%	0	0%	0	0%
Free School Lunch/Breakfast	58	72.50%	39	78.00%	31	62.00%
Reduced Price Lunch/Breakfast	2	2.50%	4	8.00%	8	16.00%
Medi-Cal	42	52.50%	28	56.00%	22	44.00%
Supplemental Security Income (SSI)	0	0%	0	0%	1	2.00%
Woman, Infants, & Children (WIC)	34	42.50%	16	32.00%	14	28.00%
Class Attendance- Percent Attended						
My Pyramid	28	35.00%	5	10.00%	8	16.00%
Nutrients Lesson	14	17.50%	5	10.00%	10	20.00%
Reading a Food Label Lesson	28	35.00%	5	10.00%	7	14.00%
Planning your Meals Lesson	25	31.30%	3	6.00%	6	12.00%
Eating Out and Snacks Lesson	5	6.30%	0	0%	2	4.00%

Note. Not all participants completed the demographic questions

Table 4. Average Scores for Dietary Behaviors by Group- Pre and Post Survey

Questions	Intervention (NMUSD)				Intervention (ACSD)*				Control (ACSD)*			
	Pre	Post	Diff	P-value	Pre	Post	Diff	p-value	Pre	Post	Diff	P-value
N=	80	80			50	50			50	50		
Q1 Do you eat fruits or vegetables as snacks?	2.81	3.57	0.76	0.000	2.85	3.16	0.31	0.008	2.5	2.9	0.4	0.023
Q4 Do you eat more than one kind of fruit each day?	2.62	3.53	0.91	0.000	2.55	2.95	0.4	0.026	2.68	3	0.32	0.018
Q5 Do you eat more than one kind of vegetable each day?	2.7	3.39	0.69	0.000	2.63	3.13	0.5	0.01	2.56	2.81	0.25	0.124
Q7 Do you eat 2 or more vegetables at your main meal?	2.36	3	0.64	0.000	2.35	2.9	0.55	0.003	2.39	2.52	0.13	0.442

Note. Scores are based on a 1-4 point scale (4=Yes, Every day 3=Yes, often 2=Yes, sometimes 1=No) Statistical significance between intervention and control group of Anaheim City School District (one-way ANOVA) was found. *Statistically significant differences were observed from pre to post survey among intervention groups (p-value<.05) using

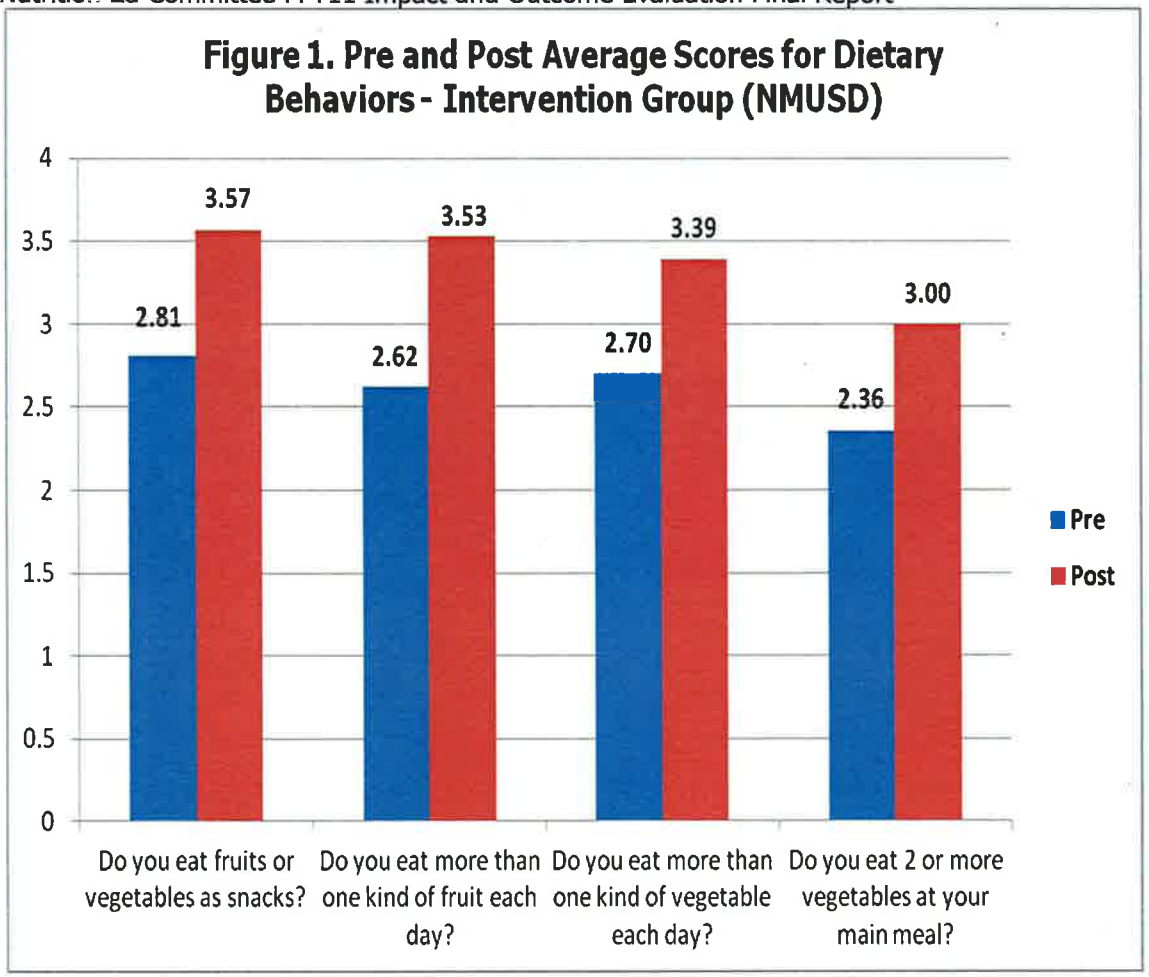


Figure 1. Pre and Post Average Scores for Dietary Behaviors - Intervention Group (NMUSD)
4
3.5
3
2.5
2
1.5
1
0.5
0
2.81
3.57
2.62
3.53
2.70
3.39
2.36
3.00
Do you eat fruits or vegetables as snacks?
Do you eat more than one kind of fruit each day?
Do you eat more than one kind of vegetable each day?
Do you eat 2 or more vegetables at your main meal?
Pre
Post

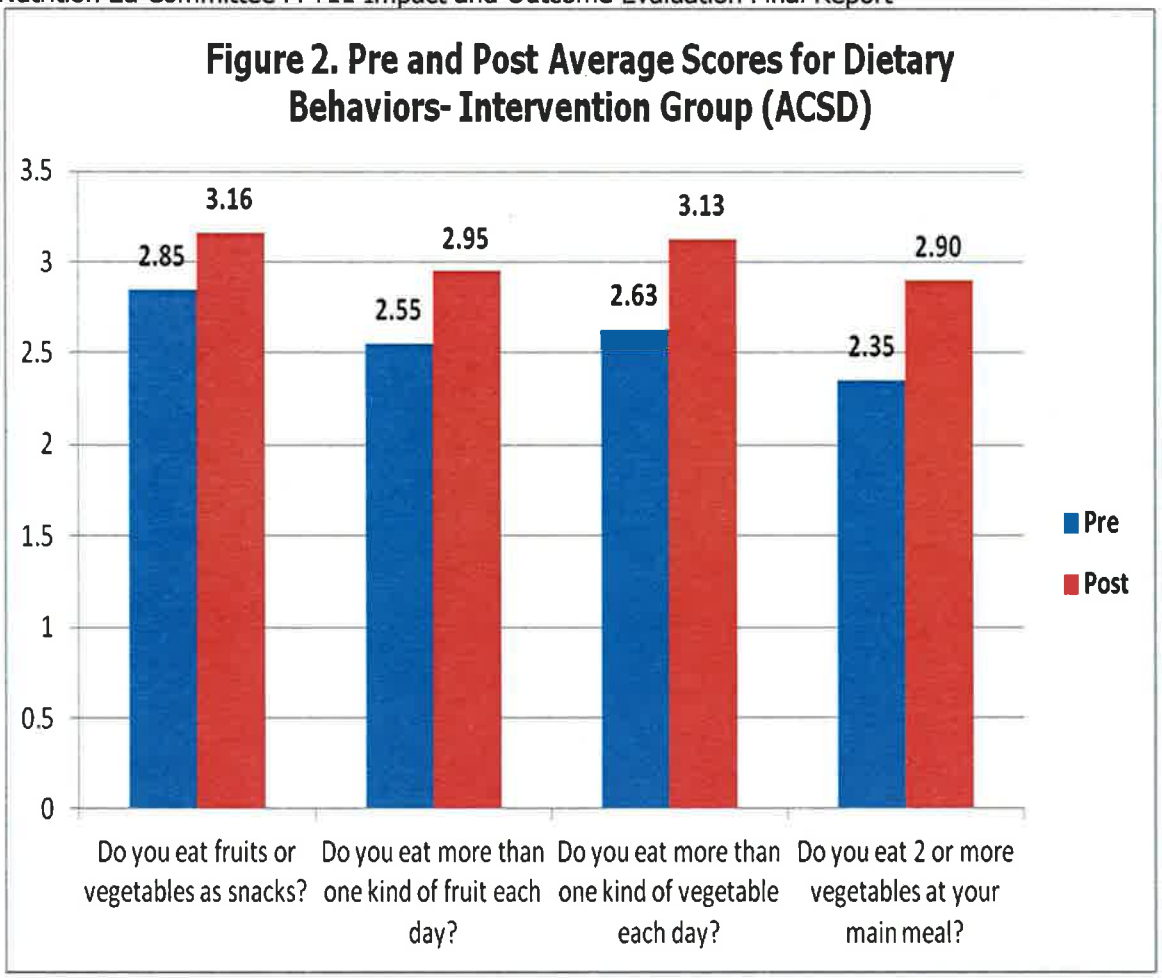


Figure 2. Pre and Post Average Scores for Dietary Behaviors- Intervention Group (ACSD)
3.5
3
2.5
2
1.5
1
0.5
0
2.85
3.16
2.55
2.95
2.63
3.13
2.35
2.90
Do you eat fruits or vegetables as snacks?
Do you eat more than one kind of fruit each day?
Do you eat more than one kind of vegetable each day?
Do you eat 2 or more vegetables at your main meal?
Pre
Post

Table 5. Percent Weekly Citrus fruit or Citrus Juice Consumption by Group- Pre and Post Survey

	Intervention (NMUSD)		Intervention (ACSD)		Control (ACSD)	
	Pre	Post	Pre	Post	Pre	Post
N=	80	80	50	50	50	50
Yes	84.80%	93.80%	84.80%	95.90%	88.00%	92.00%
No	15.20%	6.30%	15.20%	4.10%	12.00%	8.00%

Table 6. Mean Fruit and Vegetable Servings Eaten Each Day by Group- Pre & Post Survey

		FRUIT				VEGETABLES			
		Mean servings		Change in mean servings		Mean servings		Change in mean servings	
Group	N	Pre	Post	Diff.	P-value	Pre	Post	Diff.	P-value
Intervention(NMUSD)*	80	1.27	1.89	0.62	0.000	1.23	1.87	0.64	0.000
Intervention (ACSD)*	50	1.17	1.62	0.45	0.000	1.18	1.58	0.4	0.024
Control (ACSD)	50	1.36	1.58	0.22	0.040	1.25	1.52	0.27	0.049

Note. No statistically significant differences were observed within groups (p-value<.05) based on one-way ANOVA. *Statistically significant differences were observed from pre to post
survey among intervention groups (p-value<.05) paired samples t-tests.

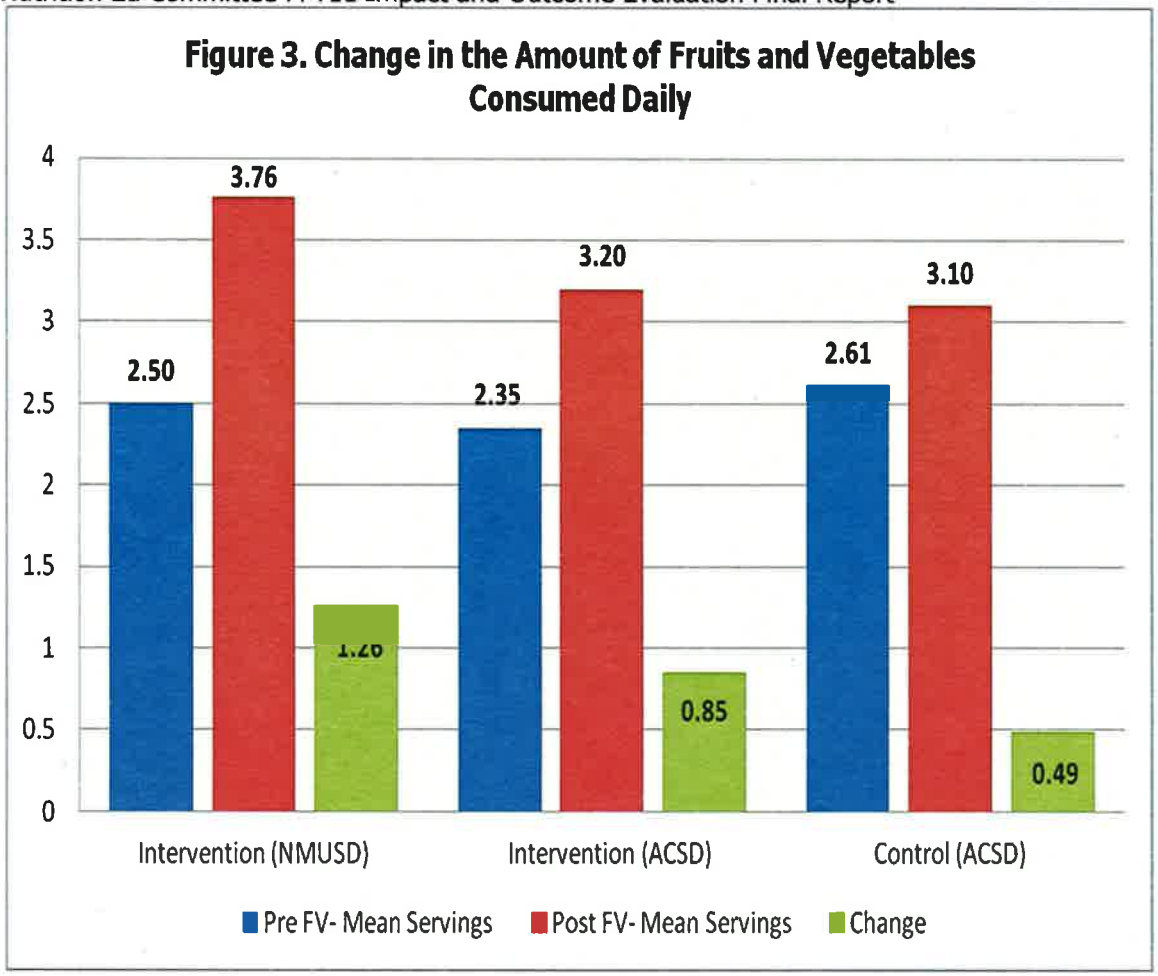


Figure 3. Change in the Amount of Fruits and Vegetables Consumed Daily
4
3.5
3
2.5
2
1.5
1
0.5
0
2.50
3.76
1.26
2.35
3.20
0.85
2.61
3.10
0.49
Intervention (NMUSD)
Intervention (ACSD)
Control (ACSD)
Pre FV- Mean Servings
Post FV- Mean Servings
Change

Table 7. Average Scores for Knowledge, Beliefs, Awareness, and Self-Efficacy by Group- Pre & Post Survey

Questions	Intervention (NMUSD)		Change in Mean Scores		Intervention (ACSD)		Change in Mean Scores		Control (ACSD)		Change in Mean Scores	
	Pre	Post	Diff	P-value	Pre	Post	Diff	P-value	Pre	Post	Diff	P-value
N=	80	80			50	50			50	50		
Q1 I feel that I am helping my body by eating more fruits and vegetables	1.99	2	0.01	0.320	1.98	1.96	-0.02	1.000	1.94	1.96	0.02	0.659
Q2 I may develop health problems if I do not eat fruit and vegetables	1.94	1.83	-0.11	0.088	1.72	1.91	0.19	0.016	1.79	1.92	0.13	0.160
Q3 I feel that I can eat fruit or vegetables as snacks	1.68	1.93	0.25	0.000	1.83	1.93	0.10	0.324	1.72	1.92	0.20	0.037
Q4 I feel that I can buy more vegetables the next time I shop	1.99	1.97	-0.02	0.567	2.00	2.00	--	--	1.9	1.96	0.06	0.261
Q5 I feel that I can plan meals or snacks with more fruit during the next week	1.91	1.97	0.06	0.058	2.00	1.98	-0.02	0.324	1.98	1.92	-0.06	0.569
Q6 I feel that I can eat two or more servings of vegetables at dinner	1.9	1.91	0.01	0.741	1.83	1.89	0.06	0.599	1.85	1.8	-0.05	0.411
Q7 I feel that I can plan meals with more vegetables during the next week	1.97	1.95	-0.02	0.483	1.88	1.95	0.07	0.373	1.98	1.96	-0.02	0.569
Q8 I feel that I can add extra vegetables to casseroles and stews	1.97	1.99	0.02	0.567	1.93	1.96	0.03	0.711	1.92	1.98	0.06	0.182

Note. Scores are based on a 0-2 point scale (2=Agree, 1=Agree nor Disagree, 0=Disagree). No statistical significance between groups for ACSD (one-way ANOVA). *Statistically significant differences were observed from pre to post survey among intervention groups (p-value<.05) paired samples t-tests.

Table 8. Average Scores for Perceived Diet Quality by Group- Pre and Post Survey

Questions	Intervention (NMUSD)		Change in Mean Scores		Intervention (ACSD)		Change in Mean Scores		Control (ACSD)		Change in Mean Scores	
	Pre	Post	Diff	P-value	Pre	Post	Diff	P-value	Pre	Post	Diff	P-value
N=	80	80			50	50			50	50		
Q9 How would you describe your diet?	1.91	2.7	0.79	0.000	1.63	2.56	0.93	0.000	1.91	1.8	-0.11	0.291

Note. Scores are based on a 0-4 point scale (4=Excellent 3=Very Good 2=Good 1=Fair 0=Poor)

*Statistical significance from pre to post paired samples *t*-test (p value<.05)

Table 9. Food Purchasing and Preparation Distribution by Group- Pre and Post Survey

Questions	Intervention (NMUSD)		Intervention (ACSD)		Control (ACSD)	
	Pre	Post	Pre	Post	Pre	Post
N=	80	80	50	50	50	50
In your household, who is in charge of what foods to buy?						
I am	85.00%	81.30%	68.00%	78.00%	74.00%	82.00%
Shared decision	7.50%	13.80%	12.00%	6.00%	12.00%	14.00%
Other person	1.30%	1.30%	0%	0%	2.00%	2.00%
In your household, who is in charge of how to prepare the food?						
I am	88.80%	90.00%	76.00%	82.00%	82.00%	90.00%
Shared decision	5.00%	2.50%	2.00%	4.00%	4.00%	6.00%
Other person	1.30%	3.80%	0%	0%	2.00%	2.00%

Note. Not all participants answered Questions 10 and 11.No statistical significance between groups (one-way ANOVA). No statistical significance from pre to post (paired samples *t*-test) were found

Table 10. Average Scores for Readiness to Eat More Fruits and Vegetables by Group- Pre and Post Survey

Group		FRUITS				VEGETABLES			
		Mean servings		Change in mean servings		Mean servings		Change in mean servings	
	N	Pre	Post	Diff.	P-value	Pre	Post	Diff.	P-value
Intervention(NMUSD)*	80	3.26	3.74	0.48	0.000	3.22	3.63	0.41	0.000
Intervention (ACSD)*	50	3.12	3.38	0.26	0.424	3	3.43	0.43	0.020
Control (ACSD)	50	2.97	2.97	--	0.199	3.26	3.17	-0.09	0.160

Note. Scores are based on a 0-4 point scale. *Statistically significant differences were observed from pre to post survey among intervention groups (p-value<.05) paired samples t-tests.

FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Alameda County Health Care Services Agency - 10-10085
Contract number:	10-10085
Information provided by :	Tamiko Johnson
Telephone:	5105956439
Date:	7/19/2011
Email:	tamiko.johnson@acgov.org

Section 1

1. Project Description and Goals

Project Name:	Healthy Kids...for Life
Target Population:	4th, 5th, and 6th grade students

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
	0

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Nutrition education included: 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, Importance of Breakfast intervention, Sugar Savvy/Rethink Your Drink intervention, TV Turn Off week intervention, Oakland Eats Garden Fresh intervention, and the Harvest of the Month Toolkit intervention.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

None

In 1-2 paragraphs, please provide a Description of the Standardized Training:

All classroom teachers were given identical nutrition education materials. Selected schools received the Harvest of the Month Toolkit intervention.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

For the Network Youth Survey, each of the classroom teachers read the survey aloud to students. For the UC Berkeley Survey, Alameda County Nutrition Services' staff read the survey aloud to students.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

Classroom teachers implemented the nutrition education, taste testing, and interventions in a similar manner.

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 100 4th,5th,and 6th 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.

Impact/Outcome Physical Activity Objective:

Impact/Outcome Sugar Sweetened Beverage Objective:

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?

Classrooms

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

a. Intervention:	Convenience Sample	
b. Control:	None	Specify Other:

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 Surveys used?	A student nutrition survey that was developed and tested by UC Berkeley was also used for Goal 1/Objective 1, which measures food consumption (fruit and vegetable consumption yesterday, frequency of fruit and vegetable consumption at home, individual fruits, individual vegetables, sweetened beverages, and snack food), physical activity/inactivity, and basic nutrition and physical activity knowledge. The Alameda County Public Health Department (ACPHD) has worked over the years with UC Berkeley to develop this survey tool which is easy to administer and is sensitive enough to measure statistically significant changes. Our evaluation design was to administer both survey tools to similar populations for comparison.

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	9/19/2010	11/19/2010
Post-test:	5/16/2011	6/13/2011
Follow-up:		

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	All students received one HOTM intervention before the Pre-test was administered
How many lessons from the intervention occurred *after* pre-tests?	7

c. Describe how the data were collected.

Intervention:	Paper and pencil survey
Comparison/control:	0

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.

Network Youth Survey: The schools surveyed with the Network Youth Survey tool were Learning Without Limits Elementary School, PLACE at Prescott Elementary School, and Roots Academy (a middle school). The analysis includes 154 matched pre and post test surveys. The only notable change between pre and post tests was a significant decrease in the consumption of water. None of the other results were statistically significant. There was a decrease in almost all consumption questions. We believe that these findings are due to the small sample size.

UC Berkeley Survey: The schools surveyed with the UC Berkeley Student Nutrition Survey were International Community School (ICS), Think College Now (TCN), and Greenleaf Elementary School. The analysis includes 142 matched pre and post test surveys. In addition to the required Impact Evaluation, Alameda County conducted data analysis by varying intervention types. Greenleaf was a new school for the 2010-2011 academic year and received the Harvest of the Month monthly intervention as well as a Healthy Living Champions for Change parent group starting in January 2011. In addition to the interventions that Greenleaf received, ICS and TCN share a school campus, have a salad bar, receive the Harvest of the Month Toolkit intervention, and have been served by our program for 10 years.

The Healthy Living Champions for Change Councils are parent groups held on a monthly basis at the Learning without Limits campus and the International Community School/Think College Now campus. The Councils inspire and empower members to make healthier choices for themselves, their families, and their communities. There is a monthly educational component highlighting the Harvest of the Month and featuring a cooking demonstration and taste test.

The Salad Bar is an additional component that is offered during the school lunch time at ICS, TCN, PLACE at Prescott, and Learning Without Limits.

The Harvest of the Month Toolkit is offered at ICS and TCN and is composed of 6 lesson plans, recipes, food preparation supplies for each classroom, and produce delivered to the classroom for each of the six lessons. This toolkit intervention is offered in addition to the monthly Harvest of the Month taste test.

Table 1:

There was a significant increase in the consumption of fruits and vegetables eaten yesterday and a significant increase in the availability of fruits and vegetables at home. This contrasts with a significant decrease in the frequency of consumption of both fruits and vegetables overall. We hypothesize that at the time of the post-test, the specific fruits listed in the survey were not available and/or in season, which may have affected students' self-report of overall fruit consumption. A significant decrease in the consumption of sweetened beverages and snack foods was also reported. A reduction in the sweetened beverage category could be attributed to the Be Sugar Savvy intervention which was just completed at the time of the post test and which focused on the reduction of sweetened beverages and includes classroom materials such as the Rethink Your Drink poster.

Table 2:

Among girls, there was a significant increase in the consumption of fruits and vegetables eaten yesterday, a significant increase in the availability of fruits and vegetables at home, a significant increase in the frequency of vegetable consumption overall, and a significant decrease in the consumption of both sweetened beverages and snack foods. There was a significant decrease in fruit consumption overall for girls.

Among boys, there was a significant increase in the availability of fruits and vegetables at home and a significant decrease in the consumption of snack foods. This contrasts with a significant decrease in the overall consumption of both fruits and vegetables and a significant increase in sweetened beverage consumption. There was no significant change in the consumption of fruits and vegetables eaten yesterday.

Table 3:

Questions were asked about the number of hours spent on physical activity and physical inactivity on school days and on weekends. There was a significant increase in the number of hours spent on video games, TV/videos, and surfing the internet on school days. However, there was also a significant increase in the number of hours spent on physical activities on school days. The results were not statistically significant when students were asked about physical activity and physical inactivity on the weekends. Physical activity has not been a primary focus of our interventions, but this was our 4th year promoting TV Turn Off Week when students were encouraged to complete an activity log with a book as an incentive.

Table 4:

A series of questions was asked to determine students' knowledge about nutrition and physical activity. There were increases in correct responses for all six questions as evidenced by the frequency tables.

Table 5:

At Greenleaf Elementary School, there was a significant increase in the consumption of fruits and vegetables eaten yesterday, a significant increase in the availability of fruits and vegetables at home, and a significant increase in the overall consumption of vegetables. There was a significant decrease in the consumption of both sweetened beverages and snack foods. We noted a significant decrease in fruit consumption overall.

At ICS and TCN, there was a significant decrease in the consumption of both sweetened beverages and snack foods. However, there was a significant decrease in the availability of fruits and vegetables at home and in the overall consumption of fruits and vegetables. The consumption of fruits and vegetables eaten yesterday was not statistically significant.

Table 6:

At Greenleaf, ICS and TCN, there was a significant increase in the number of hours spent on video games,

TV/videos, and surfing the internet on school days. There was also a significant increase in the number of hours spent on physical activities on school days. The results were not statistically significant when students were asked about physical activity and physical inactivity on the weekends for all three schools.

Table 7:

A series of questions was asked to determine students' knowledge about nutrition and physical activity by varying intervention types at Greenleaf and at ICS/TCN. At Greenleaf, there were increases in correct responses for all six questions. At ICS/TCN, students' knowledge increased in three areas (importance of breakfast, healthiest juice choice, and healthiest snack choice) and decreased in the remaining three (fruits/vegetables high in Vitamin A, fruits high in Vitamin C, and physical activity minutes).

Table 8:

The average age of respondents was 10 years old. The number of students was almost equal between intervention groups with Greenleaf having 70 matched pre and post tests and the ICS/TCN campus having 72 matched pre and post tests. The percentage of boys participating in the survey was slightly greater (54.2%) than girls (45.8%). Survey respondents were predominantly Hispanic/Latino, followed by Black/African-American, Asian, Native Hawaiian/Other Pacific Islander, White, Multi-ethnic, and American Indian/Alaska Native.

Qualitative Findings

Throughout the history of our program, we have actively sought new school partners and opportunities to conduct nutrition education in summer schools or professional development workshops with teachers and staff. In the past 10 years, we have often had the door shut on us, preventing us from doing broader level work such as incorporating nutrition education into summer schools and teacher professional development opportunities. This past year, the Oakland Unified School District (OUSD) Wellness Director asked our program to bring nutrition education into the summer schools by training a team of teachers and nurses to be dedicated nutrition education teachers for four weeks in low income targeted partner schools. Additionally, we were asked to work with OUSD to put on the first district wide Professional Development Summit focused on nutrition education. Principals from more schools than we have capacity for, are requesting our services and programming because of positive word of mouth: students in our partner schools are asking cafeteria staff for more produce, in particular the Harvest of the Month produce; students and parents are advocating for salad bars in their schools; and parents are rallying around safer and more walk-able communities to increase their families' physical activity. Also notable is that we partner with the Oakland FRESH school based produce markets by conducting monthly cooking demos at each of eight markets. Several times this year, the produce we highlighted in the cooking demos would sell out at the markets. Not only is the produce accessible to the community, they are also learning how to prepare different recipes in tasty ways, and increasing overall demand for produce in their communities.

b. Description of how evaluation results will be used:

Evaluation results will inform program planning for the 2011-2012 academic year. While we have similar intervention levels and populations at the six schools surveyed, we found conflicting results with the two different survey tools. We have different interventions at our elementary schools versus the middle schools, and it would have been useful for program planning for the Network Youth Survey results to be reported by site. We will propose to increase the sample size for the following year as we are unsure of the reliability of the survey results due to the small sample size. The number of middle schools surveyed may be increased if survey results are available by site and grade level; this was the first year that a middle school was included in the impact evaluation.

7. Point of Contact

Name:	Jenny Wang
Phone Number:	5105956475
Email Address:	jenny.wang@acgov.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 and Network High School Survey

Yes

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

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.74	11.40	-0.34	0.437
3. Milk	1.46	1.41	-0.05	0.550
4. Yogurt or cheese	0.61	0.61	-0.01	0.936
5. Cereal	0.83	0.81	-0.02	0.800
7. Vegetables	1.67	1.64	-0.03	0.811
8. Fruit	1.93	2.16	0.23	0.138
10. Juice	1.53	1.41	-0.12	0.364
11. Water	3.71	3.38	-0.34	0.020
Total: fruit & vegetable (no juice)	3.60	3.79	0.19	0.387
Total: fruit, vegetable, juice	5.13	5.20	0.07	0.800
Unhealthy Foods	3.83	4.05	0.22	0.377
6. French fries or chips	0.96	0.95	-0.01	0.942
9. Punch, sports drinks, fruit-flavored drinks	1.07	1.19	0.13	0.192
12. Soda or soft drinks	0.88	0.99	0.10	0.284
13. Cookies, cakes, other sweets	0.88	0.90	0.03	0.795
Physical Activity	6.82	6.93	0.11	0.763
14. Days of 60 minutes moderate/vigorous	3.79	3.63	-0.16	0.500
15. Days of 30 minutes outdoor play	3.05	3.29	0.24	0.247
Other				
16. Breakfast	0.77	0.82	0.06	0.229
17. Trying New Foods	1.18	1.14	-0.05	0.338
Perceived Parental Consumption	4.79	4.93	0.14	0.272
18. How often parents eat fruit	2.39	2.39	0.01	0.913
19. How often parents eat vegetables	2.38	2.51	0.13	0.080
Access	3.41	3.49	0.08	0.279
20. Fruits to eat at home	1.70	1.76	0.05	0.287
21. Vegetables to eat at home	1.70	1.74	0.03	0.468

Demographics

Average Age	10.9
Gender	
Males	94
Females	94

FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Alameda COE (Coalition) Hayward - 10-10160
Contract number:	10-10160
Information provided by :	Dr. Chris Boynton
Telephone:	510-670-4539
Date:	7/18/2011
Email:	cboynton@acoe.org

Section 1

1. Project Description and Goals

Project Name:	Champions for Changes
Target Population:	High School

Primary Curriculum Used:

Choice, Control and Change

Secondary Curriculum Used:

Other - Please Specify

In 1-2 paragraphs, please provide a Description of the Nutrition Education Intervention:

Nutrition Education Intervention--Choice, Control and Change (C3) is an inquiry-based science and nutrition program developed by researchers at Teachers College (Columbia University). The curriculum engages students in inquiry-based classroom investigations that motivate them to apply their new science understandings and skills to their day-to-day lives. According to the curriculum authors, "In C3, students think about their choices, take control, and make changes as they confront the array of foods available to them at fast-food places, restaurants, farmers' markets, corner stores, and elsewhere. They create personal plans for ways to balance video games and television...with sports, dance and other activities to get their bodies moving."

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Physical Activity Intervention--The physical activity lesson plans designed by ACOE were created to assist health teachers meet the California Health Content Standards for physical activity in high schools. The lesson was designed as a three-day program in which students were responsible for planning and participating in their own physical activity program. On day one, for example, students created a mapped walking course of their school campus, and then completed their walk using a pedometer to record their steps. On day two, students were asked to examine the differences between moderate and vigorous physical activity. After learning these differences, students participated in several activities and tracked the intensity level of the activity. On day three, students were given the task to create their own personal physical activity goals and then create an action plan to execute their goals. The lesson plans included handouts and teacher instructions for quick implementation.

Please provide a description of standardized training:

We meet and train teachers on Choice, Control, and Change and supply materials for the teachers to do the class. Training for the Nutrition Education staff is ongoing

Please provide a description of Standard Administration of Data

Pre and Post Surveys of surveys to different class group.

- Health Class (Choice, Control and Change)
- Healthy Living Class (Choice, Control and Change)

- Harvest of the Month (All classes)
- Cooking Connection (Integrated Language Development (ELD, French, Spanish)
- Garden Connection (Integrated into Social Sciences)

Internships (Youth Led Participatory)

Please provide a description of Standardization across all classrooms

There were two levels of education in the program a) classroom teachers teach nutrition education in the class integrated into the academic area or b) Project EAT staff teaches internship programs for the youth. The Youth Development program has two internships: 1) Fresh Crew which imparts nutrition education through information and activities and 2) Professionals which trains the students in Youth Led Participatory Action Research.

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 80 high school grade students who participated in ACOE 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.

Impact/Outcome Physical Activity Objective:

By Sept 30, 2011, a sample of 80 high school grade students who participated in ACOE Champions for Change will report increased physical activity

Other Impact/Outcome Objective:

By Sept 30, 2011, a sample of 80 high school grade students who participated in ACOE Champions for Change will report increased Hope Scale scores

2. Evaluation Design

a. 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 from participating high schools	
b. Control:	purposive sample selected as matched comparison group to intervention sites	

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	Increased fruit and vegetable consumption	
Goal 2/Objective 2	Increased physical activity	

Were any other survey's used? Children's Hope Scale Survey (6 items) was appended to the Network High School Survey

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	1/26/2011	3/15/2011
Post-test:	5/11/2011	5/17/2011
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?	10

c. Describe how the data were collected.

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

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.

Champions for Change Network High School Survey Findings, ACOE (2010-11)

Introduction

This narrative reports pretest-posttest measurement results using data from the Network High School Survey administered at two intervention sites where the health curriculum was implemented, 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 February 2011 then approximately 15 weeks later in May. A six-item dispositional scale for measuring self-efficacy was also appended to the Network High School Survey. The Children's Hope Scale has been tested widely with children and youth aged 8-19 including Hispanic youth (Edwards, Ong & Lopez, 2007), and presents strong research-based evidence for its validity and reliability (Steed, 2002).

Where appropriate, this section notes statistically significant findings related to Impact/Outcome Objective 1 (increased fruit and vegetable consumption), Objective 2 (increased physical activity), and Hope Scale pretest-posttest results. Interpretation of these findings is presented in the results section. Due to rounding, some figures presented may not sum precisely.

Pretest-Posttest Findings

Pretesting yielded 119 valid surveys at San Lorenzo, 98 at Tennyson, and 118 at Hayward High; post-testing resulted in 75 valid surveys at San Lorenzo, 109 at Tennyson, and 104 at Hayward High. Using student identification numbers, valid pretest and posttest data were matched to obtain the following sample sizes: 69 students at San Lorenzo, 54 at Tennyson, and 84 at Hayward. Thus, there was a total of 123 matched student surveys for the intervention group and a total of 84 matched surveys for the control group.

Demographics

The mean age of students in the intervention group (n=123) was 15.0 years compared to 14.4 for the control group (n=84), and 62 out of 123 (51%) were boys in the intervention group compared to 47 out of 84 (56%) in the control group.

Healthy Foods & Beverages

Both the intervention and control groups lowered their overall Healthy Foods & Beverages consumption from 13.68 to 13.52 (-.016) and 13.73 to 13.02 (-0.71), respectively.

Item 3: While the intervention group decreased its milk consumption slightly from 1.10 to 1.08 (-0.02), the control group increased its milk consumption slightly from 1.15 to 1.17 (0.01),

Item 4: Both the intervention and control groups increased their yogurt or cheese consumption from 0.49 to .59 (0.11) and 0.40 to 0.48 (0.07), respectively.

Item 5: The intervention group increased slightly its consumption of cereal from 0.54 to 0.57 (0.03), compared to a slight decrease for the control group from 0.70 to 0.68 (-0.02).

Item 7: Fruit juice consumption increased for both the intervention and control groups from 1.80 to 1.93 (0.14) and 1.71 to 2.00 (0.29), respectively.

Item 8: Both groups reported decreases in their fruit consumption: the intervention group decreased from 2.32 to 2.07 (-.025) and the control group from 2.21 to 2.05 (-0.17).

Items 9-12: Total vegetable consumption decreased for both groups: the intervention group decreased from 4.10 to 3.73 (-0.37) and the control group from 4.31 to 3.62 (-0.69) which for the control group was a statistically significant difference (p=0.020).

Item 13: The intervention group reported an increase in water consumption from 3.26 to 3.42 (0.16), while the control group reported a decrease from 3.20 to 3.01 (-0.19).

The intervention group reported decreases in total fruit and vegetable consumption (no juice) from 6.45 to 5.79 (-0.66) and also for total fruit, vegetable and juice consumption from 8.27 to 7.76 (-0.51). The control group also reported decreases in total fruit and vegetable consumption (no juice) from 6.52 to 5.67 (-0.86) which was found to be a statistically significant difference (p=0.013), and also for total fruit, vegetable and juice consumption from 8.24 to 7.67 (-0.57).

Unhealthy Foods

Both groups reported slight increases in their total unhealthy food intake from 2.85 to 2.91 (0.06) for the intervention group and 3.06 to 3.09 (0.03) for the control group.

Item 6. Both the intervention and control groups reported slight increases in their consumption of French fries and chips from 0.66 to 0.75 (0.09) and 0.60 to 0.65 (0.06), respectively.

Item 14. Students in the intervention group reported a slight decrease in their consumption of punch, sports drinks or other fruit-flavored drinks from 0.95 to 0.92 (-0.03) compared to the control group students who indicated their consumption increased from 0.90 to 1.11 (0.20). This difference for the control group approaches statistical significance (p=0.055).

Item 15: Students in the intervention group reported an increase in their consumption of regular (not diet) sodas or soft drinks from 0.58 to 0.65 (0.07) compared to the control group students who indicated their consumption decreased from 0.80 to 0.76 (-0.05)

Item 16: Both groups reported decreases in their intake of cookies, cakes and other sweets which for the intervention group decreased from 0.64 to 0.58 (-0.06) and for the control group from 0.75 to 0.63 (-0.12).

Physical Activity

Both groups reported increases in the amount of physical activity they engaged in during the prior week. For the intervention group, their pretest mean of 4.92 increased to a posttest mean of 5.61 (0.69) which approached statistical significance (p=0.053). For the control group, their pretest mean of 5.50 increased to a posttest mean of 5.93 (0.43).

Item 17: Students in both groups reported an increase in the number of days they engaged in at least 60 minutes of moderate/vigorous activity in the prior week. For the intervention group, the mean increased dramatically from 2.83 to 3.31 (0.48) which was statistically significant (p=0.045). For the control group, the mean increased slightly from 3.13 to 3.23 (0.10).

Item 18: Students in both groups also reported increases in the number of days they engaged in at least 30

minutes of outdoor play during the prior week. For the intervention group, the mean increased from 2.08 to 2.31 (0.22), and for the control group, the mean increased from 2.37 to 2.70 (0.33).

Other

Item 19: Both groups reported increases when asked how frequently they ate breakfast: for the intervention group the mean increased from 0.62 to 0.71 (0.08), and for the control group the mean increased from 0.65 to 0.72 (0.07).

Item 20: The intervention group reported a slight increase in their frequency for trying new foods from 1.20 to 1.25 (0.05), while the control group reported a slight decrease from 1.27 to 1.25 (-0.02).

Perceived Parental Consumption

Student perception of parental consumption of fruits and vegetables at home remained the same for students in the intervention group (4.14 for both pre- and posttest), but increased slightly for the control group from 4.30 to 4.56 (0.26).

Item 21: The pretest and posttest mean for student perception of parental fruit consumption remained the same for the intervention group (2.02 for both), but it increased for the control group from 2.10 to 2.19 (0.10).

Item 22: Students in the intervention group reported a slight decrease in their perception of parental vegetable consumption from 2.14 to 2.12 (-0.02) while the control group reported an increase from 2.19 to 2.33 (0.14).

Access

Access to fruits and vegetables at home decreased for both the intervention and control groups from a mean of 3.55 to 3.45 (-0.10) and 3.43 to 3.38 (-0.05), respectively.

Item 23:

Students in both the intervention and control groups reported slight decreases in their access to fruits at home from 1.76 to 1.69 (-0.07) and from 1.71 to 1.69 (-0.02), respectively.

Item 24:

Students in both the intervention and control groups reported slight decreases in their access to vegetables at home from 1.77 to 1.72 (-0.04) and from 1.71 to 1.68 (-0.02), respectively.

Hope Scale

Students in the intervention group increased their cumulative score from 22.69 on the pretest to 23.36 on the posttest (0.68). They also reported increases on all 6 items: (1) 3.63 to 3.64 (0.01); (2) 3.95 to 4.01 (0.06); (3) 3.84 to 3.93 (0.09); (4) 3.80 to 3.95 (0.15); (5) 3.65 to 3.97 (0.32); (6) 3.81 to 3.87 (0.06). For item (5), the difference was found to be statistically significant ($p=0.039$). Students in the control group decreased their cumulative score from 23.54 on the pretest to 23.33 on the posttest (-0.21). They also reported decreases on 3 of the 6 items: (1) 3.62 to 3.58 (-0.04); (3) 4.01 to 3.94 (-0.07); (5) 4.22 to 4.04 (-0.18). Students in the control group reported either no or slight increase on the following 3 items: (2) 3.86 remained the same; (4) 3.75 to 3.98 (0.23); (6) 3.96 to 3.98 (0.01).

Results

Comparing pretest and posttest data for students in the intervention group (n=123) and control group (n=84) indicate, on average, they are comparable demographically and behaviorally. Analyzing matched pretest-posttest data reveal several statistically significant differences between the two groups attributable possibly to the intervention.

Related to Objective 1 (increased fruit and vegetable consumption), students in both groups reported decreases in total fruit and vegetable consumption (no juice) between pretest and posttest; however, the decrease for the control group was larger, on average, and found to be statistically significant. Total vegetable consumption also decreased for both groups; however, for the control group, the difference was larger, on average, and found to be statistically significant. While students in the intervention group reported a slight decrease in their consumption of punch, sports drinks or other fruit-flavored drinks, students in the control group reported a large increase in their consumption of these beverages, a difference that approached statistical significance.

Related to Objective 2 (increased physical activity), students in the intervention group reported a statistically significant increase in the number of days in which they engaged in at least 60 minutes of moderate/vigorous physical activity during the prior week compared to students in the control group.

Related to the Hope Scale objective, students in the intervention group had higher mean posttest scores, on average, compared to their peers in the control group despite reporting lower mean pretest scores. Thus, the average difference or gain scores between pretest and posttest increased by 0.68 for the intervention group but decreased by -0.21 for the control group. For item (5), in particular, a question that measures agency, students in the intervention group increased their mean score considerably, a difference that was found to be statistically significant.

The Hope Scale is "based on the premise that children are goal directed and that their goal-related thoughts can be understood according to two components: agency and pathways" (Snyder et al., 1997, p. 400). "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). The odd numbered items in the scale (1, 3, and 5) measure agency while the even numbered items (2, 4 and 6) assess pathways. 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).

In sum, while students in the intervention group reported decreased fruit and vegetable consumption between pretest and posttest, the difference was not as great compared to their peers in the control group who reported a statistically significant decline. Students in the intervention group reported a statistically significant increase in the amount of moderate/vigorous physical activity they engaged in during the week compared to their control group peers. Finally, intervention students reported higher gain scores on the Hope Scale compared to control group students, and posted statistically significant increases in their agency subscale scores. Students in the control group, however, had lower difference scores between pretest and posttest, and reported decreased scores on all agency subscale items.

References

Duncan-Andrade, J. (2009). Note to educators: Hope required when growing roses in concrete. *Harvard Educational Review, 79*(2), 181-194.

Edwards, L., Ong, A., & Lopez, S. (2007). Hope measurement in Mexican American youth. *Hispanic Journal of Behavioral Sciences, 29*(2), 225-241.

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., et al. (1997). The development and validation of the children's hope scale. *Journal of Pediatric Psychology, 22*(3), 399-421.

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.

Steed, L. (2002). A psychometric comparison of four measures of hope and optimism. *Educational and Psychological Measurement, 62*(3), 466-482.

b. Description of how evaluation results will be used:

Results from the 2011 final report will be used to strengthen the design of the 2012 evaluation plan by (a) increasing the size of the matched pretest-posttest intervention sample to at least 100, and (b) lengthening the interval between pretesting and post-testing to 18 weeks with a follow-up component (see attached HighSchool_FFY12 IOE Plan_ACOE_7-11). The implementation of and adherence to the curriculum will also be changed in 2012 as result of the 2011 evaluation, and monitored more closely using fidelity logs maintained by classroom teachers.

Qualitative Evaluation Results

There were several memorable anecdotes shared by the lead teachers. At Tennyson, the lead teacher recounted a story about two female students discussing their upcoming trips to Mexico and Guatemala, and talking excitedly about how they would be able to lose some weight because they would be eating more fresh food and walking more. The lead teacher explained they knew that these behaviors and actions would lead to good outcomes. At San Lorenzo, the lead teacher shared a recent story that the Black Student Union wanted to serve vegetable sushi at a fundraiser. Most of the students didn't know what it was a few months prior, but now many students clamor for it after the lunch time tastings. As she stated, "...word about the tastings have infiltrated the school." Now, she gets approached by student clubs and teachers for healthy tastings at their meetings instead of pizza. As she put it, "The school culture is changing!"

7. Point of Contact

Name:	Dr. Chris Boynton
Phone Number:	510-670-4539
Email Address:	cboynton@acoe.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 and Network High School Survey

Yes

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

References

uncan-Andrade, J. (2009). Note to educators: Hope required when growing roses in concrete. *Harvard Educational Review, 79*(2), 181-194.

Edwards, L., Ong, A., & Lopez, S. (2007). Hope measurement in Mexican American youth. *Hispanic Journal of Behavioral Sciences, 29*(2), 225-241.

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., et al. (1997). The development and validation of the children's hope scale. *Journal of Pediatric Psychology, 22*(3), 399-421.

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.

Steed, L. (2002). A psychometric comparison of four measures of hope and optimism. *Educational and Psychological Measurement, 62*(3), 466-482.

Results Control

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	13.73	13.02	-0.71	0.161
3. Milk	1.15	1.17	0.01	0.894
4. Yogurt or cheese	0.40	0.48	0.07	0.417
5. Cereal	0.70	0.68	-0.02	0.801
7. Juice	1.71	2.00	0.29	0.188
8. Fruit	2.21	2.05	-0.17	0.379
Total: vegetable (9-12)	4.31	3.62	-0.69	0.020
13. Water	3.20	3.01	-0.19	0.181
Total: fruit and vegetable (no juice)	6.52	5.67	-0.86	0.013
Total: fruit, vegetable, juice	8.24	7.67	-0.57	0.174
Unhealthy Foods	3.06	3.09	0.03	0.914
6. French fries or chips	0.60	0.65	0.06	0.591
14. Punch, sports drinks, fruit-flavored drinks	0.90	1.11	0.20	0.055
15. Soda or soft drinks	0.80	0.76	-0.05	0.620
16. Cookies, cakes, other sweets	0.75	0.63	-0.12	0.305
Physical Activity	5.50	5.93	0.43	0.303
17. Days of 60 minutes moderate/vigorous	3.13	3.23	0.10	0.707
18. Days of 30 minutes outdoor play	2.37	2.70	0.33	0.230
Other				
19. Breakfast	0.65	0.72	0.07	0.358
20. Trying New Foods	1.27	1.25	-0.02	0.686
Perceived Parental Consumption	4.30	4.56	0.26	0.079
21. How often parents eat fruit	2.10	2.19	0.10	0.322
22. How often parents eat vegetables	2.19	2.33	0.14	0.103
Access	3.43	3.38	-0.05	0.508
23. Fruits to eat at home	1.71	1.69	-0.02	0.640
24. Vegetables to eat at home	1.71	1.68	-0.02	0.657

Demographics

Average Age	14.4
Gender	
Males	47
Females	37

Results Intervention

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	13.68	13.52	-0.16	1.000
3. Milk	1.10	1.08	-0.02	0.544
4. Yogurt or cheese	0.49	0.59	0.11	0.066
5. Cereal	0.54	0.57	0.03	0.906
7. Juice	1.80	1.93	0.14	0.906
8. Fruit	2.32	2.07	-0.25	0.396
Total: vegetable (9-12)	4.10	3.73	-0.37	0.466
13. Water	3.26	3.42	0.16	0.239
Total: fruit and vegetable (no juice)	6.45	5.79	-0.66	0.346
Total: fruit, vegetable, juice	8.27	7.76	-0.51	0.432
Unhealthy Foods	2.85	2.91	0.06	0.734
6. French fries or chips	0.66	0.75	0.09	0.913
14. Punch, sports drinks, fruit-flavored drinks	0.95	0.92	-0.03	0.829
15. Soda or soft drinks	0.58	0.65	0.07	0.511
16. Cookies, cakes, other sweets	0.64	0.58	-0.06	0.916
Physical Activity	4.92	5.61	0.69	0.490
17. Days of 60 minutes moderate/vigorous	2.83	3.31	0.48	0.303
18. Days of 30 minutes outdoor play	2.08	2.31	0.22	0.960
Other				
19. Breakfast	0.62	0.71	0.08	0.059
20. Trying New Foods	1.20	1.25	0.05	0.516
Perceived Parental Consumption	4.14	4.14	0.00	0.651
21. How often parents eat fruit	2.02	2.02	0.00	0.389
22. How often parents eat vegetables	2.14	2.12	-0.02	0.849
Access	3.55	3.45	-0.10	0.874
23. Fruits to eat at home	1.76	1.69	-0.07	0.349
24. Vegetables to eat at home	1.77	1.72	-0.04	0.621

Demographics

Average Age	15.0
Gender	
Males	62
Females	61

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:	6/16/2011
Email:	Petra.Martinez@alisal.org

Section 1

1. Project Description and Goals

Project Name:	Alisal Union School District
Target Population:	10-11yr olds/5th and 6th grade

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
USDA MyPyramid	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

We use nutritional competencies, health standards, and *Network* approved curriculum to teach nutrition education and promote physical activity for our students. Students are provided with a minimum of 10 weeks of nutrition lessons. The intervention group was given 28 weeks of lessons. Each class received one 30 minute lesson per week.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Our students were provided with one physical activity lesson per month. All lessons are from CATCH or from other approved curriculum or *Network* sites. All physical activity related to the nutrition education lesson that was presented the prior week. Physical activity was presented to students so they understood the balance between good nutrition and healthy amounts of physical activity and the need to balance calories consumed with calories burned.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

All lessons were collectively planned by teachers so that all students were receiving the same instruction. Instructional plans were based on California State Standards for Health and Nutrition.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

All testers used the same materials and the same dialogue when working with students. The administration was carefully planned so all students received the same instructions.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

All classrooms were assessed by the same group of *Network* instructors.

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 200 grade students who participated in Alisal Union 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.

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?

Classrooms

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

a. Intervention:	Random Sample
b. Control:	

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	None

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	9/7/2011	9/10/2011
Post-test:	5/24/2011	6/10/2011
Follow-up:		

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?	28

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	None	

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 area of Healthy Foods and Beverages, our students started by eating a mean of 2.01 servings of fruit and 1.83 servings of vegetables. The data was not separated into grade levels, but in general students' post assessment revealed a mean of 2.23 servings of fruit and 2.10 servings of vegetables. These results are significant. Another area of significance was the consumption of fries or chips. There was an increase of 0.14 and a p-value of 0.018. The last area of significant results was in Physical Activity. Overall, there was a difference of 1.56 and a p-value of 0.00. See the results table at the end of this report.

Here are a few memorable moments: 1. A student talking to one of our teachers about his friend said "Juan found the lost marble in the grass very quickly because he has good eyesight. He eats vegetables with lots of Vitamin A." 2. Parents have come up to another teacher to say that their children are asking for more fruits and vegetables and are able to recognize them at the grocery store and can share facts about the fruit or vegetable because they have experienced it in class. 3. Students asked their parents to try new recipes from the cookbooks we gave them and

they shared with one of our teachers how easy it was to prepare great tasting healthy meals at home using fresh fruits, vegetables and whole grains. 4. Another teacher reported that students often ask her for the recipe of simple food preparation activities such as fresh fruit with a yogurt dip (we showed students to use nonflavored yogurt and to add a little honey to sweeten it). Parents have also asked. 5. A school principal told me that a parent stopped her at the market and asked her to point out the bok choy, because her daughter wanted her to make it for dinner (just like we had showed them).

b. Description of how evaluation results will be used:

The results tell us that students are consuming more fruits and vegetables. However, we are concerned about the increase in chips and fries. This may be due to parent groups that fund raise with unallowable foods or the ambulant vendors that park near the school exits as students are going home. The group that we tested were the upper grades and were children that might have some spare change for unhealthy snack items.

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.

None

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

Foerster, S., J. Gregson, et al. (1998). "The California Children's 5 a Day-Power Play! Campaign: Evaluation of a large-scale social marketing initiative." Family and Community Health 21(1): 46-64.

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

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

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

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.68	12.15	0.48	0.176
3. Milk	1.67	1.56	-0.11	0.216
4. Yogurt or cheese	0.71	0.75	0.04	0.608
5. Cereal	0.85	0.78	-0.07	0.301
7. Vegetables	1.83	2.10	0.27	0.018
8. Fruit	2.01	2.23	0.23	0.049
10. Juice	1.40	1.41	0.01	0.927
11. Water	3.20	3.31	0.11	0.386
Total: fruit & vegetable (no juice)	3.84	4.34	0.50	0.005
Total: fruit, vegetable, juice	5.24	5.75	0.51	0.030
Unhealthy Foods	2.84	2.86	0.03	0.888
6. French fries or chips	0.55	0.69	0.14	0.018
9. Punch, sports drinks, fruit-flavored drinks	0.98	1.03	0.04	0.633
12. Soda or soft drinks	0.61	0.52	-0.09	0.212
13. Cookies, cakes, other sweets	0.70	0.63	-0.07	0.392
Physical Activity	7.41	8.97	1.56	0.000
14. Days of 60 minutes moderate/vigorous	3.75	4.57	0.82	0.000
15. Days of 30 minutes outdoor play	3.66	4.40	0.74	0.000
Other				
16. Breakfast	0.83	0.86	0.03	0.546
17. Trying New Foods	1.24	1.23	-0.01	0.870
Perceived Parental Consumption	4.77	4.72	-0.04	0.748
18. How often parents eat fruit	2.37	2.38	0.01	0.934
19. How often parents eat vegetables	2.39	2.32	-0.06	0.375
Access	3.56	3.58	0.02	0.735
20. Fruits to eat at home	1.82	1.84	0.03	0.458
21. Vegetables to eat at home	1.73	1.74	0.01	0.803

Demographics

Average Age	10.4
Gender	
Males	97
Females	91

Network-funded contractor:	Berkeley USD - 09-11211
Contract number:	09-11211
Information provided by :	Leah Sokolofski & Mia Villanueva
Telephone:	510 644 6710
Date:	7/25/2011
Email:	leah_sokolofski@berkeley.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Parent/Family Nutrition Education Classes
Target Population:	18-59
Intervention Target	Parents

Primary Curriculum Used:
contractor-developed, PM approved lessons
Secondary Curriculum Used:

Description of 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.

Description of Physical Activity Intervention:

N/A

Description of Standardized Training:

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

Description of Standard Administration of Data

Non-teaching staff lead survey collection with a pre-test at the beginning of the first class and a post-test at the end of the last class.

Description of Standardization across all classrooms

All 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 each series (Tuesday or and Thursday evenings).

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 50 Parents who participated in Parent/Family Nutrition Education 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

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:	0	

# of intervention matched pre/post measures collected	51
# 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	Food Behavior Checklist (cups)	
Goal 2/Objective 2	0	

Where any other surveys used?	0

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/5/2010	4/21/2011
Post-test:	11/2/2010	5/19/2011
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?	0

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.

Food Behavior Checklist: Key Findings

Overall, the evaluation results pertaining to our goal of increasing fruit and vegetable consumption among participants showed statistical significance. In particular, participants reported an increase in their fruit consumption by .29 cups per day and an increase in vegetable consumption by .40 cups per day [see questions 6 & 7 of FBC Results Tables tab]. Questions pertaining to fruit and vegetable consumption that showed a slight increase, but were not statistically significant include: Q1 - consumption of fruit and vegetables as snacks, Q3 - consumption of citrus fruit or juice in the past week, Q8 & Q9 - variety of fruits and veggies consumed daily, and Q13 - number of vegetables eaten at main meal. However, the cumulative P-Values were significant in the sum of questions pertaining to fruit and vegetable consumption [see collective results for Fruits (Q2, 6, 8); Veggies (Q7, 9, 13), and Fruit and Veggies (Q1, 3, 6-9, 13) in FBC Results Tables tab]. Question 14 which pertained to reading nutrition facts when shopping, also showed a slight increase, yet not enough to be statistically significant.

In addition, participants reported a decrease in their consumption of fruit drinks, sports drinks or punch [see question 2 of FBC Results Tables tab] and regular soda [see questions 4 of FBC Results Tables tab]. They also reported an increase in their self-rating of eating habits [see question 16 of FBC Results Tables tab].

Similar to previous years, five of the 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), meat preparation and consumption (Q11 and Q12), nor did the lessons include significant information about food security (Q15).

Additional Knowledge Questions: Key Findings

We added five additional questions to supplement the Food Behavior Checklist (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: Additional Survey Questions.final.doc).

Survey results showed a statistically significant increase in participants' ability to identify a whole grain product by using the Ingredient Label [see question 3 of Knowledge Results Table).

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.

For Knowledge Question 1, this may have been because the wording of the question was not clear. The question

asked, "What is the recommended daily amount of fruits and vegetables, for the average woman who is moderately active?" However, it did not specify the age of the woman, nor the length of time the woman was active, i.e. <30 minutes a day, 30-60 minutes a day, or >60 minutes a day. This may have resulted in a lack of clarity for participants.

Knowledge Questions 2 and 4 may not have shown statistical significance because the information that was asked on the survey was not emphasized in class. For example, the emphasis of the Soups/Sodium class was how to reduce sodium intake by preparing nutritious soups – emphasis was not put on the daily recommended amount of one teaspoon. Similarly, the Healthy Snacks class recommended fruit and water as a more nutritious option than fruit drinks and juices. However, this option was not offered as one of the multiple choice answers which may have confused the results for Knowledge Question 4.

Overall, these findings suggest that the Network funded Parent/Family Nutrition Education Class Series may have a positive impact on the food behavior of participants, specifically in the areas increasing the consumption of fruits and vegetables eaten per day, and decreasing the consumption of sport, fruit, punch drinks, and sodas. The results for the knowledge question pertaining to identifying a whole grain product (Knowledge Question 3) reinforce that there was an increase in participants' knowledge of Nutrition Labels.

b. Description of how evaluation results will be used:

This year's evaluation results will continue to inform lesson plan revisions and delivery in the coming school year. Prior to the start of our classes/intervention in FFY12, we plan to meet with our evaluation staff and revise the four additional knowledge and one additional behavior questions used in the past so that they are aligned with class content.

7. Point of Contact

Name:	Leah Sokolofski & Mia Villanueva
Phone Number:	510 644 6710
Email Address:	leah_sokolofski@berkeley.k12.ca.us

8. Relevant Journal References

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

N/A

c. Did you use the Food Behavior Checklist?	Yes
Did you use the Fruit and Vegetable Checklist	No
Did you use the Fruit and Vegetable Inventory?	No

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

0

6. Qualitative Evaluation Results

This is your opportunity to share with us anything that may not have been reflected in your data or elsewhere in this report. Consider the questions below, or offer us other qualitative reports of your successes and challenges over the last year.

What have been the biggest challenges and barriers you have faced while implementing your intervention or evaluation? What have you learned from them?

Our biggest challenge to date is participant retention. It should be noted that for the purposes of this evaluation, results were analyzed for participants that attended 4 or 5 classes -- 51 total pre/post matched surveys – in order to have a sample size that met Network requirements. While we increased the number of sessions offered and expanded classes throughout the school year, we also centralized the class location to one school site. Centralizing the class location allowed our staff to better prepare for classes and to present a more consistent program from session to session. The school was centrally located and accessible by public transportation, however, low attendance at some of the classes may have been due to classes not taking place at participants' "home" schools. While we did not measure this factor, next year we will continue to seek a satellite location and determine whether this affects attendance. We may also work with our evaluation staff to determine a way to evaluate other factors that may be affecting attendance including times, location, etc.

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?

The Network-funded Parent/Family Nutrition Education Class Series at Berkeley Unified School District continues to receive positive feedback and gratitude from its participants. Parent/Family Nutrition Educator Tanya Henderson, noted some outstanding moments this year, including: participants trying specific vegetables for the first time such as kale and even carrots, reaching 71 parents/family members of BUSD students, and successfully outreaching for the program at school and community events such as Back to School Night and student performances. More highlights from our program can also be found in this year's Nutrition News, our annual newsletter about our program. In addition, the expansion of the classes to a year-round program was quite successful; we now have four dedicated staff who have created systems for efficiently delivering the classes year round.

At a broader level, the impacts of the classes are evident in the anecdotes we hear from district employees and former participants alike. On a few occasions, Tanya has run into parents at the grocery store who have raved about being avid label readers or trying a new vegetable that they learned about in class. With focused attention to class retention rates, we plan to continue getting the word out about family nutrition education and making healthy changes in our community.

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Knowledge				
Total Score (Q1-Q4)	2.20	2.66	0.45	0.011
Q1	0.25	0.27	0.02	0.800
Q2	0.64	0.73	0.09	0.352
Q3	0.66	0.93	0.27	0.001
Q4	0.66	0.73	0.07	0.412

Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.96	3.17	0.21	0.077
Q2. Drink sports drinks or punch (1-4)	1.85	1.66	-0.19	0.027
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.81	0.91	0.11	#N/A
Q4. Drink regular soda (1-4)	1.46	1.30	-0.15	0.018
Q5. Consumed milk in past week (0=N; 1=Y)	0.72	0.70	-0.02	0.710
Q6. Fruit eaten per day (0-3)	1.52	1.82	0.29	0.011
Q7. Vegetables eaten per day (0-3)	1.23	1.63	0.40	0.000
Q8. Different kinds of fruit daily (1-4)	2.54	2.70	0.15	0.181
Q9. Different kinds of vegetable daily (1-4)	2.80	3.00	0.20	0.095
Q10. Drink milk (1-4)	2.35	2.50	0.15	0.332
Q11. Take skin off chicken (1-4)	2.45	2.61	0.16	0.197
Q12. Consumed fish in past week (0=N; 1=Y)	0.63	0.76	0.13	0.083
Q13. 2 or more vegetables at main meal (1-4)	2.72	2.87	0.15	0.197
Q14. Read nutrition facts when shopping (1-4)	2.77	2.96	0.19	0.183
Q15. Run out of food before month end (1-4)	1.70	1.61	-0.09	0.420
Q16. Self-rating of eating habits (1-10)	6.34	6.96	0.62	0.000

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.83	2.08	0.26	0.003
Veggies (Q 7, 9,13) (Range 0-3)	1.58	1.84	0.26	0.003
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	4.05	4.66	0.60	0.000

Demographics			
Hispanic			
yes	13	**Average Age**	#DIV/0!
no	37	**Gender**	
Race		Males	9
American Indian or Alaskan Native	1	Females	42
Asian	5		
Black or African American	16		
Native Hawaiian or Other Pacific Islander	2		
White	12		

Network-funded contractor:	Compton USD
Contract number:	09-11220
Information provided by :	Gehane Simoes
Telephone:	310-639-4321 X56683
Date:	40716
Email:	gsimoes@compton.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Compton Unified School District
Target Population:	9-10 yrs/4th and 5th grades

Primary Curriculum Used:	
PowerPlay!	
Secondary Curriculum Used:	
Harvest of the Month	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Using the 4th and 5th grade Power Play books, the Network and teachers teamed up to administer the lessons. The Network administered a series of nutrition education lessons listed on the agenda, accompanied by a taste testing according to the lessons. The main idea of Network staff administering half of the lessons, was to provide the students with a different approach by the Network staff. This approach was intended to enhance the students' understanding on nutrition and help them associate healthy eating with the foods they choose.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Once the teachers completed 10 lessons in the Power Play workbooks, the students participated in the "Steps to Healthy Living Campaign". Each student received a tool that helps them to count their steps according to the appropriate physical activity.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Each 4th and 5th grade student received a "Power Play" workbook. Each student followed along with the lesson plan during instruction. During the days that the Network administered the lessons, the students listened and wrote down their answers. The integration of fruits and vegetables were featured and sampled to the students and teachers to provide a better understanding of the lessons and in depth understanding of the topics. Emphasizing the importance of each lesson was very crucial at the end of the session to ensure that the students have grasped the idea and how to apply it at home.

In 1-2 paragraphs, please provide a Description of the 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 data entry templates provided by the Network. A comparison of the pre and post test results was then calculated for a comparison and evaluation.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

All 4th and 5th grade students at Tibby and McNair Elementary received the workbooks, lesson plans and Network help to follow through with the plan in the classrooms.

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 267 4th and 5th 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.

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?

Classrooms

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

a. Intervention:	Convenience Sample
b. Control:	

# of intervention matched pre/post measures collected	267
# 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

Where any other surveys used?	No

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	11/9/2011	11/16/2011
Post-test:	5/18/2011	5/26/2011
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

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	

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 result for 4th and 5th graders at Tibby and McNair Elementary there was a significant increase in the consumption of fruit the day before. They increased fruit consumption from 1.69 (one and half times eating fruit a day) to 2.04 (two times eating fruit a day) a P-Value of 0.007. Overall physical activity increased for students. There was a greater increase in the number of days of 30 minutes outdoor play. Students increased number of days from 2.84 per week to 3.34 per week (P=0.007). This shows an increase in the number of days that the students have exercised in outdoor play activities. Another significant change is the consumption of breakfast. Over 85% (0.86) of students were eating breakfast, which increased to 94% (0.94) at the end of the intervention (P=0.049).There were steady results on the Perceived Parental Consumption, consuming fruits and vegetables on most days of the week. Having access to fruits and vegetables at home was reported as sometimes to almost always. As for the "Unhealthy Foods", most students on the average reported consuming one of those foods once a day.

b. Description of how evaluation results will be used:

This survey targets several categories to improve the overall food choices and increase physical activity. Although, 4th and 5th graders at those two schools cannot represent the entire student population in Compton Unified School District, the results have provided an idea of what an average student's eating habit may be. The data results show an indication of what needs to be improved and what tools can be used to target those categories. However, by comparing last year's results with this year's, there was an overall "positive" increase in: Breakfast, Physical Activity and Healthy Eating this year. Unhealthy Foods choices have also decreased this year from 3.52 to 3.41, indicating a change in their eating habits. The students received a better foundation on nutrition education, which I believe has increased their knowledge in making better food choices. The Network will continue to encourage physical activity along with better food choices through our services to students, staff and parents throughout the year. Breakfast in the classroom and FFVP have definitely played a great role in the overall increase of healthy foods. These results were a great indication of how students can apply what they learn in the classroom towards making healthier food choices at home. The Network will continue to administer the lessons, showing a greater increase in nutrition knowledge and a healthier food selection.

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.

None

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

Power Play!

Foerster, S., J. Gregson, et al. (1998). "The California Children's 5 a Day-Power Play! Campaign: Evaluation of a large-scale social marketing initiative." Family and Community Health 21(1): 46-64.

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

Yes

Network Youth Survey and *Network* High School Survey

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	10.31	11.27	0.96	0.013
3. Milk	1.30	1.33	0.03	0.667
4. Yogurt or cheese	0.56	1.07	0.51	0.000
5. Cereal	0.79	0.80	0.01	0.839
7. Vegetables	1.53	1.41	-0.12	0.299
8. Fruit	1.69	2.04	0.35	0.007
10. Juice	1.36	1.52	0.17	0.139
11. Water	3.06	3.07	0.01	0.941
Total: fruit & vegetable (no juice)	3.22	3.45	0.23	0.212
Total: fruit, vegetable, juice	4.58	4.97	0.40	0.109
Unhealthy Foods	3.52	3.41	-0.11	0.537
6. French fries or chips	0.90	0.89	0.00	0.949
9. Punch, sports drinks, fruit-flavored drinks	1.10	1.10	0.00	1.000
12. Soda or soft drinks	0.63	0.64	0.02	0.814
13. Cookies, cakes, other sweets	0.86	0.77	-0.09	0.267
Physical Activity	6.09	6.76	0.67	0.040
14. Days of 60 minutes moderate/vigorous	3.26	3.43	0.17	0.343
15. Days of 30 minutes outdoor play	2.84	3.34	0.50	0.007
Other				
16. Breakfast	0.86	0.94	0.08	0.049
17. Trying New Foods	1.23	1.22	0.00	0.932
Perceived Parental Consumption	4.53	4.53	0.00	1.000
18. How often parents eat fruit	2.27	2.22	-0.06	0.444
19. How often parents eat vegetables	2.25	2.22	-0.03	0.685
Access	3.36	3.40	0.03	0.557
20. Fruits to eat at home	1.70	1.75	0.05	0.159
21. Vegetables to eat at home	1.65	1.65	0.00	0.914

Demographics

Average Age	9.6
Gender	
Males	129
Females	138

Network-funded contractor:	Contra Costa Health Services (Community Wellness and Prevention Program) - 10-10060
Contract number:	10-10060
Information provided by :	Jennifer Lifshay and Maria Padilla
Telephone:	925 313-6831 & 925 313-6108
Date:	7/31/2011
Email:	jennifer.lifshay@hsd.cccounty.us & maria.padilla@hsd.cccounty.us

Section 1

1. Project Description and Goals

Project Name:	Contra Costa Health Services
Target Population:	18 - 59
Intervention Target	Adult Hispanic Women

Primary Curriculum Used:
Nuevos Ninos Nuevas Familias
Secondary Curriculum Used:

Description of Nutrition Education Intervention:

Three community Promotoras led nine workshop series that consisted of six sessions each. The target audience was Hispanic adult women between the ages of 18 and 60. The surveys used were the Fruit and Vegetable Checklist, and the Fruit and Vegetable Inventory (adults). Each series contained two food preparation activities. At the end of each session, each promotora completed a fidelity logs to highlight completed components of the workshops and to provide feedback. Topics that were covered in workshop series' included: The recommendations for fruit and vegetable consumption and 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 reviews, review of the USDA's food pyramid, menu planning that includes tips on shopping on a tight budget, label reading, calculating the amount of sugar in food items, stress and nutrition and physical activity demonstrations. Network recipes were handed out and discussed with workshop participants.

Description of Physical Activity Intervention:

0

Description of Standardized Training:

Promotoras attended a training session in which they learned how to administer the evaluation tools and components of the workshops, such as the food demonstrations and store circular exercise.

Description of Standard Administration of Data

Promotoras used standardized surveys including the Fruit and Vegetable Checklist and Fruit and Vegetable Inventory (adults). They were also given a data collection protocol that provided direction on how to assign ID numbers and administer the demographic forms, attendance sheets, and pre-post tests as well as how to complete fidelity logs. The Program manager and/or Promotora manager observed and assisted with the first pre-test administration of each Promotora to ensure that data collection was conducted according to the protocol.

Description of Standardization across all classrooms

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.

Impact/Outcome Objective 1:

By Sept 30, 2011, a sample of 101 SNAP-eligible Hispanic women who participated in at least five Promotora-led nutrition education sessions will report statistically significant increases in fruit and vegetable consumption and/or improvements in related factors, such as knowledge of physical activity and fruit and vegetable consumption recommendations, self-efficacy and/or other factors, as measured by matched pre-post tests.

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:	NA	

# of intervention matched pre/post measures collected	101
# 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	Goal 1: SNAP-Ed eligible families (<=185% Federal Poverty Level) will consume the recommended daily amounts of colorful fruits and vegetables Objective 10: Impact/Outcome: By July 31, 2011, a sample of SNAP-eligible Hispanic women who attend at least five Promotora led nutrition education sessions will report statistically significant increases in fruit and vegetable consumption and/or improvements in related factors such as knowledge of physical activity and fruit and vegetable consumption recommendations, self-efficacy and/or norms, as measured by at least 50 matched pre-post tests.	
Goal 2/Objective 2	Fruit and Vegetable Checklist (cups)	

Where any other surveys used?	0

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	1/18/2011	5/10/2011
Post-test:	2/18/2011	6/7/2011
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?	6

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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.

0

b. Description of how evaluation results will be used:

0

7. Point of Contact

Name:	Jennifer Lifshay and Maria Padilla
Phone Number:	925 313-6831 & 925 313-6108
Email Address:	jennifer.lifshay@hsd.cccounty.us & maria.padilla@hsd.cccounty.us

8. Relevant Journal References

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

0

c. Did you use the Food Behavior Checklist?	No
Did you use the Fruit and Vegetable Checklist	Yes
Did you use the Fruit and Vegetable Inventory?	No

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

0

CONTRA COSTA COUNTY IMPACT EVALUATION 2010-KEY OUTCOME FINDINGS

Table 1: KNOWLEDGE	Pre-test (% correct)	Pre-test (% correct)	Percentage point difference	p-value[1]
(Q1.14) Knowledge about the daily recommendation for number of cups of fruit and vegetable s (n=96)	5.2%	94.8%	89.6ppt	<.001 **
(Q1.15) Knowledge about the recommended number of minutes of daily physical activity (n=101)	63.4%	97.0%	33.7ppt	<.001 **

Table 2a: PERCEIVED BENEFIT	Pre-test mean	Post-test mean	Change	p-value[2]
(Q1.1) I feel that I am helping my body by eating more fruits and vegetable (n=99) (Range:0-2)	1.90	2.00	0.10	0.003*
(Q1.2) I may develop health problems if I do not eat fruit and vegetables (n=93) (Range:0-2)	1.95	1.98	0.03	0.320
Table 2b: SELF-EFFICACY	**Pre-test mean**	**Post-test mean**	**Change**	**p-value**
(Q1.3) I feel that I can ... eat fruit or vegetables as snacks. (n=100) (Range:0-2)	1.88	1.95	0.07	0.163
(Q1.4) I feel that I can ... buy more vegetables the next time I shop. (n=101) (Range:0-2)	1.92	1.98	0.06	0.083
'Q1.5) I feel that I can ... plan meals or snacks with more fruit during the next week. (n=101) (Range:0-2)	1.92	1.96	0.04	0.348
(Q1.6) I feel that I can ... eat two or more servings of vegetables at dinner. (n=101) (Range:0-2)	1.84	1.96	0.12	0.014*
(Q1.7) I feel that I can ... plan meals with more vegetables during the next week. (n=101) (Range:0-2)	1.95	1.98	0.03	0.320
(Q1.8) I feel that I can ... add extra vegetables to casseroles and stews. (n=101) (Range:0-2)	1.93	1.98	0.05	0.132
Table 2c: PERCEIVED CONTROL	**Pre-test mean**	**Post-test mean**	**Change**	**p-value**
(Q1.10) In your household, who is in charge of what foods to buy? (n=98) (Range=0-2)	1.82	1.84	0.02	0.596
(Q1.11) In your household, who is in charge of how to prepare the food? (n=98) (Range:0-2)	1.91	1.90	-0.01	0.741
Table 2d: READINESS	**Pre-test mean**	**Post-test mean**	**Change**	**p-value**
(Q1.12) Readiness to eat more fruit (n=98) (Range:0-4)	2.87	3.62	0.76	<.001**
(Q1.13) Readiness to eat more vegetables (n=98) (Range:0-4)	2.94	3.54	0.60	<.001**
Table 2e: COMPOSITES	**Pre-test mean**	**Post-test mean**	**Change**	**p-value**
Perceived benefit (n=92) (Range:0-1)	0.96	1.00	0.03	0.013*

Self-efficacy (n=100) (Range:0-1)	0.96	0.98	0.03	0.059
Perceived control (n=97) (Range:0-1)	0.94	0.94	0	1.00
Readiness (n=96) (Range:0-1)	0.73	0.82	0.09	<.001**
Table 2f: DIET DESCRIPTION	**Pre-test mean**	**Post-test mean**	**Change**	**p-value**
(Q1.9) How would you describe your diet? (n=100) (Range: 0-5)	1.97	3.48	1.51	<.001**

Table 3a: BEHAVIOR	**Pre-test mean**	**Post-test mean**	**Change**	**p-value**
Q1) Do you eat fruits or vegetables as snacks? (n=100) (Range:1-4)	2.64	3.48	0.84	<.001**
Q3) Fruit (cups): How much do you eat each day? (n=101) (Range:0-3)	1.33	2.65	1.32	<.001**
Q4) Do you eat more than one kind of fruit each day? (n=100) (Range:1-4)	2.48	3.36	0.88	<.001**
Q5) Do you eat more than one kind of vegetable each day? (n=99) (Range=1-4)	2.55	3.35	0.81	<.001**
Q6) Vegetables (cups): How much do you eat each day? (n=99) (Range: 0-3)	1.23	2.82	1.60	<.001**
Q7) Do you eat 2 or more vegetables at your main meal? (n=101) (Range:1-4)	2.36	3.4	1.05	<.001**
Q8) Do you drink regular soda? (n=100) (Range:1-4) +	2.00	1.51	-0.49	<.001**
Q9) Do you use this label when food shopping? (n=98) (Range:1-4) +	2.21	3.35	1.13	<.001**
Table 3b: BEHAVIOR	**Pre-test (% yes)**	**Post-test (% yes)**	**Percentage point difference**	**p-value**
Q2) Did you have citrus fruit or citrus juice during the past week? (n=101)	90.1%	97.0%	+6.9ppt	0.092
Table 3c: BEHAVIOR COMPOSITES	**Pre-test mean**	**Post-test mean**	**Change**	**p-value**
Fruit composite (n=100) (Range: 0-3)	1.84	2.65	0.82	<.001**
Vegetable composite (n=97) (Range = 0-3)	1.36	2.53	1.18	<.001**
Fruit & Vegetable composite (n=95) (Range = 0-7)	3.71	6.01	2.31	<.001**

(*) Statistically significant. (**) Highly statistically significant.

NOTES ABOUT STATISTICAL TESTS

[1] McNemar's test was used to assess statistically significant changes in proportions.

[2] Paired t-tests were used for all analyses comparing pre- and post-test means.

NOTES ABOUT QUESTIONS:

Tables 2a-f

All questions in Tables 2a-f are from the Fruit and Vegetable Inventory. The Spanish version of these questions was used.

Scale for Qs 1.1-1.8: 0 (disagree), 1 (agree or disagree), 2.0 (agree).

Scale for Q 1.9: 0(poor), 1(fair), 3 (good), 4 (very good), 5 (excellent).

Scale for Qs 1.10-1.11: 0 (other person); 1.0 (shared decision), 2.0 (I am).
Scale for Qs 1.12-1.13: 0 (I am not thinking about eating more fruit/veg), 1.0 (I am thinking about eating more fruit/veg ... planning to start within 6 months) 2.0 (I am definitely planning to eat more fruit/veg in the next month), 3.0 (I am trying to eat more fruit/veg now); 4.0 (I am already eating 3 or more servings of fruit/veg a day)
Perceived benefit composite includes: Q1.1 & Q1.2; **Self-efficacy** composite includes: Q1.3-Q1.8; **Perceived control composite** includes: Q1.10 & Q1.11; **Readiness composite** includes: Q1.12 & Q1.13.

Tables 3a-c

All questions in Tables 3a-c are from the Fruit and Vegetable Checklist except Q8 and Q9, which are from the Food Behavior Checklist. (FBC). Q8 is question 4 from the FBC; Q9 is question 14 from the FBC. The Spanish versions of these tools were used.

Scale for Qs 1, 7, 8: 1(no); 2 (yes, sometimes); 3 (yes, often); 4 (yes, everyday)

Scale for Qs 3 & 6: 0 (none); .5 (.5 cup); 1 (1 cup); 1.5 (1.5 cups); 2.0 (2 cups); 2.5 (2.5 cups); 3 (3.0 cups or more)

Scale for Qs 4, 5, 9: 1(no); 2 (yes, sometimes); 3 (yes, often); 4 (yes, always)

Fruit composite includes: (Q2) Citrus fruit or juice past week, (Q3) Fruit eaten per day, and (Q4) Different kinds of fruit daily

Vegetable composite includes: (Q5) Different kinds of vegetables daily, (Q6) Vegetables eaten per day, and (Q7) 2 or more vegetables at main meal

Fruit & Vegetable composite includes: All six questions listed above plus Q1 re: eating fruits & vegetables as snacks.

TABLE 4. Minutes per session	PA & Healthy eating	Stress & Nutrition	Healthy breakfast	Healthy snacks & serving sizes	Menu Planning	Label Reading	
Sites	**Session 1**	**Session 2**	**Session 3**	**Session 4**	**Session 5**	**Session 6**	**Average**
Rio Vista Elementary	120	150	135	120	120	120	128
First Five Bay Point	120	120	120	120	120	120	120
First Five Concord	90	90	90	90	90	90	90
Marina Vista Elem School	90	105	90	90	120	90	98
Antioch Middle School	145	120	120	120	120	120	124
Parkside elem school	120	75	75	135	135	135	113
Marsh Elem school	105	120	105	120	120	120	115
Ygnacio Valley Elem school	90	90	90	90	90	90	90
Riverview middle school	120	120	120	120	120	150	125
AVERAGE	**111**	**110**	**105**	**112**	**115**	**115**	**111**

TABLE 5. Minutes per food demonstration	Food demo1	Food demo2
Rio Vista Elementary	30	20
First Five Bay Point	30	30
First Five Concord	25	15
Marina Vista Elem School	30	35
Antioch Middle School	15	15
Parkside elem school	20	20
Marsh Elem school	30	35
Ygnacio Valley Elem school	20	25
Riverview middle school	missing	30
AVERAGE	**25**	**25**

TABLE 6. Participant Involvement	Food demo1	Food demo2
Rio Vista Elementary	4	4

First Five Bay Point	4	4
First Five Concord	4	3
Marina Vista Elem School	3	3
Antioch Middle School	4	4
Parkside elem school	4	4
Marsh Elem school	4	4
Ygnacio Valley Elem school	3	2
Riverview middle school	4	4
AVERAGE	**3.8**	**3.6**

Scale: none (1); some (2); most (3); all (4)

Network-funded contractor:	California State University, Chico, Research Foundation (SCNAC)) - 10-10093
Contract number:	10-10093
Information provided by :	Cindy Wolff, Keiko Goto & Stephanie Bianco-Simeral
Telephone:	5308985288
Date:	7/31/2011
Email:	cwolff@csuchico.edu

Section 1

1. Project Description and Goals

Project Name:	HOTM
Target Population:	4-6 for Evaluation #1; K-6 for Evaluation #2; 1-6 for Evaluation #3

Primary Curriculum Used:	
Harvest of the Month	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

All Evaluations

The majority of the nutrition education intervention is derived from the Harvest of the Month (HOTM) curriculum. The HOTM curricula included HOTM taste testings, HOTM posters with health benefits and images of the HOTM item that is incorporated into various recipes, HOTM educator newsletters, Farmer of the Month (FOTM) newsletters, and garden based nutrition education. The HOTM produce items for the monthly tastings included cucumbers, pears, sweet potatoes, broccoli, kiwi, orange, spinach, carrots and strawberries.

Other nutrition education activities included MyPyramid lessons including portion sizes and moderation, whole grain and fiber lessons, fat and nutrition education 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 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.

Please note that one elementary school, Chico Country Day Charter School, has strong garden enhanced nutrition education activities and many parents are actively involved in the school's garden committee.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Evaluation #1 only

The physical activity intervention, Bike Week, organized by Butte Bicycle Coalition in October 2010 and May 2011, included week long promotions with daily activities designed to encourage participation by both students and parents. For example, activities included bike safety lessons, helmet fitting stations, weekly participation logs, and bicycle rodeos.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

All Evaluations

SCNAC Site Assistants (part-time Network-funded staff who also work part-time for district) are given

monthly trainings on the foundations of nutrition and the HOTM program, meeting the California health education content standards, and methods for increasing physical activity.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

Evaluation #1

Data collection instruments and methods were designed and directed by Dr, Cindy Wolff, Dr. Keiko Goto, and CSUC graduate students. *Network Youth Survey* was used for Project #1. This survey addresses students' fruit and vegetable familiarity and preferences, consumption of a variety of foods including fruit and vegetables, and activity patterns. SCNAC Site Assistants and graduate students met on two separate occasions prior to data collection for training on survey administration. Training included review of a standardized script (approved by Human Subject Review Committee), discussed questions that may occur and standardized responses to those questions, and practice of survey completion. The survey was administered to 4th through 6th grade students in seven SCNAC schools and two control schools in a single school district. The survey was administered in November 2010 (pre) and again in May 2011 (post) during class time and took students approximately 15 minutes to complete.

Evaluation #2

Data collection for selection observations and production records was exempt from the CSU, Chico Human Subject Review Committee. Permission to observe children and collect production record data was given by the CUSD foodservice director and school principals.

Observation data:

Researchers were trained on data collection procedures for observations of student selection in the cafeteria. The data collection instrument, *Observation Data Collection Instrument FFY 2011* (attached), listed the first and last names of the students, ID numbers, and grade levels in individual columns. Adjacent columns included coding for the various entrée, salad mix, broccoli, carrots, seasonal fruits, seasonal vegetables, and beverage options.

Production record data:

The production records (PR) represent food produced to meet the needs of all students who purchase or qualify for free meals from the cafeteria. The PR include: type and quantity of food initially prepared, served, and left over. The total number of students served is determined by the number of entrees served. The total number of fruit and vegetables servings selected is determined by the difference between the number of portions prepared and the number of portions left over. Thus, school cafeteria production records serve as proxy for cafeteria fruit and vegetable selection and can be used to confirm findings from the observation data. Production records were completed by foodservice staff/kitchen managers at each school by either number of servings or by weight. SCNAC researchers converted weights to servings for data entry and analyses.

Evaluation #3

Data collection for milk selection observations and milk waste (consumption) was exempt from the CSU, Chico Human Subject Review Committee. Permission to observe children and collect milk waste was given by the CUSD foodservice director and school principals. Researchers were trained on data collection procedures for milk selection observations in the cafeteria and milk collection for the milk waste study. The data collection instrument, *Observation Data Collection Instrument FFY 2011* (attached),
listed the first and last names of the students, ID numbers, and grade levels in individual columns. Adjacent columns included coding for the various beverage options.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

Evaluation #1

Scripts were given to staff implementing the survey in classrooms to accompany survey instructions. Students were asked to answer each question as each question was read aloud. Gender characteristics are similar for the intervention and control groups. Also, white and Latino students are the two most common ethnicities represented in both the intervention and control groups. There are twice as many Latino students in the intervention group compared

to the control group and approximately twice as many white students in the control group compared to the intervention group.

Evaluation #2

Standardization Across All Cafeterias

School lunch selections for all K-6 grade students participating in the National School Lunch Program (NSLP) were observed from seven schools in Chico Unified School District (CUSD). The same menu items, including those in the salad bar, are provided in all the elementary schools as mandated by the NSLP. CUSD uses the offer vs. serve method which gives students the choice to select fruits and vegetables from the salad bar as part of their lunch. The salad bar consists of a minimum of five items. Broccoli, carrots, and salad mix are served every day throughout the school year. The other fruit and vegetables items are seasonal and added to the menu month to month.

Evaluation #3

Standardization Across All Cafeterias

Milk selections for all K-6 grade students participating in the National School Lunch Program (NSLP) were observed from three schools in Chico Unified School District (CUSD), two interventions and one control. The same beverage items are provided in all the elementary schools as mandated by the NSLP. CUSD uses the offer vs. serve method which gives students the choice to select white or chocolate milk as part of their lunch. Two interventions were implemented at separate schools to influence students' choice toward white milk opposed to chocolate. The first intervention placed chocolate milk behind the lunch-line counter, with white milk easily accessible in front. A poster indicated to the students that if they wanted chocolate milk, they would have to ask for it. A researcher would provide the student with chocolate milk only if they asked. The second intervention tripled the displayed quantity of white milk compared to chocolate. Pre data were collected over five days per school, followed by five days during the intervention period. Students were matched by ID number from pre to post to assess changes in individual selection.

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 at least 200 K-12 5th and 6th grade students who participated in SNAP-Ed approved activities, like HOTM will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

Please note that the Objective #8 from our SOW includes three evaluations:

Evaluation #1: Impact of HOTM on Fruit and Vegetable Preferences, Consumption, and Physical Activity Based on *Network Youth Survey*. The report for this evaluation is in the IOE final report template under "Youth Questionnaire" and in this Word document.

Evaluation #2: Impact of HOTM on K-6 Fruit and Vegetable Cafeteria Selection Based on Observations and Production Records. The report for this evaluation is in this Word document only.

Evaluation #3: Impact of Various Marketing Strategies on Milk Selection and Consumption in SCNAC elementary Schools. The report for this evaluation is in this Word document only.

2. Evaluation Design

a. What design was used?

- **Evaluation #1 Design:** Pre-test and Post-test with a comparison (control) group
- **Evaluation #2 Design:** Post-only with a comparison (control) group for observation data; baseline and post intervention with a comparison (control) group for production records
- **Evaluation #3 Design**: Cluster randomized intervention design. Pre- and post-data collection for milk selection observation and consumption by waste study

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:**

Evaluation #1:
a. Intervention: Census (all grade 4-6 students)
b. Control: Census (all grade 4-6 students)

Evaluation #2:
a. Intervention: Convenience sample
b. Control: Convenience sample

Evaluation #3:
a. Intervention: Random cluster
b. Control: Random cluster

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 surveys used?	Questions from the Network Nutrition Education Survey were used for demographics and questions from the HOTM survey were used for HOTM produce item preferences. *Observation Data Collection Instrument FFY 2011* was used for Evaluations 2 and 3.

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	11/4/2010	11/8/2010
Post-test:	5/12/2011	5/20/2011
Follow-up:		

Were any pre-test data collected AFTER the intervention began?	No
How many lessons from the intervention occurred *before* pre-tests?	6
How many lessons from the intervention occurred *after* pre-tests?	14

c. Describe how the data were collected.

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

How were the surveys administered?

...self-reported 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.

Evaluation #1 – Impact of HOTM on Fruit and Vegetable Preferences, Consumption, and Physical Activity Based on *Network Youth Survey*

McNemar tests were used to assess the difference in familiarity with HOTM fruits and vegetables between matched pre/post intervention and control students (Table 2). Students who marked 'I do not know what this is' were considered to be unfamiliar with the fruit or vegetable. Table 2 demonstrates that both intervention students were higher on a percentage basis for sweet potatoes, kiwi and spinach compared to control students, although these differences did not achieve the level of statistical significance. There were significant pre to post changes for sweet potatoes among intervention 1 students and for spinach among intervention 2 students while no significant changes were observed in the control group. Familiarity with sweet potatoes changed from 90% to 95% in the intervention 1 group vs. 92% to 95% in the control group. Familiarity with spinach changed from 95% to 99% in the intervention 2 group vs. 93% to 96% in the control group. Logistic regression analyses revealed that after controlling for pre-intervention data as a covariate, post intervention familiarity with these fruits and vegetables did not significantly differ among intervention 1, intervention 2 and control students.

Table 3 presents the self-reported results of 4th – 6th grade students' preferences for the HOTM fruits or vegetables. The question was asked on a 3-level scale (0 = I do not like this, 1 = I like this a little and 2 = I like this a lot). Students who answered "I do not know what this is" were excluded from the analysis. Paired sample t-tests were used to compare the results between the pre and post surveys. There were small numerical increases in all the fruits and vegetables except for sweet potatoes, for which there was a non-significant decrease in the two intervention groups. There were statistically significant increases in preference for kiwi and strawberries for intervention 1 students, and oranges, spinach and strawberries for intervention 2, indicating the positive effects of the HOTM program on preferences for some F/Vs. With the exception of sweet potatoes and broccoli, all post preference values were higher for intervention students compared to control students; ANCOVA revealed that after controlling for the pre-intervention data, post-intervention preferences for oranges ($p=0.01$) and kiwi ($p= 0.026$) were significantly higher in intervention 1 students compared to control students. ANCOVA also revealed that post intervention preference for strawberries was higher in both intervention 1 students ($p= 0.05$) and intervention 2 students ($p=0.002$) compared to control students. These results indicate a significant impact of the HOTM program on preferences for some fruits.

Table 4 presents data comparing the self-reported consumption of a variety of foods and beverages during the prior day. We used paired sample t-tests to assess changes in pre to post consumption for the control and intervention groups. The questions concerning how many times a child consumed milk, yogurt, cereal, French fries, punch soda and sweets were asked on 4-level scale (0 = I did not eat any, 1 = I ate the food one time, 2 = I ate the food two times, 3 = I ate the food three times or more). The questions concerning how many times a child consumed vegetables, fruits, fruit juice, and water were asked on a 6-level scale (0 = I did not eat any, 1 = I ate the food one time, 2 = I ate the food two times, 3 = I ate the food three times, 4 = I ate the food four times, 5 = I ate the food five times or more). With the exception of yogurt, punch and water, all post consumption values were higher for both intervention 1 and 2 students compared to control students. There was a statistically significant increase in the consumption of milk and water among intervention 1 students. While there was a significant increase in soda consumption in the control schools, there was no real change in soda consumption among intervention 1 and 2 students. The results from ANCOVA demonstrate that intervention 1 students had significantly higher post milk consumption compared to control students ($p= 0.031$).There were statistically significant pre to post increases in intervention 2 and control students' self-reported consumption of fruits and vegetables. ANCOVA revealed that after controlling for pre-intervention data, post-intervention vegetable consumption was significantly higher in intervention 2 students compared to control students ($p= 0.023$). The difference between the intervention 2 and control groups remained significant ($p= 0.022$) after controlling for vegetable availability at home as a covariate. These findings indicate that the HOTM program had a significant effect on intervention 2 students' self-reported consumption regardless of vegetable availability at home. There was no significant difference in self-reported fruit consumption between intervention 2 and control students ($p= 0.103$). ANCOVA results show that there were no significant differences in self-reported consumption of fruits ($p= 0.38$) or vegetables ($p= 0.71$) over the prior 24 hours between the control group and the intervention 1 group. These findings are incongruent with our findings of significantly higher fruit and vegetable selection rates from the school cafeteria

salad bar for intervention 1 students compared to control students. One important factor affecting intervention 1 students' reports of fruit and vegetable consumption is the finding that they report significantly lower availability of both fruits and vegetables at home (see Table 8).

Table 5 presents data comparing the self-reported number of days students participated in physical activity for 30 and 60 minutes outside of school. Students were asked to mark the number of days in the past week that they participated in physical activity for either 30 or 60 minutes. The results from the pre and post surveys for the intervention and control groups were compared using paired sample t-tests. While not significant, there were numerical increases in both categories in the intervention 1 group. There were significant pre to post increases in physical activity levels in both intervention 2 and control groups. ANCOVA revealed that after controlling for pre-intervention data, physical activity levels were significantly higher in the control group ($p< 0.001$) and the intervention 2 group ($p< 0.001$) compared to the intervention 1 group. One of the two control schools had a rigorous bike event right before the post intervention survey was conducted. Also, the intervention 2 group had a non-standardized physical activity program (CATCH) during the intervention period. These activities may have contributed to the significant pre to post changes in physical activity level in control and intervention 2 students. No significant differences were found between the intervention 2 and control groups.

Table 6 presents the findings for the self-reported results of whether students ate breakfast and if they like to try new foods. The breakfast question was a yes-no question (0 = no, and 1 = yes) and the new foods question was asked using a 3-level response scale (1 = almost always or always, 2 = sometimes, and 3 = almost never or never). A paired sample t-test was used to compare the differences between the pre and post surveys. None of the scores changed significantly for intervention or control students. Intervention 2 students had a significantly higher mean value of breakfast consumption than intervention 1 students ($p= 0.008$). No significant differences in breakfast consumption were found between control and intervention students. No significant differences in attitude toward new foods were found among the intervention 1, intervention 2 and control groups.

Table 7 presents the self-reported results of how often students' parents eat fruits or vegetables. Both questions were asked on a 4-level response scale (0 = never, 1 = a few days a week, 2 = most days of the week, 3 = every day). Students who answered "I do not know" were excluded from the analysis. A paired sample t-test was used to compare the differences between the pre and post surveys. There was a non-significant decrease pre to post except for parent fruit consumption among intervention 2 students. After controlling for pre-intervention data, post parent fruit consumption in the intervention 2 group was significantly higher compared to the intervention 1 group ($p=0.002$) and the control group ($p=0.008$). Likewise, post-intervention parent vegetable consumption in the intervention 2 group was significantly higher compared to the intervention 1 group ($p= 0.004$) and the control group ($p= 0.03$).

Table 8 presents the self-reported findings for students' perception of availability of fruits and vegetables at home. Both of these questions were asked on a 3-level scale (0 = never, 1 = sometimes, 2 = always). Students who answered "I don't know" were excluded from the analysis. A paired sample t-test was used to compare the differences between the pre and post surveys. A significant pre to post increase was seen in the availability of fruits at home in intervention 1 and control students. ANCOVA revealed that after controlling for pre-intervention data, post-intervention availability of fruits was higher in the intervention 2 group compared to the control group ($p=0.008$) and the intervention 1group ($p= 0.002$). Also, the post-intervention availability of vegetables was higher in the control group compared to the intervention 1 group ($p=0.003$), but not the intervention 2 group ($p=0.331$).

Additionally, we examined the total number of times students reported consuming fruits and vegetables in the prior 24 hours. These reported levels indicate inadequate consumption of fruits and vegetables for all three groups. However, ANOVA results for post only mean fruit and vegetable consumption rates indicate that intervention 2 students have significantly higher consumption levels (4.87) compared to intervention 1 students (4.35) and control students (4.17). There was no significant difference between intervention 1 and control students' post mean fruit and vegetable consumption rates even though intervention 1 students report lower availability of fruits and vegetables at home.

Evaluation #2: Impact of HOTM on K-6 Fruit and Vegetable Cafeteria Selection Based on Observations and Production Records.

Observations of Fruit and Vegetable School Lunch Salad Bar Selections

This component of our HOTM impact evaluation has a non-randomized, target/control design consisting of five consecutive days of observing school lunch selections for all K-6 grade students participating in the National School Lunch Program from seven schools in Chico Unified School District (CUSD). CUSD uses the offer vs. serve method with students given the choice to include or not include fruits and vegetables from the salad bar as part of their lunch.

Daily, the salad bar consists of broccoli, carrots, and salad mix, with a varying seasonal fruit and seasonal vegetable. On any given day, there is anywhere from five to eight fruit and vegetable options on the salad bar.

Five of the seven schools participate in the Harvest of the Month program and were matched to two demographically comparable control schools in the CUSD who do not participate in the HOTM program. A total of approximately 2,350 students were observed making selections from the school salad bar over the five day data collection period.

The data collection instrument listed the first and last names of the students, ID numbers, and grade levels in individual columns. The data collection instrument was used to record all students' selections of entrée, salad mix, broccoli, carrots, seasonal fruits, seasonal vegetables, and beverages. The observations took place in April, 2011, one month shy of the completion of the school year's Harvest of the Month intervention.

Table 9 describes the demographic characteristics of the 2,359 intervention and control K-6 students who were observed making school lunch selections in the cafeteria over a five day period. Free or Reduced (F/R) Price School Meals eligibility is used as a proxy for family income. As shown in Table 9, 84% of the intervention and 60% of the control students observed making selections from the salad bar are eligible for F/R priced school meals. These rates demonstrate a significantly higher rate for F/R price school meals eligibility among intervention vs. control students, respectively ($p<0.001$). These figures are not reflective of the overall F/R rate for participating schools. They are, instead, reflective of only those students participating in the school lunch program during our five day observation period. The average overall eligibility rate is 75% for the five intervention schools and 33% for the two control schools. Also shown in Table 9 is the frequency of school lunch participation by students during the one week observation period. The mean frequency of school lunch participation over the five day observation period was 3.8 ± 1.3 for intervention students and 3.0 ± 1.4 for control students ($p<0.001$). At 83%, a higher percent of intervention students selected a school lunch at least three days out of five compared to only 62% of control students.

Table 10 compares the number and percent of intervention and control students selecting fruits and vegetables (f/v) from the school salad bar as part of their school lunch over a five day period. The selection of both fruits and vegetables was significantly higher among intervention students in that 20% (92% intervention vs. 72% control) more intervention students selected at least one fruit and 26% (63% vs. 37%) more selected at least one vegetable from the self-serve salad bar compared to control students. A total of 96% of intervention students selected either a fruit or vegetable as part of their school lunch compared to 81% of control students. These figures are not totals for f/v selection rates since many students selected both f/v. At 29%, the difference in vegetable selection rates between intervention and control students was highest for K-3 intervention students compared to control K-3 students.

It should be noted that 63% of control students and 37% of intervention students never selected a vegetable from the salad bar over the five day observation period. Of those students selecting a school lunch every day over the five day observation period (n=755), 55% of control students (n= 66 out of 120) and 26% of intervention students (n= 165 out of 635) never selected a vegetable. This finding indicates that over half of all control students do not select or consume any vegetables from the school salad bar.

Table 11 compares the number and percent of students selecting school salad bar f/v by their status as either eligible for free or reduced price school meals (F/R; low income) or full price (paid) students. At 94% vs. 81%, significantly more intervention F/R students selected fruit than did control F/R students, respectively ($p<0.001$). Significantly more paid intervention students vs. paid control students (81% vs. 59%, respectively) selected fruit from the salad bar. At 64% vs. 38%, significantly more intervention F/R students selected vegetables compared to control F/R students, respectively ($p<0.001$). Significantly more paid intervention students selected vegetables from the salad bar compared to paid control students, 58% vs. 36%, respectively ($p<0.001$).

Within the intervention group, significantly more F/R students selected both vegetables (64% vs. 58%) and fruits (94% vs. 81%) compared to paid students, respectively. In summary, 13% more F/R intervention students selected fruit compared to F/R control students whereas 26% more selected vegetables. It is notable that 90% of paid intervention students selected a fruit and/or vegetable over the observation period compared to 72% of paid control students. Students were excluded from the findings presented in Table 11 if their eligibility was not known (n=5).

School Foodservice Production Records

The data for this component of our impact evaluation are derived from production records completed by foodservice staff at each of the participating schools. The production records (PR) represent food produced to meet the needs of all students who purchase or qualify for free meals from the cafeteria. The PR include: type and quantity of food initially prepared, served, and left over. The total number of students served is determined by the number of entrees

served. The total number of fruit and vegetables servings selected is determined by the difference between the number of portions prepared and the number of portions left over. Thus, school cafeteria production records serve as proxy for cafeteria fruit and vegetable selection and can be used to confirm findings from the observation data.

This section presents school cafeteria production record findings for two consecutive years, 2009-2010 and 2010-2011. The findings for the 2009-2010 year were included in the 2010 IOE report. They are included again here in order to provide a more comprehensive view of the impact of the HOTM program on intervention students.

The pre and post production record data for the 09-10 year were collected from 2 control schools and 2 intervention schools over a period of ten days for each school (resulting in 20 data points for both control and intervention). The pre and post production records for the 10-11 year were taken from 2 control schools and 5 intervention schools; the pre-records were taken for 15 days, and the post records were taken for 14 days (resulting in 29 and 28 data points for the control schools for the pre and post, respectively, and 76 and 70 data points for the intervention schools for pre and post, respectively).

Results were obtained by taking the mean ratio of non-entrée fruit and vegetable servings (i.e. items taken from the salad bar that were self-selected) to total number of entrées served (our proxy for number of students served). Grape servings were omitted for both groups, due to inability to determine quantity served from information provided.

Pre measurements of vegetable selection significantly differed (t-tests give a p-value <0.001), with control students selecting 0.6 servings of vegetables and intervention students selecting 0.9 servings of vegetables for every entrée. In post measurements, intervention students increased vegetable selection by 0.1 servings, while control students stayed constant in selection.

Intervention students selected approximately the same number of servings of fruit in pre measurements (no significant difference), 0.7 servings for every entrée, but in post measurements, intervention students remained constant in selection, while control students decreased by 0.2 servings, to 0.5 servings (also not significantly different).

In pre measurements for the 10-11 school year, intervention students selected approximately 1.6 servings of fruits and vegetables, while control students selected approximately 1.3 servings for every entrée. In post measurements, the overall ratio increased by 0.1 servings for the intervention schools, and decreased by 0.2 servings for the control schools. An independent t-test showed significant differences in pre measurements (p-value = 0.02), while another test showed a greater difference of 0.6 servings in post measurements (p-value <0.001). This finding indicates that by the end of 10-11 school year, intervention students selected approximately 1.5 times as many servings of fruits and vegetables compared to control schools.

The results from the 09-10 IE differ slightly than the ones given below in Figures 4, 5 and 6. In last year's report, the mean number of fruit and vegetable servings per entrée were higher than the numbers reported below. The discrepancy is because different criteria were used for comparing mean ratios. For example, sack lunches were included as entrées, and marinara sauce was included as a vegetable. For this study, we decided to remove those, as sack lunches didn't indicate selection because students were not given a choice in the cafeteria. Marinara sauce was removed because it is considered a condiment, rather than a vegetable, in menu planning by the foodservice director of Chico Unified School District. In order to maintain congruency, we analyzed the data from the 09-10 year the same way as the 10-11 year.

When looking at vegetable consumption, we see that the overall trend for intervention schools was an increase of 0.3 servings (from 0.7 to 1.0), while for control schools, the overall trend was to stay constant (0.6 servings). This finding indicates that by the end of the intervention in April 2011, on average, an intervention student selects 1.7 times more vegetables than a control student. Looking at fruit selection over the two year period, figure 5 shows that while fruit selection initially dropped for the intervention schools, the overall trend was to stay constant (staying at 0.7 servings from 2009 August records to the 2011 April records), while the overall trend for the control schools dropped by 0.1 servings, from 0.6 servings to 0.5 servings. By the end of the intervention in April 2011, intervention students were choosing 1.4 times more fruit than control students. From the figure showing both years together, we see that students at control schools have consistently selected fewer salad bar items than students at intervention schools. They have also trended downward from pre to post, while intervention schools stayed constant for the 2009-2010 year and increased for the 2010-2011 year. To reiterate from above, the final difference (2011 April records) between control and intervention schools is 0.6 servings of fruits and vegetables for every entrée selected. By the end of the intervention in April 2011, the intervention students were choosing 1.5 times as many fruit and vegetable servings than control students. The overall increase for intervention schools (from 2009 August records to 2011 April records) is 0.3 servings; for control schools, the same range indicates a 0.1 decrease.

Evaluation #3: Impact of Various Marketing Strategies on Milk Selection and Consumption in SCNAC elementary Schools.

Milk Selection and Consumption in SCNAC elementary Schools.

In addition to fruit and vegetable observations, students were observed for milk selection in a pre-post cluster-randomized control trial in three HOTM participating elementary school in Chico Unified School District. Two interventions were implemented at separate schools to influence students' choice toward white milk as opposed to chocolate. The first intervention placed chocolate milk behind the lunch-line counter, with white milk easily accessible in front. A poster indicated to the students that if they wanted chocolate milk, they would have to ask for it. A researcher would provide the student with chocolate milk only if they asked. The second intervention tripled the displayed number of white milk cartons compared to chocolate. Pre data were collected over five days per school, followed by five days during the intervention period. Students were matched by ID number from pre to post.

Table 12 describes the demographic characteristics of the three schools. All three schools receive the Harvest of the Month program, classifying them as low income based on eligibility rates, and are located in one school district. Kindergarten students were excluded based on their inability to read the poster as part of the first intervention (*Ask for Chocolate Milk*).

Table 13 compares the total number and percent of students selecting white milk at least one time over the course of the pre and post intervention periods. At the school where students were required to "*Ask for Chocolate Milk*", approximately 1/3 of students selected white milk at least one time at pre compared to nearly 1/2 of students during the intervention period ($p<0.001$). At the school where students were exposed to an "*Increased White Milk Quantity*" compared to chocolate, there was no significant difference between the number of students selecting white milk at pre compared to the intervention period ($p = 0.69$). The control school experienced no significant difference from pre to post ($p = 1.00$).

Table 14 reports the odds ratio of students selecting white milk at the intervention schools compared to the control school by using binary logistic regression. At the first intervention school where students were required to *"Ask for Chocolate Milk"*, the odds of students selecting white milk was 3.81 (2.4 – 6.1) times higher compared to the control school after controlling for the pre-intervention data as a covariate ($p < 0.001$). At the second intervention school where students were exposed to an *"Increased White Milk Quantity,"* the odds of students selecting white milk was 1.51 (0.85 – 2.70) times higher compared to the control school ($p = 0.159$). Among more frequent participants of the NSLP (≥ 3 days), significant and non-significant findings between control and intervention students remained the same.

Table 15 compares the average percent of student selection of white milk out of total milk selected. A paired samples t-test determined a significant difference of 8.9% from pre to post in the "*Ask for Chocolate Milk*" intervention group ($p< 0.001$). There was no significant difference in the *"Increased White Milk Quantity"* intervention ($p= 0.366$) or control groups ($p= 0.915$).

ANCOVA compared the average post-intervention percent of students selecting white milk between the intervention and control school using pre measurements as a covariate. Students required to *"Ask for Chocolate Milk"* selected white milk with 32.8% (+/- 41.3%) of their meals, a significant difference from control students at 16.7% (+/- 33.9%) ($p < 0.001$). Students exposed to an *"Increased Quantity of White Milk"* did not select white milk more frequently compared to control students ($p = 0.163$).Among more frequent participants of the NSLP (≥ 3 days), significant and non-significant findings remained the same.

Assessment of Milk Consumption

The purpose of this experiment was to influence students' beverage selection toward white milk as opposed to chocolate. The concern of removing chocolate milk from the lunch menu is that children will not drink white milk, and therefore not meet their daily calcium requirement. To dispute the assumption that students would not drink white milk if convinced to select it, consumption analysis was done to measure milk waste and, consequently, milk consumption. For each day of observations, students discarded their milk in segregated white milk and chocolate milk trash cans. Discarded milk containers were counted and the waste was weighed.
The average pre and post white milk cartons counted and weighed in the "*Ask for Chocolate Milk*" intervention group was 49 and 64, respectively. The average pre and post white milk cartons counted and weighed in the "*Increased White Milk Quantity*" intervention group was 36 and 35, respectively. The average white milk carton counted and

weighed in the control group was 41 for both pre and post.

Table 16 compares the pre and post five-day average milk consumed out of the total milk selected. This analysis was conducted from the measured waste and number of cartons collected. A paired sample t-test revealed no significant difference in white milk consumption from pre to post among students required to *"Ask for Chocolate Milk"* ($p = 0.61$). Though significantly more students selected white milk, milk waste did not change, indicating that students will drink white milk if convinced to select it. Both *"Increased White Milk Quantity"* and the control school did not change white milk consumption from pre to post.

b. Description of how evaluation results will be used:

Our study demonstrated significant pre to post changes in familiarity with and preferences for some of the HOTM fruits and vegetables among intervention students. A significant pre to post change in familiarity with sweet potato in the intervention group indicates the importance of introducing fruits and vegetables that may not be commonly consumed among our program participants. On the other hand, no significant pre to post change in preference for sweet potato suggests that it takes time to influence students' preference after a new food is introduced and repeated exposure to the same fruits and vegetables may be needed. In addition, using various recipes may be needed to increase preferences for newly introduced fruits and vegetables.

While the observation data demonstrate that the selection of fruits and vegetables at a school cafeteria was significantly higher in the intervention group compared to the control group, we found no significant difference in the self-reported fruit and vegetable consumption on the previous day (which includes consumption in school and at home) between the intervention and control groups. The survey also revealed that fruit and vegetable availability at home was significantly lower in the intervention group compared to the control group. These findings indicate that more parent involvement in the HOTM program is needed to change the availability and consumption of fruits and vegetables at home. Because parent fruit and vegetable consumption at home doesn't appear to differ between the intervention and control groups, the emphasis should be given to child feeding practices among parents.

7. Point of Contact

Name:	Cindy Wolff, Keiko Goto & Stephanie Bianco-Simeral
Phone Number:	5308985288
Email Address:	cwolff@csuchico.edu

8. Relevant Journal References

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

The following articles describe the intervention we conducted previously (but not this year).

Cheung B, Wolff C, Bianco-Simeral S, Goto K. Fruit and Vegetable Program Supports Nutrition Related Changes for Students and Teachers. CA Dietetic Association Annual Meeting, 2011.

Waite A, Wolff C, Goto K, Frigaard M, Bianco-Simeral S. Impact of Harvest of the Month Program on School Cafeteria Lunch Selection Among K-6 Students CA Dietetic Association Annual Meeting, 2011.

Trivedi P, Goto K, Bianco-Simeral S, and Wolff C. Promoting Fruit and Vegetable Attitudes among Low-income Hispanic and White Elementary School Students. J of Nutr Educ and Behav. Vol. 43, Issue 4S1, Pages S15-S16, 2011.

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

The following articles describe the intervention we conducted previously (but not this year).

Voorhees J, Goto K, Bianco-Simeral S, Wolff C. Impact of the Harvest of the Month Program on Low-income Hmong and White Middle School Students. J of Nutr Educ and Behav. Vol. 43, Issue 4, Supplement 2, Pages S152-S154, 2011.

Wood L, Wolff C, Bianco-Simeral S, Goto K. Impact of a Kindergarten through Eighth-Grade Nutrition Education Program on Student, Teacher, and Schoolwide Practices J of Nutr Educ and Behav. Vol. 43, Issue 4, Supplement 2, Pages S145-S147, 2011.

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 Accepted for publication in the Californian Journal of Health Promotion.

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

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

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

Cullen K, Baranowski T, et al. Availability, accessibility, and preferences for fruit, 100% fruit juice, and vegetables influence children's dietary behavior. Health Educ Behav 2003; 30(5): 615-26.

Domel, S. B., T. Baranowski, et al. (1993). Measuring fruit and vegetable preferences among 4th- and 5th-grade students. Prev Med 22(6): 866-79.

Baxter, S. D. and W. O. Thompson (2002). Fourth-grade children's consumption of fruit and vegetable items available as part of school lunches is closely related to preferences. J Nutr Educ Behav 34(3): 166-71.

Table 1. Demographic Characteristics of Intervention and Control School Participants

	Intervention 1 (n-418)[a]		Intervention 2 (n-149)[b]		Control (n=376)[c]	
	No.	%	No.	%	No.	%
Grade						
4	163	39	52	35	119	32
5	173	41	46	31	134	36
6	82	20	51	34	123	32
Gender						
Male	224	54	67	45	181	48
Female	194	46	82	55	195	52
Race/Ethnicity						
White (non-Hispanic)	109	26	108	73	227	61
Latino	195	47	20	13	71	19
American Indian/Alaskan Native	17	4	2	1	15	4
African American	10	3	1	1	5	1
Asian	46	11	0	0	7	2
Native Hawaiian/ Other Pacific Islander	5	1	1	1	6	2
Other	31	8	16	11	40	11

[a] N varies from 413 to 418 by variable.

[b] N varies from 148 to 149 by variable.

[c] N varies from 371 to 404 by variable.

Table 2. Number and Percent of Intervention and Control Students Familiar with HOTM Fruits and Vegetables

	Intervention 1								
	Pre				Post				
	Know		Don't Know		Know		Don't Know		*p* value
HOTM Fruits and Vegetables	No.	%	No.	%	No.	%	No.	%	
Broccoli	414	99	1	1	414	99	1	1	1.000
Oranges	412	100	0	0	412	100	0	0	1.000
Sweet Potatoes	368	90	39	10	387	95	20	5	0.009
Kiwi	403	99	2	1	403	99	2	1	1.000
Spinach	380	95	19	5	386	97	13	3	0.327
Carrots	399	99	4	1	403	100	0	0	0.125
Strawberries	412	99	1	1	413	100	0	0	1.000
	Intervention 2								
	Pre				**Post**				
	Know		**Don't Know**		**Know**		**Don't Know**		***p* value**
HOTM Fruits and Vegetables	No.	%	No.	%	No.	%	No.	%	
Broccoli	148	99	1	1	148	99	1	1	1.000
Oranges	148	100	0	0	147	99	1	1	1.000
Sweet Potatoes	136	92	12	8	144	98	4	2	0.057
Kiwi	138	94	9	6	144	98	3	2	0.070
Spinach	138	95	7	5	144	99	1	1	0.031
Carrots	147	100	0	0	146	99	1	1	1.000
Strawberries	149	100	0	0	148	99	1	1	1.000
	Control								
	Pre				**Post**				
	Know		**Don't Know**		**Know**		**Don't Know**		***p* value**
HOTM Fruits and Vegetables	No.	%	No.	%	No.	%	No.	%	
Broccoli	369	99	4	1	372	99	1	1	0.250
Oranges	372	99	1	1	372	99	1	1	1.000
Sweet Potatoes	342	92	28	8	350	95	20	5	0.280
Kiwi	353	96	16	4	357	97	12	3	0.481
Spinach	334	93	26	7	344	96	16	4	0.064
Carrots	369	100	0	0	369	100	0	0	1.000
Strawberries	372	99	1	1	372	99	1	1	1.000

Table 3. Pre To Post Changes in Fruit and Vegetable Preferences and Screen Time Between Intervention and Control Groups

	Intervention 1			Intervention 2			Control		
	Mean ± SD		*p* value*	Mean ± SD		*p* value*	Mean ± SD		*p* value*
Preferences:	Pre	Post		Pre	Post		Pre	Post	
Broccoli	1.17 ± 0.73	1.18 ± 0.74	0.774	1.32 ± 0.74	1.28 ± 0.75	0.367	1.23 ± 0.71	1.28 ± 0.71	0.174
Oranges	1.81 ± 0.46	1.84 ± 0.43	0.154	1.61 ± 0.61	1.71 ± 0.57	0.004	1.67 ± 0.60	1.68 ± 0.59	0.670
Sweet Potatoes	0.99 ± 0.80	0.92 ± 0.81	0.133	0.93 ± 0.84	0.87 ± 0.87	0.327	1.00 ± 0.83	1.02 ± 0.81	0.696
Kiwi	1.66 ± 0.63	1.74 ± 0.58	0.002	1.46 ± 0.79	1.53 ± 0.74	0.114	1.33 ± 0.82	1.43 ± 0.79	0.001
Spinach	0.91 ± 0.81	0.98 ± 0.80	0.081	0.78 ± 0.77	0.92 ± 0.78	0.016	0.89 ± 0.83	0.90 ± 0.79	0.820
Carrots	1.57 ± 0.58	1.61 ± 0.58	0.238	1.48 ± 0.65	1.58 ± 0.62	0.061	1.48 ± 0.68	1.53 ± 0.64	0.109
Strawberries	1.88 ± 0.42	1.92 ± 0.31	0.018	1.85 ± 0.44	1.95 ± 0.28	0.003	1.82 ± 0.50	1.85 ± 0.47	0.139
	Intervention 1			Intervention 2			Control		
	Mean ± SD			Mean ± SD			Mean ± SD		
Statement:	Pre	Post	*p* value	Pre	Post	*p* value	Pre	Post	*p* value
During the past 24 hrs I spent ____ hrs in front of the TV, computer &/or video games.	1.99 ± 1.67	1.96 ±1.55	0.776	2.13 ± 1.49	1.92 ± 1.47	0.104	1.85 ± 1.50	1.83 ± 1.46	0.791

Table 4. Pre to Post Changes in Consumption between Intervention and Control Students

Statement: Yesterday, how many times did you…	Intervention 1 Mean ± SD Pre	Intervention 1 Mean ± SD Post	*p* value*	Intervention 2 Mean ± SD Pre	Intervention 2 Mean ± SD Post	*p* value*	Control Mean ± SD Pre	Control Mean ± SD Post	*p* value*
Milk	1.67 ± 0.98	1.79 ± 0.91	0.006	1.60 ± 1.07	1.70 ± 1.06	0.235	1.62 ± 0.99	1.64 ± 0.97	0.677
Yogurt	0.72 ± 0.86	0.69 ± 0.82	0.620	0.72 ± 0.83	0.74 ± 0.90	0.799	0.68 ± 0.76	0.71 ± 0.79	0.442
Cereal	0.85 ± 0.72	0.84 ± 0.71	0.722	0.77 ± 0.70	0.77 ± 0.76	1.000	0.64 ± 0.66	0.75 ± 0.71	0.015
French Fries	0.73 ± 0.86	0.79 ± 0.83	0.242	0.57 ± 0.73	0.68 ± 0.81	0.123	0.61 ± 0.69	0.62 ± 0.70	0.759
Eat vegetables?	2.10 ± 1.51	2.10 ± 1.50	0.948	2.09 ± 1.51	2.40 ± 1.45	0.017	1.84 ± 1.47	2.00 ± 1.43	0.023
Eat fruit?	2.26 ± 1.61	2.25 ± 1.47	0.910	2.06 ± 1.50	2.47 ± 1.56	0.005	1.82 ± 1.36	2.17 ± 1.41	0.001
Punch	0.97 ± 0.92	0.90 ± 0.92	0.159	0.75 ± 0.95	0.75 ± 0.91	1.000	0.73 ± 0.89	0.83 ± 0.89	0.052
Fruit Juice	1.47 ± 1.41	1.37 ± 1.26	0.177	1.20 ± 1.22	1.25 ± 1.27	0.677	1.13 ± 1.27	1.17 ± 1.29	0.586
Water	3.94 ± 1.34	4.10 ± 1.26	0.028	3.86 ± 1.45	4.00 ± 1.34	0.198	4.00 ± 1.35	4.01 ± 1.32	0.862
Soda	0.67 ± 0.89	0.70 ± 0.86	0.520	0.57 ± 0.79	0.58 ± 0.84	0.865	0.39 ± 0.67	0.48 ± 0.71	0.028
Sweets	0.74 ± 0.95	0.66 ± 0.80	0.162	0.67 ± 0.88	0.96 ± 0.91	0.001	0.52 ± 0.75	0.57 ± 0.81	0.307

Table 5. Pre to Post Changes in Physical Activity Levels between Intervention and Control Students

Statement:	Intervention 1 Mean ± SD Pre	Intervention 1 Mean ± SD Post	*p* value*	Intervention 2 Mean ± SD Pre	Intervention 2 Mean ± SD Post	*p* value*	Control Mean ± SD Pre	Control Mean ± SD Post	*p* value*
Physical Activity: 60 min	3.62 ± 2.58	3.70 ± 2.59	0.510	4.25 ± 2.34	5.08 ± 2.08	<0.001	3.55 ± 2.35	4.38 ± 2.39	<0.001
Physical Activity: 30 min	3.42 ± 2.53	3.48 ± 2.54	0.668	4.06 ± 2.34	4.71 ± 2.24	0.003	3.40 ± 2.44	4.39 ± 2.40	<0.001

Table 6. Pre to Post Changes in Breakfast Consumption and Attitude Toward New Foods Between Intervention and Control Students

Statement:	Intervention 1 Mean ± SD Pre	Intervention 1 Mean ± SD Post	Intervention 1 *p* value*	Intervention 2 Mean ± SD Pre	Intervention 2 Mean ± SD Post	Intervention 2 *p* value*	Control Mean ± SD Pre	Control Mean ± SD Post	Control *p* value*
Yesterday, did you eat breakfast?	0.88 ± 0.33	0.87 ± 0.34	0.580	0.94 ± 0.24	0.95 ± 0.23	0.797	0.89 ± 0.32	0.90 ± 0.30	0.600
I like to try new foods.	1.32 ± 0.55	1.28 ± 0.54	0.126	1.26 ± 0.60	1.26 ± 0.60	0.879	1.31 ± 0.53	1.30 ± 0.56	0.852

Table 7. Comparison of Pre to Post Changes in Parent Fruit and Vegetable Consumption Between Intervention and Control Students

Statement:	Intervention 1 Mean ± SD Pre	Intervention 1 Mean ± SD Post	Intervention 1 *p* value*	Intervention 2 Mean ± SD Pre	Intervention 2 Mean ± SD Post	Intervention 2 *p* value*	Control Mean ± SD Pre	Control Mean ± SD Post	Control *p* value*
How often do your parents eat fruit?	2.37 ± 0.77	2.29 ± 0.74	0.107	2.39 ± 0.65	2.53 ± 0.60	0.046	2.42 ± 0.71	2.33 ± 0.79	0.107
How often do your parents eat vegetables?	2.44 ± 0.75	2.37 ± 0.74	0.106	2.47 ± 0.72	2.57 ± 0.64	0.090	2.46 ± 0.69	2.42 ± 0.68	0.337

Table 8. Pre to Post Changes in Fruit and Vegetable Availability at Home Between Intervention and Control Groups

Statement:	Intervention 1 Mean ± SD Pre	Intervention 1 Mean ± SD Post	Intervention 1 *p* value*	Intervention 2 Mean ± SD Pre	Intervention 2 Mean ± SD Post	Intervention 2 *p* value*	Control Mean ± SD Pre	Control Mean ± SD Post	Control *p* value*
At your home do you have fruits to eat?	1.69 ± 0.47	1.77 ± 0.45	0.003	1.85 ± 0.36	1.87 ± 0.33	0.579	1.75 ± 0.43	1.84 ± 0.38	0.001
At your home do you have vegetables to eat?	1.69 ± 0.49	1.71 ± 0.47	0.581	1.80 ± 0.42	1.80 ± 0.42	0.848	1.74 ± 0.45	1.81 ± 0.40	0.003

Table 9. Demographic Characteristics of K-6 Students Observed During Cafeteria Lunch

	Intervention		Control	
	No.	%	No.	%
Number of Students Observed	1692	72	667	28
Grade				
Kindergarten	153	9	14	2
1st	274	16	129	19
2nd	253	15	122	18
3rd	254	15	99	15
4th	288	17	116	17
5th	229	14	97	15
6th	241	14	90	14
Total	1692	100	667	100
Eligibility of Students Observed				
Free	1277	76	324	49
Reduced Price	136	8	73	11
Paid	274	16	270	40
Number of Days of Cafeteria Lunch/Week*				
One Day	142	8	157	24
Two Days	157	9	95	14
Three Days	246	15	120	18
Four Days	515	30	175	26
Five Days	635	38	120	18

*Mean frequency of school lunch per week for Intervention students = 3.8 ± 1.3 and Control students = 3.0 ± 1.4

Table 10. Higher Rates of Salad Bar Fruit & Vegetable Selections for Intervention Students vs. Control Students Do Not Differ by Grade

	Intervention (n=1692)				Control (n=667)				*p* value
	Yes		No		Yes		No		
	No.	%	No.	%	No.	%	No.	%	
Vegetables									
K - 3	593	64	341	36	127	35	237	65	< 0.001
4 - 6	480	63	278	37	122	40	181	60	< 0.001
Total	1073	63	619	37	249	37	418	63	< 0.001
Fruits									
K - 3	868	93	66	7	256	70	108	30	< 0.001
4 - 6	693	91	65	9	224	74	79	26	< 0.001
Total	1561	92	131	8	480	72	187	28	< 0.001
Total Fruits and/or Vegetables									
K - 3	901	97	33	3	285	78	79	22	< 0.001
4 - 6	724	96	34	4	253	84	50	16	< 0.001
Total	1625	96	67	4	538	81	129	19	< 0.001

Table 11. Significantly More Free/Reduced Price Intervention Students Select Fruits and Vegetables from the School Salad Bar

	Intervention (n=1687)				Control (n=667)				*p* value
	Yes		No		Yes		No		
	No.	%	No.	%	No.	%	No.	%	
Vegetables									
Free/Reduced Price	909	64	504	36	152	38	245	62	< 0.001
Paid	160	58	114	42	97	36	173	64	< 0.001
Total	1069	63	618	37	249	37	418	63	< 0.001
Fruits									
Free/Reduced Price	1333	94	80	6	320	81	77	19	< 0.001
Paid	223	81	51	19	160	59	110	41	< 0.001
Total	1556	92	131	8	480	72	187	28	< 0.001
Total Fruits and/or Vegetables									
Free/Reduced Price	1374	97	39	3	343	86	54	14	< 0.001
Paid	246	90	28	10	195	72	75	28	< 0.001
Total	1620	96	67	4	538	81	129	19	< 0.001

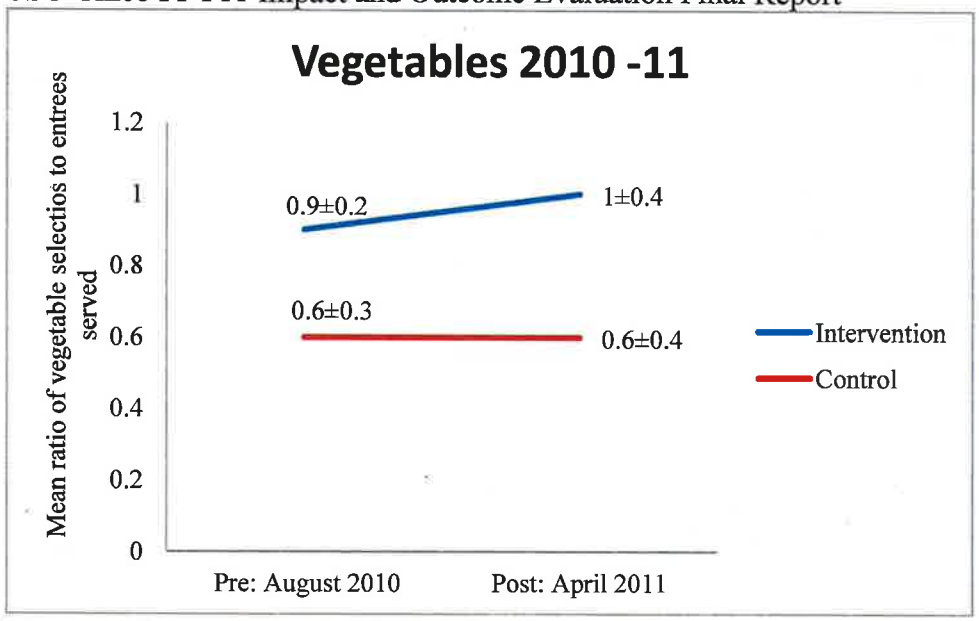


Figure 1. Intervention students select significantly more vegetable servings compared to control students

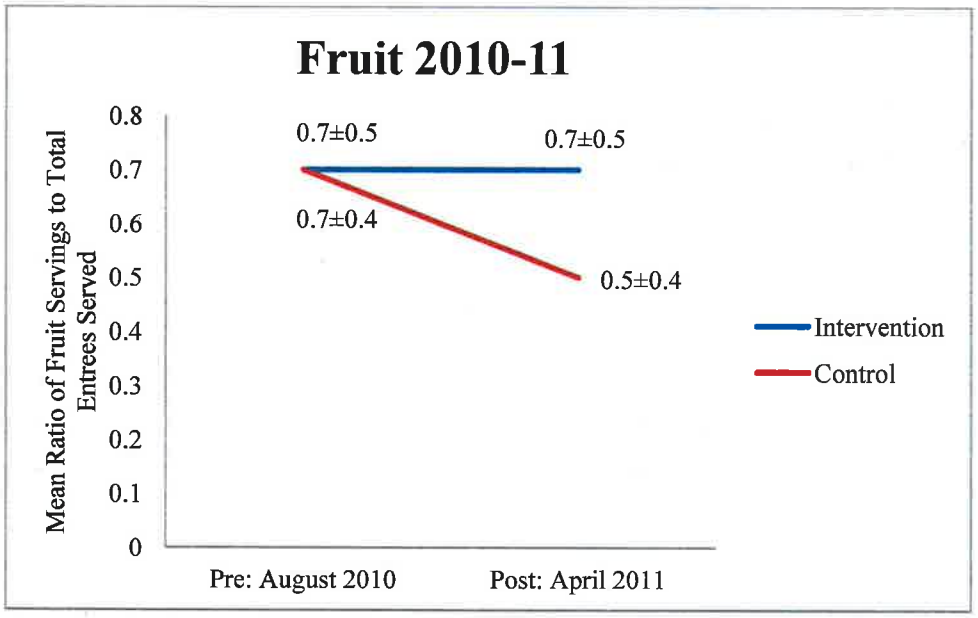


Figure 2. Intervention students select 0.2 servings more than control students in post 10-11 measurements

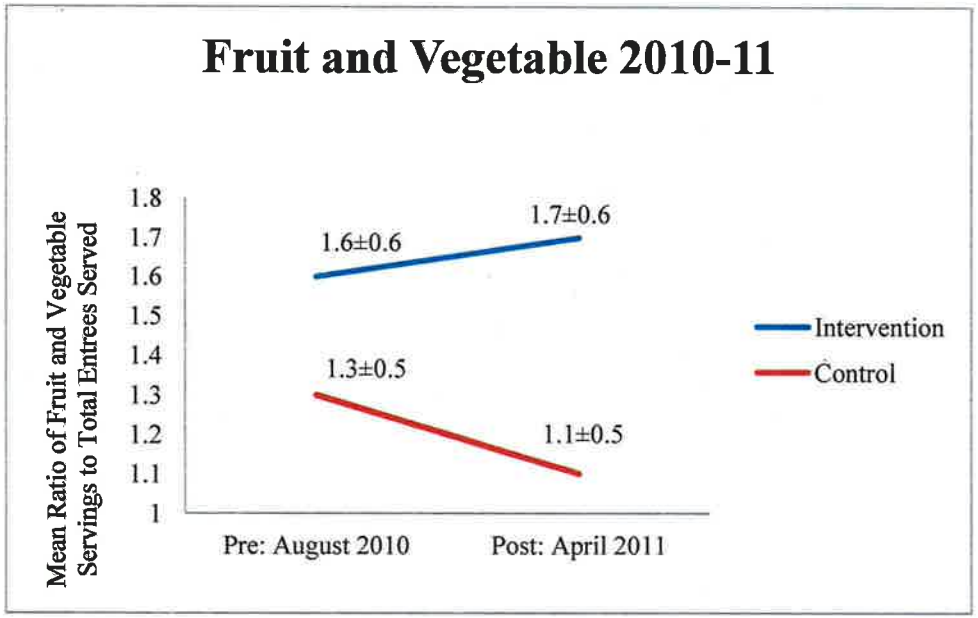


Figure 3. Intervention students select significantly more f/v after 10-11 HOTM intervention compared to control students

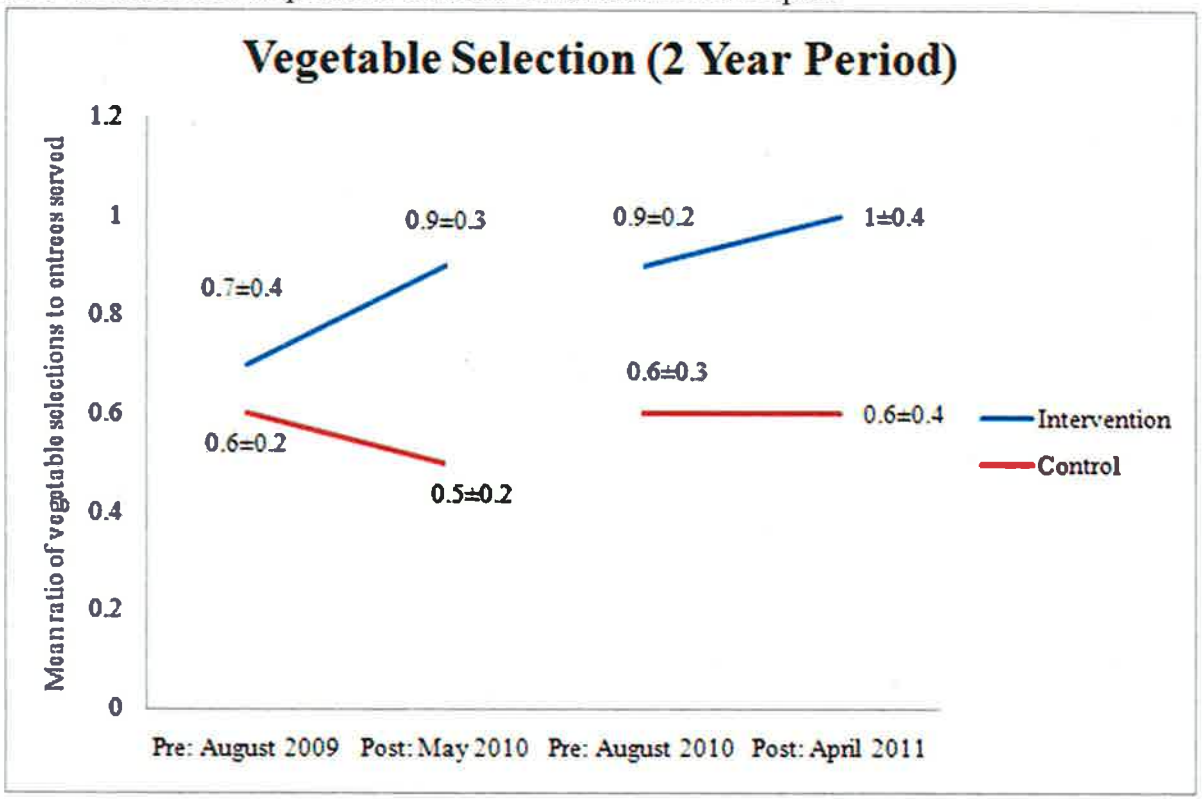


Figure 4. Intervention students consistently select more vegetables than control students

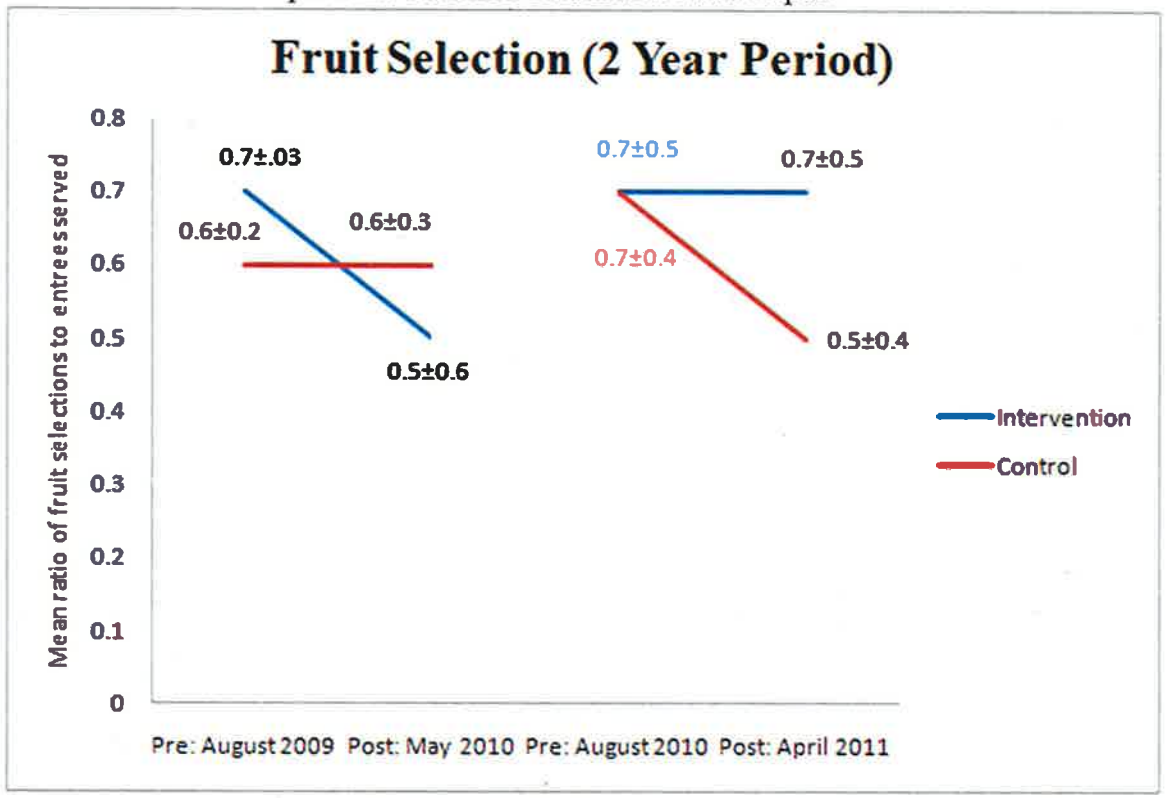


Figure 5. The long term trend shows intervention students select more fruit compared to control students

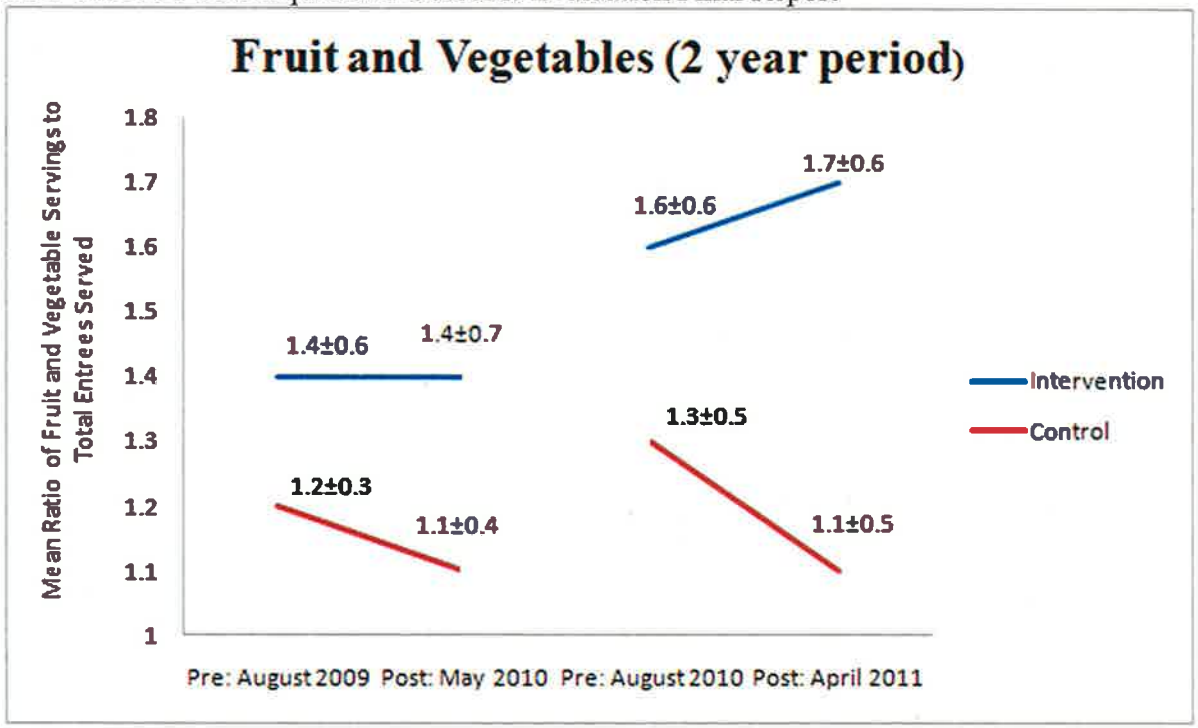


Figure 6. Intervention students select significantly more fruits and vegetables than control students over a two year period

Table 12. Demographic Characteristics of First through Sixth Grade Students Observed During Cafeteria Lunch

	Intervention One *Ask for Chocolate Milk*		**Intervention Two** *Increased White Milk Quantity*		**Control**	
	No.	**%**	**No.**	**%**	**No.**	**%**
Number of Students Observed	247	36	153	23	277	41
Grade						
1st	45	18	22	14	53	19
2nd	41	17	27	18	28	14
3rd	29	12	32	21	53	19
4th	48	19	34	22	47	17
5th	44	18	18	12	42	15
6th	40	16	20	13	44	16
Total	247	100	153	100	277	100

Table 13. Comparison of Number of Students Selecting White Milk at Least One Time During the Week of Observations

	Pre		**Post**		**Change**		***p* value***
	No.	**%**	**No.**	**%**	**No.**	**%**	
Intervention One: *Ask for Chocolate Milk*	74	30	118	48	44	18	< 0.001
Intervention Two: *Increased White Milk Quantity*	50	33	53	35	3	2	0.69
Control School	64	23	65	24	1	1	1.00

*Significance determined using McNemar

Table 14. Requiring Students to Request Chocolate Milk vs. Self-Serve Significantly Reduces Selection

	Odds Ratio*	**95% CI**	***p* value****
Intervention One: *Ask for Chocolate Milk*	3.81	2.4 - 6.1	< 0.001
Intervention Two: *Increased White Milk Quantity*	1.51	0.85 - 2.70	0.159

*Odds ratio in comparison to control group
**Significance determined using binary logistic regression

Table 15. Students Required to Ask for Chocolate Milk Select White Milk More Frequently than Control Students

	Percent of White Milk Selected Out of Total Milk Selections				
	N	Pre (%)	Post (%)	Difference (%)	*p* value*
Intervention One: *Ask for Chocolate Milk*	247	23.9 +/- 40.1	32.8 +/- 41.3	8.9	< 0.001
Intervention Two: *Increased White Milk Quantity*	153	24.3 +/- 38.9	25.8 +/- 39.8	1.5	0.366
Control School	277	16.9 +/- 34.4	16.7 +/- 33.9	-0.2	0.915

*Significance determined using a paired samples t-tests

Table 16. No Change in White Milk Consumption

	White Milk			
	Pre	Post	% Change	*p* value
	Mean % ± SD	Mean % ± SD		
Intervention One: *Ask for Chocolate Milk*	50.4 +/- 4.7	49.4 +/- 6.1	-1.0	0.61
Intervention Two: *Increased White Milk Quantity*	57.7 +/- 4.2	58.2 +/- 10.6	1.2	0.91
Control School	53.7 +/- 3.3	51.2 + /- 12.0	-2.5	0.68

Network-funded contractor:	Del Norte USD - 09-11223
Contract number:	09-11223
Information provided by :	Deborah Kravitz
Telephone:	707-464-0273
Date:	7/25/2011
Email:	dkravitz@delnorte.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Del Norte USD Elementary
Target Population:	9-10 year olds; 4th & 5th grade students

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
PowerPlay!	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Monthly Harvest of the Month lessons as well as weekly garden-based nutrition education lessons are provided for the majority of the 4th & 5th grade classrooms that participated in the evaluation. Once a month a nutrition educator provides a lesson on the specific fruit or vegetable featured and the weekly garden-based lessons include a different seasonal fruit, vegetable, herb or physical activity. In addition, the 4th & 5th grade classrooms participated in the Power Up with Fruits & Vegetables Power Play/HOTM workbooks. All nutrition lessons utilized are from approved and recommended Network curricula and focus on the California Health Education Content Standards, specifically focusing on the Nutrition Competencies. In addition, nutrition education during salad bar/lunch times (Color Cafe /Cafeteria Connections) takes place, food demonstrations/taste testing, Educator and Family HOTM Newsletter, Posters, Power Play!, teacher trainings, and physical activity promotion. School Libraries are provided with several featured HOTM related literature books, classrooms are encouraged to participate in Healthy Challenges such as seasonal celebrations like Harvest (Fall) and Valentine's Day (Spring). School site parent newsletters incorporate a nutrition/p.a. related article on occasion and nutrition is promoted during school events such as Back to School/Open Houses and special events like International/World Day, Spring Arts Festivals, etc.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Physical activity is incorporated in our classroom nutrition lessons as well as the garden-based nutrition lessons. Teachers participate in "Mileage Club" p.a. promotion during recess and lunch periods. Teachers are provided with staff training on p.a. yearly and provided with curriculum and materials to assist them in the promotion of p.a. and classroom energizers. Based on our geography, students spend an abnormal amount of time in the winter and spring indoors due to rainfall and the fact that our school district only employs one physical education specialist, p.a. is an ongoing concern and priority for us. In the spring, the Network sponsors the annual Nutrition Adventures Day for 4th & 5th graders where they participate in p.a. activities with nutrition education. Finally, many of the elementary schools hold a field day with nutrition education (last week/day of school).

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Network nutrition education and garden-based staff hold monthly staff meetings to plan and discuss upcoming HOTM and garden-based nutrition education lessons. Staff working with like school age youth/classes i.e. preschool, primary, secondary, middle school and high school will discuss lesson ideas and literature books as well as the Power Up Your Harvest Lesson materials for that month. All Network staff participated in a training conducted by the Network Staff on "Weaving Nutrition Education into the School Day" In addition, staff have participated in a video teleconference on "Following the Tracks to Educational Achievement, Understanding the CA Health Education Content Standards". Staff have been instructed on Network Approved and Recommended Curricula and various resources that are available to us for use such as lesson plans, i.e. L.A. Collaborative materials, etc. We have coordinated with our regional partners through the Northcoast Nutrition and Fitness Collaborative (6 north coast counties) on our HOTM featured fruits and vegetables to standardize the schedule as well as developed the Power Up Your Harvest workbooks to provide for standardization of some of the educational materials used in our intervention.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

All classrooms/students surveyed during the pre survey and post survey times were conducted within a one week time frame. In addition, the surveys were administered by the Network Staff and utilized a "Read Aloud" method with classroom teacher assistance. Students were instructed to not work ahead and follow along with the nutrition staff member readings. Students instructed to verify student numbers on surveys, collected, and put into folder labeled with date, classroom, and number of students completing pre survey. Surveys were coded for their response. This process was repeated for the post surveys and once coded, surveys were then matched. All unmatched surveys were kept in the file. Those surveys matched were then entered into the template provided to us by the Evaluation Unit.

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 100 elementary (4th & 5th) grade students who participated in Del Norte USD Elementary 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?

classrooms

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

a. Intervention:	Convenience Sample
b. Control:	

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.

	First Administered	Last Administered
Pre-test:	9/28/2010	10/8/2010
Post-test:	6/1/2011	6/7/2011
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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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 Foods & Beverages: Overall we saw no change in consumption of healthy foods and beverages. When looking individually at the specific questions, it is interesting to note that the largest negative difference between the tests appears in Question 10, Water. Specifically, Q. 3 and 4 (Milk, Yogurt/cheese) showed a very slight increase in consumption, however not significant and not necessarily one that we can attribute to our intervention. Q. 5, Cereal did show a significant increase in consumption between pre and post surveys with a difference of 0.19, P-Value of 0.001. Still, students are indicating that they are eating cereal almost 1 time a day. I am not sure that we can attribute this solely to our intervention even though we do emphasize the importance of eating breakfast and offer a universal breakfast program to our students free of charge. Q. 7, 8 -Vegetable and Fruit consumption showed a slight increase

between surveys however not significant. This is disappointing in that the main staple of our nutrition education and garden-based education focuses around the HOTM program and fruits/vegetables. Q.10-Juice showed a slight decrease in consumption but not significant. Students indicated that they drank juice something less than 2 times yesterday. Q.11 –Water did show a significant decrease as mentioned above. The pre-test mean was 4.06 and the post-test was 3.53 with a P-Value of 0.008. I can not explain why the numbers went down. We have been promoting the Rethink Your Drink Campaign and the importance of drinking water first. The results indicate that students are drinking water between 3 and 4 times a day however. I wonder if the time of year (September – pre, versus May-post) the surveys were conducted had any impact on the amount of water students drank. September is our warmest time of the year and May is generally cold and raining. Just a thought! Finally Total F&V/no juice numbers did increase slightly and Total F%V juice numbers decreased slightly, neither being significant.

Unhealthy Foods: Overall we saw a slight increase in unhealthy foods from a pre-test mean of 3.30 to a post-test mean of 3.53. However this increase was not significant. Specifically, Q. 6, French fries or chip saw a slight decrease in consumption from 0.81 to 0.78. Q. 9, 13 also saw a slight increase in consumption, however not significant. Q. 12, Soda or soft drinks did however show an increase in consumption that was significant with a Pre-Test mean of 0.60 and a Post-Test mean of 0.73 , resulting in a P-Value of 0.034. I am a little disappointed in the increase and would offer the following possible explanations: The time of year (June) in which the post-surveys were conducted did surround itself in classroom field trips, end of year celebrations and parties. In fact, several attempts were made to schedule post surveys around scheduled end-of-year activities. This may or may not have been a factor in the increase in unhealthy foods. I would like to note that the data represents the fact that students are reporting consuming between 0 and 1 time yesterday. This I believe is an important fact to focus on. Finally, in reviewing last years data/results we are seeing an overall decrease in consumption of unhealthy foods by students, which is a trend that we want to continue.

Physical Activity: The data indicated slight decreases in physical activity between the pre-test and post-test which was not significant. One positive note is that students indicated that they exercised or took part in physical activity and played outdoors (Q.14, Q. 15 pre-test means) 4.90 and 4.95 day a week. I feel that this is a pretty high number and was pleased to see our students are indicating that they are physically active most days of the week. The post-test data indicated a slight decrease in the days to 4.82 and 4.73 respectfully. As with last year's data, I believe that the seasonality of the survey may possibly contribute to the response as the fall (September) is our warmest/sunniest time of year and May/June are cold and raining. This may have played a factor in the slight decrease. Overall, we did see an increase in physical activity among our students compared to last years (FFY10) data, which is a trend we wanted to see continue.

Other: The two questions in this area deal with eating breakfast and trying new foods. Q. 16 data indicated the exact pre-test and post-test means (0.86) indicating no change in students eating breakfast. On a positive note, we have a high number of students who are reporting eating breakfast and we would like to improve that number to 1. More of a concern is that not every student is starting their day off eating breakfast. We have a Universal Breakfast Program in our District and every student at each of our elementary schools can have a free breakfast. Q.17 addressed the trying of new foods with very little change in the pre and post test means (1.25 to 1.27), both indicating a solid "Sometimes" from our students. Our experiences in the classrooms and gardens support the fact that most students are willing to try new foods or recipes. Additionally, feedback from teachers, staff and parents has indicated that they are very happy and pleased with their student's willingness to try new foods, especially coming from us.

Perceived Parental Consumption: The results of both questions in this area indicate that students perceived that their parents ate both fruits and vegetables at least most days of the week We are glad to see that students perceive that their parents are eating fruit/vegetables most days and actually can see in increase in these numbers from last years data from a 4.32 in FFY10 to a 4.59 this year.

Access: We saw slight increases in access to both fruits and vegetables this year (Q.20 and Q.21). Students indicated that they have access at their home at least sometimes and closer to always. Both increases were small and not considered significant. Nonetheless, we were happy to report an increase. The family nutrition education component of

our program is an area that we strive to make improvements in.

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 we know that even though the numbers/results of our Impact Evaluation Study may not indicate statistically significant changes, we know 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 parents (with student in tow) who stop by our booth at "Back To School" or "Open House" 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. The student will point us out to the parent as the nutrition lady and come up and give us a big hug (usually requires some explanation on our part to the parent as to who we are and how their child knows us). There was the Associate Superintendent of Curriculum and Instruction who found the money in his budget to pay for transportation/buses to transport 4th & 5th grade students from outlying schools so that they could attend our annual "Nutrition Adventures Day". There is the video a teacher made of his class attending the annual "Nutrition Adventures Day" showing happy faces and smiles in spite of the imminent downpour! There is a "Champion" teacher at Mary Peacock who stood out amongst her peers by challenging her students to make every Friday a "Healthy Food Items Only" lunch day and did "Shape of Yoga", "Instant Recess", and Classroom Energizers with her students daily. Finally, there was that same Associate Superintendent who paid for a sub/release time so that one of the 2nd grade teachers could attend "Weaving Nutrition into the School Day" with the Network Staff to learn about taking those first steps in integrating nutrition education into the school day. These are just a few of the things that have happened this past year which I feel show 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 2010/2011 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. Because our main emphasis is increasing fruit and vegetable consumption, it will be important to include each of the categorical areas, i.e. Healthy Foods, Unhealthy Foods, Physical Activity, and Other into our intervention. I think one of the biggest challenges we face conducting our intervention is making sure that our intervention is consistent among all the grades and/or has continuity and that we continue educating ourselves about the California Health Education Content Standards(CHECS) and the Nutrition and Physical Activity content areas. Being able to integrate our nutrition and physical activity lessons into the core subject content areas will provide us with the support from teachers, administrators and district officials that our work has value and the more integration, the more likely our goals of providing nutrition education will continue with that classroom teacher throughout the day/week/month/year. We are constantly striving to improve the quality of the nutrition education and p.a. promotion that we are conducting to ensure that it meets the needs of our students and compliments what is being taught by the classroom teacher.

I am a bit concerned that the quality and quantity of nutrition education (intervention) conducted by our staff and supplemented by classroom teachers and after school staff is not reflected in the results of this year's survey. 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.

I have shared the results with our Food Service Director and we have already begun collaborating on how to incorporate next year's HOTM featured fruits and vegetables into the school menus and salad bars. I would also plan to share this information with our administrative team and with the "Children's Health Collaborative" (CHC), a local group made up of parents, local physicians and school district employees. The CHC has already begun addressing issues such as candy in the schools (School Wellness Policy), school menus, and getting healthy through physical activity.

7. Point of Contact

Name:	Deborah Kravitz
Phone Number:	707-464-0273
Email Address:	dkravitz@delnorte.k12.ca.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 and Network High School Survey

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	12.93	12.64	-0.30	0.412
3. Milk	1.66	1.74	0.08	0.205
4. Yogurt or cheese	0.74	0.75	0.02	0.795
5. Cereal	0.74	0.93	0.19	0.001
7. Vegetables	1.99	2.04	0.05	0.626
8. Fruit	2.17	2.22	0.04	0.666
10. Juice	1.57	1.43	-0.15	0.138
11. Water	4.06	3.53	-0.53	0.008
Total: fruit & vegetable (no juice)	4.16	4.26	0.09	0.575
Total: fruit, vegetable, juice	5.74	5.69	-0.05	0.816
Unhealthy Foods	3.30	3.53	0.23	0.104
6. French fries or chips	0.81	0.78	-0.03	0.595
9. Punch, sports drinks, fruit-flavored drinks	1.00	1.08	0.09	0.207
12. Soda or soft drinks	0.60	0.73	0.13	0.034
13. Cookies, cakes, other sweets	0.89	0.93	0.04	0.502
Physical Activity	9.84	9.55	-0.29	0.260
14. Days of 60 minutes moderate/vigorous	4.90	4.82	-0.08	0.589
15. Days of 30 minutes outdoor play	4.95	4.73	-0.21	0.181
Other				
16. Breakfast	0.86	0.86	0.00	1.000
17. Trying New Foods	1.25	1.27	0.02	0.567
Perceived Parental Consumption	4.59	4.52	-0.07	0.549
18. How often parents eat fruit	2.23	2.20	-0.03	0.634
19. How often parents eat vegetables	2.29	2.30	0.01	0.893
Access	3.31	3.41	0.10	0.069
20. Fruits to eat at home	1.68	1.72	0.03	0.303
21. Vegetables to eat at home	1.62	1.69	0.07	0.069

Demographics

Average Age	9.7
Gender	
Males	140
Females	156

Network-funded contractor:	Del Norte USD - 09-11223
Contract number:	09-11223
Information provided by :	Deborah Kravitz
Telephone:	707-464-0273
Date:	7/25/2011
Email:	dkravitz@delnorte.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Del Norte USD Elementary
Target Population:	9-10 year olds; 4th & 5th grade students

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
PowerPlay!	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Monthly Harvest of the Month lessons as well as weekly garden-based nutrition education lessons are provided for the majority of the 4th & 5th grade classrooms that participated in the evaluation. Once a month a nutrition educator provides a lesson on the specific fruit or vegetable featured and the weekly garden-based lessons include a different seasonal fruit, vegetable, herb or physical activity. In addition, the 4th & 5th grade classrooms participated in the Power Up with Fruits & Vegetables Power Play/HOTM workbooks. All nutrition lessons utilized are from approved and recommended Network curricula and focus on the California Health Education Content Standards, specifically focusing on the Nutrition Competencies. In addition, nutrition education during salad bar/lunch times (Color Cafe /Cafeteria Connections) takes place, food demonstrations/taste testing, Educator and Family HOTM Newsletter, Posters, Power Play!, teacher trainings, and physical activity promotion. School Libraries are provided with several featured HOTM related literature books, classrooms are encouraged to participate in Healthy Challenges such as seasonal celebrations like Harvest (Fall) and Valentine's Day (Spring). School site parent newsletters incorporate a nutrition/p.a. related article on occasion and nutrition is promoted during school events such as Back to School/Open Houses and special events like International/World Day, Spring Arts Festivals, etc.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Physical activity is incorporated in our classroom nutrition lessons as well as the garden-based nutrition lessons. Teachers participate in "Mileage Club" p.a. promotion during recess and lunch periods. Teachers are provided with staff training on p.a. yearly and provided with curriculum and materials to assist them in the promotion of p.a. and classroom energizers. Based on our geography, students spend an abnormal amount of time in the winter and spring indoors due to rainfall and the fact that our school district only employs one physical education specialist, p.a. is an ongoing concern and priority for us. In the spring, the Network sponsors the annual Nutrition Adventures Day for 4th & 5th graders where they participate in p.a. activities with nutrition education. Finally, many of the elementary schools hold a field day with nutrition education (last week/day of school).

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Network nutrition education and garden-based staff hold monthly staff meetings to plan and discuss upcoming HOTM and garden-based nutrition education lessons. Staff working with like school age youth/classes i.e. preschool, primary, secondary, middle school and high school will discuss lesson ideas and literature books as well as the Power Up Your Harvest Lesson materials for that month. All Network staff participated in a training conducted by the Network Staff on "Weaving Nutrition Education into the School Day" In addition, staff have participated in a video teleconference on "Following the Tracks to Educational Achievement, Understanding the CA Health Education Content Standards". Staff have been instructed on Network Approved and Recommended Curricula and various resources that are available to us for use such as lesson plans, i.e. L.A. Collaborative materials, etc. We have coordinated with our regional partners through the Northcoast Nutrition and Fitness Collaborative (6 north coast counties) on our HOTM featured fruits and vegetables to standardize the schedule as well as developed the Power Up Your Harvest workbooks to provide for standardization of some of the educational materials used in our intervention.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

All classrooms/students surveyed during the pre survey and post survey times were conducted within a one week time frame. In addition, the surveys were administered by the Network Staff and utilized a "Read Aloud" method with classroom teacher assistance. Students were instructed to not work ahead and follow along with the nutrition staff member readings. Students instructed to verify student numbers on surveys, collected, and put into folder labeled with date, classroom, and number of students completing pre survey. Surveys were coded for their response. This process was repeated for the post surveys and once coded, surveys were then matched. All unmatched surveys were kept in the file. Those surveys matched were then entered into the template provided to us by the Evaluation Unit.

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 100 elementary (4th & 5th) grade students who participated in Del Norte USD Elementary 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?

classrooms

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

a. Intervention:	Convenience Sample
b. Control:	

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.

	First Administered	Last Administered
Pre-test:	9/28/2010	10/8/2010
Post-test:	6/1/2011	6/7/2011
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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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 Foods & Beverages: Overall we saw no change in consumption of healthy foods and beverages. When looking individually at the specific questions, it is interesting to note that the largest negative difference between the tests appears in Question 10, Water. Specifically, Q. 3 and 4 (Milk, Yogurt/cheese) showed a very slight increase in consumption, however not significant and not necessarily one that we can attribute to our intervention. Q. 5, Cereal did show a significant increase in consumption between pre and post surveys with a difference of 0.19, P-Value of 0.001. Still, students are indicating that they are eating cereal almost 1 time a day. I am not sure that we can attribute this solely to our intervention even though we do emphasize the importance of eating breakfast and offer a universal breakfast program to our students free of charge. Q. 7, 8 -Vegetable and Fruit consumption showed a slight increase

between surveys however not significant. This is disappointing in that the main staple of our nutrition education and garden-based education focuses around the HOTM program and fruits/vegetables. Q.10-Juice showed a slight decrease in consumption but not significant. Students indicated that they drank juice something less than 2 times yesterday. Q.11 –Water did show a significant decrease as mentioned above. The pre-test mean was 4.06 and the post-test was 3.53 with a P-Value of 0.008. I can not explain why the numbers went down. We have been promoting the Rethink Your Drink Campaign and the importance of drinking water first. The results indicate that students are drinking water between 3 and 4 times a day however. I wonder if the time of year (September – pre, versus May-post) the surveys were conducted had any impact on the amount of water students drank. September is our warmest time of the year and May is generally cold and raining. Just a thought! Finally Total F&V/no juice numbers did increase slightly and Total F%V juice numbers decreased slightly, neither being significant.

Unhealthy Foods: Overall we saw a slight increase in unhealthy foods from a pre-test mean of 3.30 to a post-test mean of 3.53. However this increase was not significant. Specifically, Q. 6, French fries or chip saw a slight decrease in consumption from 0.81 to 0.78. Q. 9, 13 also saw a slight increase in consumption, however not significant. Q. 12, Soda or soft drinks did however show an increase in consumption that was significant with a Pre-Test mean of 0.60 and a Post-Test mean of 0.73 , resulting in a P-Value of 0.034. I am a little disappointed in the increase and would offer the following possible explanations: The time of year (June) in which the post-surveys were conducted did surround itself in classroom field trips, end of year celebrations and parties. In fact, several attempts were made to schedule post surveys around scheduled end-of-year activities. This may or may not have been a factor in the increase in unhealthy foods. I would like to note that the data represents the fact that students are reporting consuming between 0 and 1 time yesterday. This I believe is an important fact to focus on. Finally, in reviewing last years data/results we are seeing an overall decrease in consumption of unhealthy foods by students, which is a trend that we want to continue.

Physical Activity: The data indicated slight decreases in physical activity between the pre-test and post-test which was not significant. One positive note is that students indicated that they exercised or took part in physical activity and played outdoors (Q.14, Q. 15 pre-test means) 4.90 and 4.95 day a week. I feel that this is a pretty high number and was pleased to see our students are indicating that they are physically active most days of the week. The post-test data indicated a slight decrease in the days to 4.82 and 4.73 respectfully. As with last year's data, I believe that the seasonality of the survey may possibly contribute to the response as the fall (September) is our warmest/sunniest time of year and May/June are cold and raining. This may have played a factor in the slight decrease. Overall, we did see an increase in physical activity among our students compared to last years (FFY10) data, which is a trend we wanted to see continue.

Other: The two questions in this area deal with eating breakfast and trying new foods. Q. 16 data indicated the exact pre-test and post-test means (0.86) indicating no change in students eating breakfast. On a positive note, we have a high number of students who are reporting eating breakfast and we would like to improve that number to 1. More of a concern is that not every student is starting their day off eating breakfast. We have a Universal Breakfast Program in our District and every student at each of our elementary schools can have a free breakfast. Q.17 addressed the trying of new foods with very little change in the pre and post test means (1.25 to 1.27), both indicating a solid "Sometimes" from our students. Our experiences in the classrooms and gardens support the fact that most students are willing to try new foods or recipes. Additionally, feedback from teachers, staff and parents has indicated that they are very happy and pleased with their student's willingness to try new foods, especially coming from us.

Perceived Parental Consumption: The results of both questions in this area indicate that students perceived that their parents ate both fruits and vegetables at least most days of the week We are glad to see that students perceive that their parents are eating fruit/vegetables most days and actually can see in increase in these numbers from last years data from a 4.32 in FFY10 to a 4.59 this year.

Access: We saw slight increases in access to both fruits and vegetables this year (Q.20 and Q.21). Students indicated that they have access at their home at least sometimes and closer to always. Both increases were small and not considered significant. Nonetheless, we were happy to report an increase. The family nutrition education component of

our program is an area that we strive to make improvements in.

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 we know that even though the numbers/results of our Impact Evaluation Study may not indicate statistically significant changes, we know 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 parents (with student in tow) who stop by our booth at "Back To School" or "Open House" 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. The student will point us out to the parent as the nutrition lady and come up and give us a big hug (usually requires some explanation on our part to the parent as to who we are and how their child knows us). There was the Associate Superintendent of Curriculum and Instruction who found the money in his budget to pay for transportation/buses to transport 4th & 5th grade students from outlying schools so that they could attend our annual "Nutrition Adventures Day". There is the video a teacher made of his class attending the annual "Nutrition Adventures Day" showing happy faces and smiles in spite of the imminent downpour! There is a "Champion" teacher at Mary Peacock who stood out amongst her peers by challenging her students to make every Friday a "Healthy Food Items Only" lunch day and did "Shape of Yoga", "Instant Recess", and Classroom Energizers with her students daily. Finally, there was that same Associate Superintendent who paid for a sub/release time so that one of the 2nd grade teachers could attend "Weaving Nutrition into the School Day" with the Network Staff to learn about taking those first steps in integrating nutrition education into the school day. These are just a few of the things that have happened this past year which I feel show 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 2010/2011 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. Because our main emphasis is increasing fruit and vegetable consumption, it will be important to include each of the categorical areas, i.e. Healthy Foods, Unhealthy Foods, Physical Activity, and Other into our intervention. I think one of the biggest challenges we face conducting our intervention is making sure that our intervention is consistent among all the grades and/or has continuity and that we continue educating ourselves about the California Health Education Content Standards(CHECS) and the Nutrition and Physical Activity content areas. Being able to integrate our nutrition and physical activity lessons into the core subject content areas will provide us with the support from teachers, administrators and district officials that our work has value and the more integration, the more likely our goals of providing nutrition education will continue with that classroom teacher throughout the day/week/month/year. We are constantly striving to improve the quality of the nutrition education and p.a. promotion that we are conducting to ensure that it meets the needs of our students and compliments what is being taught by the classroom teacher.

I am a bit concerned that the quality and quantity of nutrition education (intervention) conducted by our staff and supplemented by classroom teachers and after school staff is not reflected in the results of this year's survey. 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.

I have shared the results with our Food Service Director and we have already begun collaborating on how to incorporate next year's HOTM featured fruits and vegetables into the school menus and salad bars. I would also plan to share this information with our administrative team and with the "Children's Health Collaborative" (CHC), a local group made up of parents, local physicians and school district employees. The CHC has already begun addressing issues such as candy in the schools (School Wellness Policy), school menus, and getting healthy through physical activity.

7. Point of Contact

Name:	Deborah Kravitz
Phone Number:	707-464-0273
Email Address:	dkravitz@delnorte.k12.ca.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 and Network High School Survey

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	12.93	12.64	-0.30	0.412
3. Milk	1.66	1.74	0.08	0.205
4. Yogurt or cheese	0.74	0.75	0.02	0.795
5. Cereal	0.74	0.93	0.19	0.001
7. Vegetables	1.99	2.04	0.05	0.626
8. Fruit	2.17	2.22	0.04	0.666
10. Juice	1.57	1.43	-0.15	0.138
11. Water	4.06	3.53	-0.53	0.008
Total: fruit & vegetable (no juice)	4.16	4.26	0.09	0.575
Total: fruit, vegetable, juice	5.74	5.69	-0.05	0.816
Unhealthy Foods	3.30	3.53	0.23	0.104
6. French fries or chips	0.81	0.78	-0.03	0.595
9. Punch, sports drinks, fruit-flavored drinks	1.00	1.08	0.09	0.207
12. Soda or soft drinks	0.60	0.73	0.13	0.034
13. Cookies, cakes, other sweets	0.89	0.93	0.04	0.502
Physical Activity	9.84	9.55	-0.29	0.260
14. Days of 60 minutes moderate/vigorous	4.90	4.82	-0.08	0.589
15. Days of 30 minutes outdoor play	4.95	4.73	-0.21	0.181
Other				
16. Breakfast	0.86	0.86	0.00	1.000
17. Trying New Foods	1.25	1.27	0.02	0.567
Perceived Parental Consumption	4.59	4.52	-0.07	0.549
18. How often parents eat fruit	2.23	2.20	-0.03	0.634
19. How often parents eat vegetables	2.29	2.30	0.01	0.893
Access	3.31	3.41	0.10	0.069
20. Fruits to eat at home	1.68	1.72	0.03	0.303
21. Vegetables to eat at home	1.62	1.69	0.07	0.069

Demographics

Average Age	9.7
Gender	
Males	140
Females	156

Network-funded contractor:	Del Norte USD
Contract number:	09-11223
Information provided by :	Deborah Kravitz
Telephone:	707-464-0273
Date:	7/28/2011
Email:	dkravitz@delnorte.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Del Norte USD High School
Target Population:	14/15 year olds (9th grade)

Primary Curriculum Used:

Harvest of the Month

Secondary Curriculum Used:

Body Works, FUEL, The Power of Choice, Empowering Youth with Nutrition and Physical Activity Jump Start Teens

In 1-2 paragraphs, please provide a Description of the Nutrition Education Intervention:

Primary nutrition education took place in the form of bi-monthly nutrition lessons given in conjunction with the freshman Health classes. Coordination between the Network Nutrition Educator and the High School Health teachers took place with the goal of being able to align the nutrition lessons with the current focus/unit being taught in Health. All freshman are required to take the yearlong class and both the Network staff and Health teachers collaborated together to integrate nutrition and physical activity throughout the year, not just during the nutrition unit. 10 featured fruits and vegetables were offered (see Elementary Report) and lessons also included: Understanding Healthy Eating which included Portion/Serving Sizes, Essential nutrients and nutrients, The importance of breakfast, fast food options, the benefits of physical activity, Goal setting, Nutrition facts/label reading and Rethink Your Drink (Del Norte High School participated in a Pilot of the Network High School Rethink Your Drink lessons). In addition, students had access to daily nutrition education at the salad bar, monthly student-made HOTM posters (in English, Spanish, French and Hmong), Nutrition Bulletin Boards, Daily Nutrition Tips via "Daily Bulletin", taste testing of featured HOTM f/v in most classrooms and most subject areas, Nutrition at school events such as Back to School Night, 8th Grade Parent Night, Open House, and Orientation. Menus identifying featured HOTM posted in school and on website, After school program (Warrior OT) and cooking classes.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

P.A. is promoted during nutrition lessons either as a "stand alone" lesson or as a part of a lesson. In addition, a freshman participate in the annual "Fruit and Physical Fitness" Day during their P.E. class in the fall.

Please provide a description of standardized training:

See Elementary Report.

Please provide a description of Standard Administration of Data

See Elementary Report.

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 100 9th grade students who participated in Del Norte USD High School 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?

Classrooms

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

a. Intervention:	Convenience Sample	
b. Control:	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 High School Survey	

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	9/21/2010	9/21/2010
Post-test:	6/10/2011	6/11/2011
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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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 Foods & Beverages: Overall we saw slight but non-significant increases in the consumption of fruits, vegetables, juice, milk and yogurt and a very slight decrease in cereal consumption. Water consumption was basically flat with a .01 difference between pre and posttest means. This survey asks some questions about consumption "yesterday" and other questions ask "During the past 7 days", so it is important to differentiate these responses based on how the question was asked. Q3, milk showed a very slight increase between pre and posttests indicating that students drank milk at least 1 time yesterday (1.40 pretest mean to 1.48 post). Q4 showed a similar slight increase in consumption of yogurt or cheese yesterday (0.52 pre to 0.66 post). Q5 showed a slight decrease in cereal consumption yesterday (0.67 pre to 0.60 post). Q7 through Q12 asks students to recall the past 7 days and for these questions we saw an increase in consumption of juice, fruit and vegetables, however not significant. I think it should be noted that the students' responses indicate that they did consume juice and fruit somewhere between 4 to 6 times in the past 7 days. If I am interpreting the results correctly for Total Vegetable (Q9-12), students did show a slight increase in consumption but basically are indicating that they consumed the vegetables somewhere between 1 to 3 times during the past 7 days. Again there were no significant changes between the pre and post data that would indicate our intervention played a role in the results.

It should also be noted that this is the first year that we have used this survey tool and we are not able to compare this year's results with those of last years like we were able to do with the elementary school results.

Unhealthy Foods: Overall we saw a decrease in the reported consumption of all of the unhealthy food types with the exception of soda and/or soft drink, which had a slight increase between pre and post surveys. Q6 French fries or chips saw a statistically significant decrease in consumption from pre to posttest from 0.73 to 0.59 for a difference of 0.041. With the exception of Q6 we cannot attribute the decrease to the intervention conducted during the year.

Physical Activity: The data indicated slight decreases in physical activity between the pre-test and post-test, but this was not significant. One positive note is that students indicated that they exercised or took part in physical activity and played outdoors (Q.17, Q.18 pre-test means) 4.15 and 3.25 days a week. I feel that this is a pretty high number and was pleased to see our students are indicating that they are physically active most days of the week. The post-test data indicated a slight decrease in the days to 4.04 and 3.21 respectfully. As with the Elementary data, I believe that the seasonality of the survey may possibly contribute to the response as the fall (September) is our warmest/sunniest time of year and May/June are cold and raining. This may have played a factor in the slight decrease. Additionally, I believe that Q18 asking high school students about "playing outdoors" may be interpreted incorrectly as compared to asking a 9 year old about playing outdoors. I don't believe high school students think that they "play" anymore and so this may or may not influence their response. Perhaps rewording the question differently may help in soliciting a more representative response to the intent of the question.

Other: The two questions in this area deal with eating breakfast and trying new foods. Q. 19 data indicated a slight increase from the pre-test to post-test means (0.60 to 0.64) of students eating breakfast. On a positive note, we have a high number of students who are reporting eating breakfast and we would like to improve that number to 1. More of a concern is that not every student is starting their day off eating breakfast. Q.20 addressed the trying of new foods with very little change in the pre and posttest means (1.24 to 1.28), both indicating a solid "Sometimes" from our students.

Our experiences in the classrooms support the fact that most students are willing to try new foods or recipes. Additionally, feedback from teachers, staff and parents has indicated that they are very happy and pleased with their student's willingness to try new foods, especially coming from us.

This survey asks students to recall what they ate or drank over a 7 day period and without keeping some sort of food log or journal, I am not sure that students are accurate in their reporting. We believe that one of the biggest challenges this past year dealt with the overall lack of maturity among the freshman students. It seems every few years a group of students come through and they seem to be lacking the maturity of previous freshman classes. In addition I believe that it should be noted that these are students who have been exposed to our nutrition education since their primary grades and in general we feel are pretty nutrition savvy. We are challenged with the lack of nutrition materials that are focused at the high school levels. There seems to be an abundance of curriculum that is available for the primary levels but not that much available to us at the high school level. Seeking out new materials/curriculum that supports the CA Health Education Content Standards, specifically the Nutrition and Physical Activity Content Areas is a challenge for us. We will continue to work with the Health Teachers at the high school to align our lessons with the standards as well as seek out approved curriculum from the Network.

We had several outstanding moments this year. First we saw a significant increase in the participation of the high school salad bar at lunch time. The Nutrition staff volunteers at lunch to be at the salad bar area and promote the HOTM fruit/vegetable item as well as provide some nutrition education to students at lunch. We have seen an increase in participation from an average of 60 students in FFY10 to approximately 130 students in FFY11. The nutrition staff has participated in Network training on CA HECS and Nutrition and Physical Activity Competencies and have begun developing Pacing Guides that include essential concepts, analyzing influences, accessing valid information, interpersonal communication, decision making, goal setting, practicing health-enhancing behaviors and health promotion. Students from the health, physical education, and foreign languages classes produced monthly HOTM posters that were displayed throughout the high school; in FFY12 we would like to take some of these posters and put them in the various elementary and middle schools. A record number of high school students volunteered to be student advocates for the annual 4th & 5th grade Nutrition Adventures Day held in May at the high school. Over 60 high school students ran the events that day and also assisted in the set up and cleanup of the event. Finally, the youth-led nutrition education project team, CHANGE, has had a very successful year and was able to almost complete their research project (still one last presentation in front of the School Board in September). In addition, a team of CHANGE students attended this year's Childhood Obesity Conference and presented during one of the workshops as well as assisted the Network lead, Kamal Khaira, with the poster session on the Network Youth Initiatives Project.

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 2011/12 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. Unfortunately we have used different survey tools with the high school students so it may not be easy to compare data and trends from year to year. I am a bit concerned that the quality and quantity of nutrition education (intervention) conducted at the high school level by our staff is not reflected in the results of this year's survey. 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 North coast region), and Color Cafe' (Salad Bar Nutrition Education). A continued effort to get the message home to our families through events at high school i.e. (Back to School Nights, Open Houses, etc.), newsletters, community events, will be made. I have shared the results with our Food Service Director and we have already begun collaborating on how to incorporate next year's HOTM featured fruits and vegetables into the school menus and salad bars. I would also plan to share this information with our administrative team and with the "Children's Health Collaborative" (CHC), a local group made up of parents, local physicians and school district employees. The CHC has already begun addressing issues such as candy in the schools (School Wellness Policy), school meals, and salad bars in every school and applying for the Healthier US Schools Challenge. Finally, a "Pacing

Guide" is being developed to reflect the applicable content standards with an emphasis on the Health Education Content Standards and Nutrition Competencies for 9th grade.

7. Point of Contact

Name:	Deborah Kravitz
Phone Number:	707-464-0273
Email Address:	dkravitz@delnorte.k12.ca.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 and Network High School Survey

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	15.23	15.68	0.45	0.410
3. Milk	1.40	1.48	0.08	0.363
4. Yogurt or cheese	0.52	0.66	0.14	0.214
5. Cereal	0.67	0.60	-0.07	0.284
7. Juice	2.17	2.24	0.07	0.693
8. Fruit	2.44	2.54	0.10	0.416
Total: vegetable (9-12)	4.54	4.69	0.15	0.641
13. Water	3.49	3.48	-0.01	0.914
Total: fruit and vegetable (no juice)	6.98	7.23	0.24	0.520
Total: fruit, vegetable, juice	9.15	9.46	0.31	0.494
Unhealthy Foods	3.24	2.96	-0.28	0.161
6. French fries or chips	0.73	0.59	-0.14	0.041
14. Punch, sports drinks, fruit-flavored drinks	1.01	0.92	-0.09	0.296
15. Soda or soft drinks	0.74	0.80	0.05	0.550
16. Cookies, cakes, other sweets	0.75	0.65	-0.10	0.210
Physical Activity	7.40	7.24	-0.15	0.656
17. Days of 60 minutes moderate/vigorous	4.15	4.04	-0.11	0.600
18. Days of 30 minutes outdoor play	3.25	3.21	-0.04	0.841
Other				
19. Breakfast	0.60	0.64	0.04	0.367
20. Trying New Foods	1.24	1.28	0.04	0.558
Perceived Parental Consumption	4.17	4.42	0.26	0.099
21. How often parents eat fruit	1.95	2.15	0.20	0.027
22. How often parents eat vegetables	2.23	2.30	0.06	0.403
Access	3.31	3.34	0.04	0.676
23. Fruits to eat at home	1.61	1.66	0.06	0.273
24. Vegetables to eat at home	1.69	1.68	-0.01	0.905

Demographics

Average Age	14.1
Gender	
Males	80
Females	84

Network-funded contractor:	East Los Angeles College - 08-85119
Contract number:	08-85119
Information provided by :	Dena Herman, Manjit Kaur, Jeannie Wakamatsu, Ani Tarpinian
Telephone:	3237807230
Date:	7-28-2011
Email:	yasminaa66@yahoo.com, manjitkaurjs@msn.com, jeanwaka@yahoo.com, ani100940@aol.com

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:	
PowerPlay!	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

The intervention included introduction of HOTM produce six times throughout the year at seven elementary school sites within El Rancho USD. Each month a HOTM booth was set up either in the classroom, cafeteria, or outdoors. Students from every class have an opportunity to attend the presentation made by the HOTM Chef and the Program Specialist. During the presentation, students learned about the history and importance of each fruit and vegetables 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. During the presentation, students were asked to report any changes in consumption or behavior related to fruits and vegetables as well as physical activity.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Physical Activity education was incorporated during the HOTM presentation.

In 1-2 paragraphs, please provide a Description of the 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 the Standard Administration of Data

Lead teachers were asked to submit names of all 4th and 5th grade classrooms at their school. One 4th and one 5th grade classroom was randomly selected using the Random Number Generator (UCLA BioStat Dept) from each of the seven participating sites. Surveys were given to students from the selected classrooms. Students were asked to fill out the surveys and work independently. If they had questions relating to the survey, they were to ask their teachers.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

Lead teachers trained the classroom teachers who were selected for evaluation on survey implementation procedures. Methods such as, using district ID numbers to track students, not assisting students in answering any part of the survey, and using the same protocol for pre and post test were addressed.

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 215 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.

Impact/Outcome Physical Activity Objective:

Impact/Outcome Sugar Sweetened Beverage Objective:

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?

Classrooms

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

a. Intervention:	Random Sample
b. Control:	

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

Where any other surveys used?	No

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	11/10/2010	12/20/2010
Post-test:	5/13/2011	6/15/2011
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?	0

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.

Results showed a statistically significant difference between pre-test and post-test scores for drinking regular soda, did physical activity that made heart beat fast and played outdoors for at least 30 minutes. The average amount of times for drinking regular soda decreased during the intervention while exercise either that made the heart beat fast or playing outdoors was conducted more often mid-week than not at all

b. Description of how evaluation results will be used:

Results will be used to redesign intervention strategies, such as the lesson format, delivery of the intervention.

7. Point of Contact

Name:	Dena Herman, Manjit Kaur, Jeannie Wakamatsu, Ani Tarpinian
Phone Number:	3237807230
Email Address:	yasminaa66@yahoo.com, manjitkaurjs@msn.com, jeanwaka@yahoo.com, ani100940@aol.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 and Network High School Survey

Yes

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

0

Paired Samples Statistics

Contractor			Mean	N	Std. Deviation	Std. Error Mean
ELAC	Pair 1	FVJ_Post	4.3907	215	3.28916	.22432
		FVJ_Post	4.4233	215	3.09694	.21121
	Pair 2	Veg	1.6744	215	1.62804	.11103
		Veg	1.5256	215	1.46231	.09973
	Pair 3	Frt	1.6977	215	1.45228	.09904
		Frt	1.7395	215	1.42313	.09706
	Pair 4	Juice	1.0186	215	1.11474	.07602
		Juice	1.1581	215	1.28729	.08779
	Pair 5	Any Milk	1.5535	215	.88902	.06063
		Any Milk	1.6047	215	.92067	.06279
	Pair 6	Yogurt, Cottage Cheese, String Cheese, Yogurt Drink	.5907	215	.75499	.05149
		Yogurt, Cottage Cheese, String Cheese, Yogurt Drink	.6465	215	.83480	.05693
	Pair 7	Cereal	.7907	215	.74125	.05055
		Cereal	.7349	215	.70342	.04797
	Pair 8	French Fries, Potato Chips, Tortilla Chips, Corn Chips	.6605	215	.72413	.04939
		French Fries, Potato Chips, Tortilla Chips, Corn Chips	.5628	215	.71336	.04865
	Pair 9	Punch, Sports Drinks, Other Fruit-Flavored Drinks, No Juice	.8837	215	.91226	.06222

	Punch, Sports Drinks, Other Fruit-Flavored Drinks, No Juice	.879	215	.9091	.0620
Pair 10	Water	3.1349	215	1.67874	.11449
	Water	3.3116	215	1.58279	.10795
Pair 11	Regular Soda, No Diet	.6884	215	.82065	.05597
	Regular Soda, No Diet	.5488	215	.75886	.05175
Pair 12	Sweet Rolls, Doughnuts, Cookies, Brownies, Pie, Cake	.7023	215	.83986	.05728
	Sweet Rolls, Doughnuts, Cookies, Brownies, Pie, Cake	.6372	215	.84196	.05742
Pair 13	Number of days PA for at least 60 min	2.4837	215	2.22317	.15162
	Number of days PA for at least 60 min	3.0279	215	2.37179	.16175
Pair 14	Number of days play outdoors at least 30 min, not at school	2.2977	215	2.29276	.15637
	Number of days play outdoors at least 30 min, not at school	3.2465	215	2.36400	.16122
Pair 15	Ate breakfast yesterday?	.8651	215	.34240	.02335

		Ate breakfast yesterday?	.9256	215	.49676	.03388
	Pair 16	Like to try new foods?	1.2186	215	.58296	.03976
		Like to try new foods?	1.2279	215	.64790	.04419
	Pair 17	How often do parents eat fruit?	1.7277	213	1.21354	.08315
		How often do parents eat fruit?	1.7840	213	1.07296	.07352
	Pair 18	How often do parents eat veg?	1.8404	213	1.09150	.07479
		How often do parents eat veg?	1.8028	213	1.11533	.07642
	Pair 19	Fruit at home?	1.7311	212	.48521	.03332
		Fruit at home?	1.7642	212	.44725	.03072
	Pair 20	Veg at home?	1.5971	206	.58250	.04058
		Veg at home?	1.6553	206	.54338	.03786

Paired Samples Test

			Paired Differences							
						95% Confidence Interval of the Difference				
Contractor			Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
ELAC	Pair 1	FVJ	-.03256	3.18787	.21741	-.46110	.39598	-.150	214	.881
	Pair 2	Veg	.14884	1.70655	.11639	-.08057	.37825	1.279	214	.202
	Pair 3	Frt	-.04186	1.61567	.11019	-.25905	.17533	-.380	214	.704
	Pair 4	Juice	-.13953	1.44334	.09844	-.33356	.05449	-1.418	214	.158
	Pair 5	Any Milk	-.05116	1.06875	.07289	-.19483	.09251	-.702	214	.483
	Pair 6	Yogurt, Cottage Cheese, String Cheese, Yogurt Drink	-.05581	.96512	.06582	-.18555	.07393	-.848	214	.397
	Pair 7	Hot or Cold	.05581	.96512	.06582	-.07393	.18555	.848	214	.397

Pair 8	French Fries, Potato Chips, Tortilla Chips, Corn Chips	.09767	.88325	.06024	-.02106	.21641	1.621	214	.106
Pair 9	Punch, Sports Drinks, Other Fruit-Flavored Drinks, No Juice	.00465	1.23990	.08456	-.16203	.17133	.055	214	.956
Pair 11	Regular Soda, No Diet	.13953	1.01809	.06943	.00267	.27640	2.010	214	.046
Pair 12	Sweet Rolls, Doughnuts, Cookies, Brownies, Pie, Cake	.06512	1.02558	.06994	-.07275	.20298	.931	214	.353
Pair 13	Number of days PA for at least 60 min	-.54419	2.43162	.16583	-.87107	-.21731	-3.281	214	.001
Pair 14	Number of days play outdoors at least 30 min, not at school	-.94884	2.71069	.18487	-1.31323	-.58444	-5.133	214	.000
Pair 15	Ate breakfast yesterday?	-.06047	.54778	.03736	-.13410	.01317	-1.619	214	.107
Pair 16	Like to try new foods?	-.00930	.72981	.04977	-.10741	.08881	-.187	214	.852
Pair 17	How often do parents eat fruit?	-.05634	1.39630	.09567	-.24493	.13225	-.589	212	.557
Pair 18	How often do parents eat veg?	.03756	1.23948	.08493	-.12985	.20497	.442	212	.659
Pair 19	Fruit at home?	-.03302	.53666	.03686	-.10568	.03964	-.896	211	.371
Pair 20	Veg at home?	-.05825	.59797	.04166	-.14039	.02389	-1.398	205	.164
Pair 10	Water	-.17674	1.91072	.13031	-.43360	.08011	-1.356	214	.176

Fresno COE FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Fresno COE - 08-85131
Contract number:	08-85131
Information provided by :	Cyndi Dean
Telephone:	559-443-4833
Date:	40718
Email:	ckirby@fcoe.org

Section 1

1. Project Description and Goals

Project Name:	FCOE Youth Survey
Target Population:	9-11 Years/5th Grade

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
Power Play!	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Classroom Nutrition Education with 5th grade students featuring HOTM and Power Play!

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

The Physical Activity Intervention played hand-in-hand with our Nutrition Education Intervention; it's important to state how these two distinct Interventions lend themselves to each other. The Physical Activity Intervention presented school-aged students and faculty with a means to exhort energy throughout the day. Messages of 60 minutes of a variety of physical activity, to promote lifetime skills were heard throughout this phase. Also, messaging and research that supported engaging students with moderate to vigorous physical activity was included as often as possible into the classroom setting. Obstacles that we faced were time constraints and teachers who just did not engage in physical activity and did not understand the importance of developing a healthy, active lifestyle. When this intervention was in full swing, those participating truly understood the importance of daily physical activity and making healthy choices.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Across the board, common messaging, curricula, and activities were used. It was important for FCOE to understand to note that all school-aged students are not alike, that all learn and receive information differently and that all have a wide array of likes and dislikes. It was also critical to know environment in which they lived, along with awareness to cultural background and what family meant to them. Altering lessons to fit the school environment mattered much. What we learned is that we need to do more background checking and review lesson plans and school/community events to better educate those we want to develop a healthy, active lifestyle.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

FCOE Wellness & Nutrition Educators administered the Pre and Post Tests via narrating the Network Youth Survey in a classroom setting and students filling-out their surveys with a Number 2 pencil. Educators were asked to stay and involve themselves with the survey, while it was being administered; this offered them a view to what was expected during the course of the Intervention.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

Amongst all the classrooms featured in this Intervention, all Nutrition Educators proceeded in the same manner of execution with trainings, observations, and offering further trainings.

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 100 - 5th grade students who participated in FCOE Youth Survey 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?

School Districts

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

a. Intervention:	Convenience Sample
b. Control:	

# of intervention matched pre/post measures collected	196
# 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	0

Where any other surveys used?	No other survey was used.

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/1/2010	11/1/2010
Post-test:	5/1/2011	6/1/2011
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?	8

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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.

Upon the conclusion of the all the data inputting, the Network Youth Survey achieved significant outcomes in the realms of a decrease in drinking any punch, sports drinks or other fruit-flavored drinks on a daily basis and 2) an overall comprehension to the importance of daily Physical Activity. Student responses indicated that they exercised or took part in physical activity that made their heart beat fast and made them breathe harder for at least 60 minutes, while stating that students engaged in outdoor play for at least 30 minutes outside their regular school day. We can elaborate that these findings are a result of our Nutrition and Physical Activity Intervention efforts.

b. Description of how evaluation results will be used:

The results of the Intervention will be hi-lighted and discussed during the start of the school year at School Board meetings, Teacher trainings, during Afterschool Programming and with each School Districts Child Nutrition departments.

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.

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
Healthy Foods & Beverages	11.77	11.69	-0.08	0.888
3. Milk	1.81	1.68	-0.13	0.110
4. Yogurt or cheese	0.58	0.58	0.00	0.940
5. Cereal	0.77	0.74	-0.03	0.641
7. Vegetables	1.62	1.72	0.11	0.317
8. Fruit	1.94	2.34	0.41	0.407
10. Juice	1.35	1.15	-0.20	0.093
11. Water	3.71	3.47	-0.24	0.073
Total: fruit & vegetable (no juice)	3.56	4.07	0.51	0.301
Total: fruit, vegetable, juice	4.90	5.22	0.31	0.542
Unhealthy Foods	3.14	2.96	-0.18	0.367
6. French fries or chips	0.70	0.70	0.01	1.000
9. Punch, sports drinks, fruit-flavored drinks	1.07	0.87	-0.21	0.021
12. Soda or soft drinks	0.66	0.74	0.09	0.311
13. Cookies, cakes, other sweets	0.72	0.65	-0.07	0.347
Physical Activity	7.34	8.37	1.03	0.001
14. Days of 60 minutes moderate/vigorous	3.85	4.30	0.46	0.008
15. Days of 30 minutes outdoor play	3.49	4.06	0.57	0.002
Other				
16. Breakfast	0.90	0.85	-0.05	0.158
17. Trying New Foods	1.17	1.15	-0.02	0.702
Perceived Parental Consumption	4.29	4.44	0.15	0.218
18. How often parents eat fruit	2.06	2.09	0.03	0.644
19. How often parents eat vegetables	2.21	2.29	0.08	0.289
Access	3.44	3.49	0.06	0.511
20. Fruits to eat at home	1.76	1.75	-0.01	0.878
21. Vegetables to eat at home	1.67	1.71	0.04	0.372

Demographics

Average Age	10.4	
Gender		
Males		#VALUE!
Females	#VALUE!	

FFY11 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:	6/16/2011
Email:	nwikes@hbuhsd.org

Section 1

1. Project Description and Goals

Project Name:	Westminster High School
Target Population:	14-17

Primary Curriculum Used:

Contractor created power point lessons

Secondary Curriculum Used:

In 1-2 paragraphs, please provide a Description of the Nutrition Education Intervention:

The nutrition education intervention included a MyPyramid lesson and a series of four power point presentations. The series was conducted by Network staff and included: Diet Related Diseases, Macronutrients, Micronutrients, and Nutrition Jeopardy. The first three presentations included a worksheet that students complete as the presentation is given. The last presentation is a very interactive game where the students compete to answer questions related to the first three presentations. The health teachers taught the MyPyramid lesson.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

There was no direct physical activity intervention included in this evaluation. The nutrition education series did discuss the benefits of physical activity, how much is recommended and discussed ideas on how to become more physically active.

Please provide a description of standardized training:

No training was completed as the surveys were conducted by one Network staff member only.

Please provide a description of Standard Administration of Data

Surveys were collected immediately following completion.

Please provide a description of Standardization across all classrooms

One Network staff conducted all surveys and all classrooms were given the same instructions on how to complete the survey.

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 120 9th-12th grade students who participated in Westminster High School 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 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	
b. Control:	Convenience Sample	

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	

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/1/2010	10/5/2010
Post-test:	1/12/2011	1/14/2011
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?	5

c. Describe how the data were collected.

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

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 show there was a significant increase in: the amount of milk consumed, the amount of other dairy foods consumed (i.e. yogurt, yogurt drink, cottage cheese, or string cheese), and increase in liking to try new foods. And a significant decrease in: the consumption of regular soda and soft drinks and the overall consumption of "Unhealthy Foods". Results from the control group show there was a significant decrease in: the amount of water consumed per day, the amount of punch, sports drinks, or fruit drinks consumed, the amount of sweet rolls, doughnuts, cookies, brownies, pies, or cakes consumed and a decrease in the number of days played outdoors for at least 30 minutes.

b. Description of how evaluation results will be used:

Results will be used to adjust lessons for next year. We didn't get the results that we had hoped for so will create more skills based lessons for next year that will hopefully have more of an impact on behavior change. The behavior change we are striving for is the increased consumption of fruits and vegetables.

7. Point of Contact

Name:	Nancy Wikes
Phone Number:	714-894-1698
Email Address:	nwikes@hbuhsd.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 and Network High School Survey

Yes

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

0

6. Qualitative Evaluation Results

This is your opportunity to share with us anything that may not have been reflected in your data or elsewhere in this report. Consider the questions below, or offer us other qualitative reports of your successes and challenges over the last year.

What have been the biggest challenges and barriers you have faced while implementing your intervention or evaluation? What have you learned from them?

Because these lessons are primarily knowledge based it was sometimes challenging to keep the interest of the students. Worksheets were added this year to encourage more interaction and participation during the lessons but did not seem to promote behavior change. In the future, including more skills may improve the results.

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?

Watching students eat the healthy samples of the various fruits and vegetables that we provide is an outstanding moment in itself. We're often told that the students won't eat this or that but when we show up in the classroom with samples, they are happy to try it. Many times we hear that it's something the student has never tried before or that they are going to go home and tell their parents about it or ask them to buy it. Eventually, we will start to see a change in fruit and vegetable consumption! A change that we have seen at a broader level is that sales of the various salads in the cafeteria have increased since we have done lessons in the classroom introducing and taste testing the salads with the students.

Intervention Group Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	14.15	14.71	0.55	0.324
3. Milk	1.07	1.25	0.18	0.027
4. Yogurt or cheese	0.32	0.48	0.16	0.019
5. Cereal	0.37	0.50	0.12	0.071
7. Juice	2.03	2.15	0.12	0.511
8. Fruit	2.51	2.58	0.07	0.665
Total: vegetable (9-12)	4.25	4.34	0.08	0.793
13. Water	3.71	3.55	-0.16	0.168
Total: fruit and vegetable (no juice)	6.76	6.92	0.16	0.707
Total: fruit, vegetable, juice	8.77	8.99	0.23	0.644

Unhealthy Foods	2.53	2.04	-0.49	0.008
6. French fries or chips	0.59	0.52	-0.07	0.415
14. Punch, sports drinks, fruit-flavored drinks	0.68	0.60	-0.08	0.319
15. Soda or soft drinks	0.61	0.40	-0.21	0.008
16. Cookies, cakes, other sweets	0.65	0.58	-0.07	0.426
Physical Activity	5.57	5.25	-0.32	0.321
17. Days of 60 minutes moderate/vigorous	3.19	2.98	-0.21	0.228
18. Days of 30 minutes outdoor play	2.37	2.28	-0.09	0.633
Other				
19. Breakfast	0.73	0.69	-0.04	0.355
20. Trying New Foods	1.39	1.69	0.30	0.044
Perceived Parental Consumption	4.50	4.46	-0.04	0.717
21. How often parents eat fruit	2.13	2.14	0.01	0.902
22. How often parents eat vegetables	2.36	2.31	-0.05	0.387
Access	3.55	3.60	0.05	0.495
23. Fruits to eat at home	1.81	1.80	-0.01	0.843
24. Vegetables to eat at home	1.74	1.78	0.05	0.299

Demographics

Average Age	15.5
Gender	
Males	#VALUE!
Females	#VALUE!

Control Group Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	14.39	14.36	-0.03	0.981
3. Milk	1.24	1.28	0.03	0.597
4. Yogurt or cheese	0.61	0.62	0.01	0.885
5. Cereal	0.41	0.50	0.09	0.340
7. Juice	2.10	2.24	0.14	0.283
8. Fruit	2.30	2.33	0.03	0.824
Total: vegetable (9-12)	3.87	4.06	0.19	0.368
13. Water	3.85	3.33	-0.52	0.001
Total: fruit and vegetable (no juice)	6.17	6.39	0.22	0.419
Total: fruit, vegetable, juice	8.28	8.63	0.36	0.222

Unhealthy Foods	2.71	2.13	-0.58	0.027
6. French fries or chips	0.60	0.48	-0.12	0.220
14. Punch, sports drinks, fruit-flavored drinks	0.84	0.57	-0.27	0.001
15. Soda or soft drinks	0.56	0.52	-0.04	0.775
16. Cookies, cakes, other sweets	0.71	0.54	-0.17	0.311
Physical Activity	7.00	6.39	-0.61	0.347
17. Days of 60 minutes moderate/vigorous	3.66	3.83	0.17	0.535
18. Days of 30 minutes outdoor play	3.34	2.57	-0.77	0.047
Other				
19. Breakfast	0.66	0.71	0.05	0.045
20. Trying New Foods	1.24	1.63	0.38	0.326
Perceived Parental Consumption	4.16	4.21	0.06	0.700
21. How often parents eat fruit	1.99	2.05	0.06	0.279
22. How often parents eat vegetables	2.13	2.16	0.03	0.864
Access	3.24	3.35	0.11	0.181
23. Fruits to eat at home	1.64	1.70	0.05	0.088
24. Vegetables to eat at home	1.59	1.65	0.05	0.568

Network-funded contractor:	Health Education Council vol - 08-85132
Contract number:	08-85132
Information provided by :	Kacy Rodriguez
Telephone:	916-556-3344 x. 123
Date:	7-31-2011
Email:	krodriguez@healthedcouncil.org

Section 1

1. Project Description and Goals

Project Name:	Exercise Across California 2011
Target Population:	4th grade

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 Education Survey	
Goal 1/Objective 1	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

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 were 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, for 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 significant increases with p-values less than or equal to 0.05 in Knowledge (five of six questions), Norms, and Self Efficacy for eating enough fruits and vegetables, and a trend ($p = 0.081$) for Self-Efficacy towards asking for more fruit and vegetables from family in various situations and towards increased Fruit Consumption. Similar to last year, there were no 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 with those 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:

In FFY 11 all students received 7 Power Play! Lessons, but they did not receive the same lessons – it was always the teacher's choice. Based on our findings, we will recommend a core set of lessons that the teachers can augment with elective lessons to ensure some basic messages are delivered to all children.

7. Point of Contact

Name:	Kacy Rodriguez
Phone Number:	916-556-3344 x. 123
Email Address:	krodriguez@healthedcouncil.org

8. Relevant Journal References

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

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

Keihner, A.J., R. Meigs, S. Sugerman, D. Backman, T. Garbolino, and P. Mitchell. 2011. "The Power Play! Campaign's School Idea & Resource Kits Improve the Determinants of Fruit and Vegetable Intake and Physical Activity among Fourth- and Fifth-Grade Children." *Journal of Nutrition, Education and Behavior* 43:S122-S129.

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

No

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

Network-funded contractor:	Healthy Valley Group – Includes 5 contractors: Alhambra USD, El Monte City SD, Monrovia USD (parent group), Rosemead USD, and San Gabriel USD
Contract number:	10-10069 and others
Information provided by :	Lizett Olivares
Telephone:	(626) 471-3077
Date:	7/10/2011
Email:	lolivares@monrovia.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Healthy Parents, Healthy Community
Target Population:	17-63
Intervention Target	Parents

Primary Curriculum Used:
contractor developed

Description of Nutrition Education Intervention:

This nutrition education series was designed to provide skills-based learning with nutrition information and cooking for parents of the children we serve at each participating district. The parent series lessons include 30 minutes of nutrition information and application activities, while the remaining 30 minutes include having the parents make healthy, easy, fruit and vegetable-based recipes and discuss the information learned in each class. The series is composed of five lesson topics: My Pyramid, Eating Fruits and Vegetables, Choose Healthy Beverages, Calcium and Breakfast, and Protein and Fats. This parent nutrition education series was adapted from last year's IOE intervention with parents. Parents requested more cooking application because they wanted to extend the list of recipes they could make at home.

Description of Standardized Training:

All educators collaborated in developing the five nutrition education lessons and used a "best practices" approach to determine the techniques to effectively deliver the information. In addition, lessons were modeled by each educator to provide an effective model for each lesson.

Description of Standard Administration of Data

Pre and Post assessment surveys were administered by the educators. Educators read aloud each question to the participants and provided clarification if needed.

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 200 Parents who participated in 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

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?

School Districts

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

a. Intervention:	Convenience Sample	

# of intervention matched pre/post measures collected	206

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	Other-Specify	Specify Other: 4 selected questions from FV Inventory survey- see attached results table for specific questions

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	1/6/2011	4/11/2011
Post-test:	2/3/2011	5/18/2011
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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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 300 parent participants initiated the nutrition education parent series. 206 parent participants completed a 5-week nutrition education series called Healthy Valley's Healthy Parents, Healthy Community. The Food 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 206 parent participants who completed the series significantly increased fruit and vegetable consumption from 3.91 to 4.45 ($p< 000.0$), ate different fruit (and vegetables 2.61 to 2.87 ($p<0.000$) and 2.71 to 2.92 ($p< 0.000$), respectively. Parents also ate 2 or more vegetables at main meal from 2.58 to 2.80 ($p< 0.000$) after the five week period. In addition, participant's self-efficacy 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), respectively. In terms of beverage consumption, participants significantly decreased sport drinks or fruit punch from 2.07 to 1.84 ($p<0.000$) and increased consumption of milk from 2.85 to 3.00 ($p< 0.011$). 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 removing the skin from chicken at the end of the series from 0.63 to 0.73 ($p<0.000$) and 3.30 to 3.53 ($p< 0.007$), respectively. Overall self-rating of eating habits increased significantly from 5.47 to 6.27 ($p< 0.000$).

A comparison of last year's IOE post data (2010) and this year's results demonstrate that juice consumption was lower at the end of this intervention $p<0.565$ (2010 data) to $p<0.162$ (2011 data). However, soda consumption significantly decreased only among the participants in last year's intervention from 1.86 to 1.64 ($p<0.000$). Soda consumption for this year's intervention included mean values of 1.82 to 1.75 ($p<0.095$). The same groups of parents were not followed during the two year period, but there was no significant difference between pre-assessment values for both groups. Last year's lesson on choosing healthy beverages included a sugar shocker demonstration of how a sugar sweetened beverage is prepared which may have been more impactful than showing the total sugar amounts in each beverage. The demonstration was eliminated in this year's choosing a healthy beverage lesson. Approximately 32 percent of the participants had not received Network activities prior to the 2010-2011 school years. This may be correlated with greater differences in this year's post-data as compared to last year's results. One-hundred percent of participants in 2009-2010 were from previously participating Network schools.

In addition, the content of the lessons shifted to 50 percent hands-on food preparation. Four of the five nutrition education lessons incorporated participants' preparing, cooking, and sampling fruit and vegetable based recipes. This cooking component was enhanced as a result of last year's results per participant requests. Results of increased self-efficacy to purchase, prepare, and eat more fruits and vegetables may be associated with this change in the intervention.

Lastly, the intervention included some of the Champion Mom messages used in the Network's Champion Moms Campaign. Educator's provided empowerment dialogue that revolved around each champion message. This component enabled reflection time at each session and allowed participants to share common struggles as they

transitioned into a healthier lifestyle. No quantitative data was used to measure effectiveness of this component, but the large Hispanic population of mom participants vocalized the need to have more support in the household when making healthy changes.

b. Description of how evaluation results will be used:

Parents significantly benefited from the Healthy Parents, Healthy Community nutrition education series as evidenced by increased fruit and vegetable consumption, increased skill set in reading nutrition facts labels, and self-efficacy in preparing, and eating fruits and vegetables. The addition of the cooking component was an essential part of parent engagement and skill building. Parents had hands-on experience cooking fruits and vegetables. Based on the evidence presented, an additional intervention or strategic approach to decrease sugar sweetened beverage consumption and increase healthy beverage consumption is warranted. Furthermore, the launch of MyPlate requires the MyPyramid lesson to be revised in order to reflect the most current food guidance system. Retention is a consistent problem with parent education. Participation incentives such as prizes and the cooking component helped attendance, but did not remedy the challenge. The Asian demographic did not respond positively to the Champion Mom Messages and nutrition education and materials. Revisions of the lessons to better reach that audience is recommended. Based on the Food Behavior Checklist survey, we feel that the question 5 regarding milk should be revised to ask about calcium-rich foods. This will clearly distinguish the difference in question 10. Many participants were confused by the difference in the questions. Although physical activity was not included in this intervention due to lack of time, there is a need to incorporate stretch breaks or pre-lesson warm-ups. These simple movement breaks can increase participant focus during lessons and demonstrate how to incorporate activity throughout the day. This 5-session series will be shared with all LIA contractors in effort to increase behavior modification for fruit and vegetable consumption among SNAP-ed eligible parents. The Healthy Valley Team is coordinating a regional training to share series resources and demonstrate how to conduct lessons effectively in the 2011-2012 school year.

7. Point of Contact

Name:	Lizett Olivares
Phone Number:	(626) 471-3077
Email Address:	lolivares@monrovia.k12.ca.us

8. Relevant Journal References

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

none

c. Did you use the Food Behavior Checklist?	Yes
Did you use the Fruit and Vegetable Checklist	No
Did you use the Fruit and Vegetable Inventory?	Yes (selected questions)

Townsend MS, Kaiser LL, Allen LH, Joy AB, Murphy SP. Selecting items for a food behavior checklist for a limited resource audience. Journal for Nutrition Education and Behavior. 2003;35:69-82.

Murphy S, Kaiser LL, Townsend MS, Allen L. Evaluation of Validity of Items in a Food Behavior Checklist. J Am Diet Assoc. 2001;101:751-756, 761.

Banna JC, Becerra LE, Kaiser LL, Townsend MS. Using Qualitative Methods to Improve Questionnaires for Spanish Speakers: Assessing Face Validity of a Food Behavior Checklist. J AM Diet Assoc. 2010;110:80-90.

Townsend MS, Kaiser LL. Development of an Evaluation Tool to Assess Psychosocial Indicators of Fruit And Vegetable Intake for 2 Federal Programs. J Am Diet Assoc. 2005; 37: 170-184.

Townsend MS, Kaiser LL. Brief tool is sensitive to fruit and vegetable intervention in low-income communities. J Am Diet Assoc. 2007;107:2120-2124.

FBC Results- Healthy Parents, Healthy Community

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.66	3.01	0.35	0.000
Q2. Drink sports drinks or punch (1-4)	2.07	1.84	-0.22	0.000
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.89	0.93	0.03	0.162
Q4. Drink regular soda (1-4)	1.82	1.75	-0.08	0.095
Q5. Consumed milk in past week (0=N; 1=Y)	0.93	0.94	0.01	0.684
Q6. Fruit eaten per day (0-3)	1.24	1.49	0.25	0.000
Q7. Vegetables eaten per day (0-3)	1.23	1.50	0.27	0.000
Q8. Different kinds of fruit daily (1-4)	2.61	2.87	0.25	0.000
Q9. Different kinds of vegetable daily (1-4)	2.71	2.92	0.21	0.000
Q10. Drink milk (1-4)	2.85	3.00	0.16	0.016
Q11. Take skin off chicken (1-4)	3.30	3.53	0.23	0.000
Q12. Consumed fish in past week (0=N; 1=Y)	0.63	0.73	0.10	0.005
Q13. 2 or more vegetables at main meal (1-4)	2.58	2.80	0.22	0.000
Q14. Read nutrition facts when shopping (1-4)	2.40	2.88	0.48	0.000
Q15. Run out of food before month end (1-4)	1.96	1.97	0.00	0.950
Q16. Self-rating of eating habits (1-10)	5.45	6.25	0.80	0.000

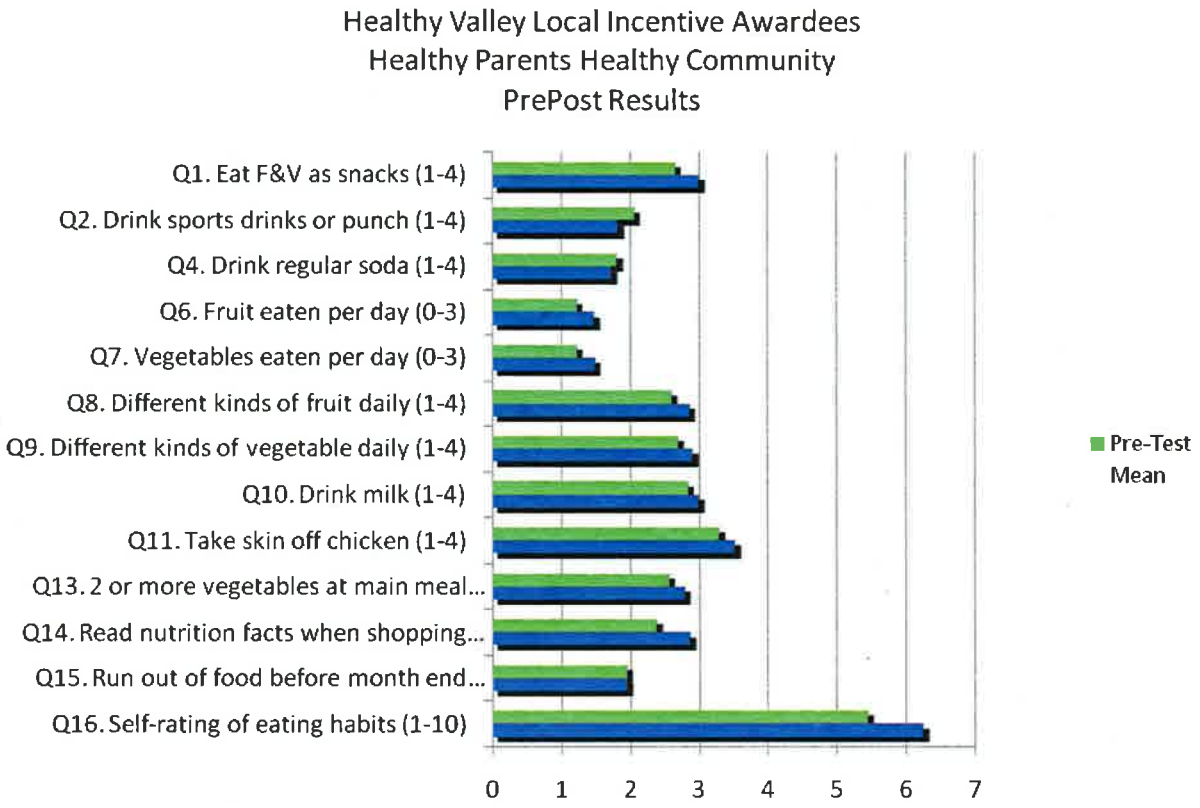
Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.84	2.04	0.20	0.000
Veggies (Q 7, 9,13) (Range 0-3)	1.50	1.74	0.23	0.000
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.91	4.45	0.54	0.000

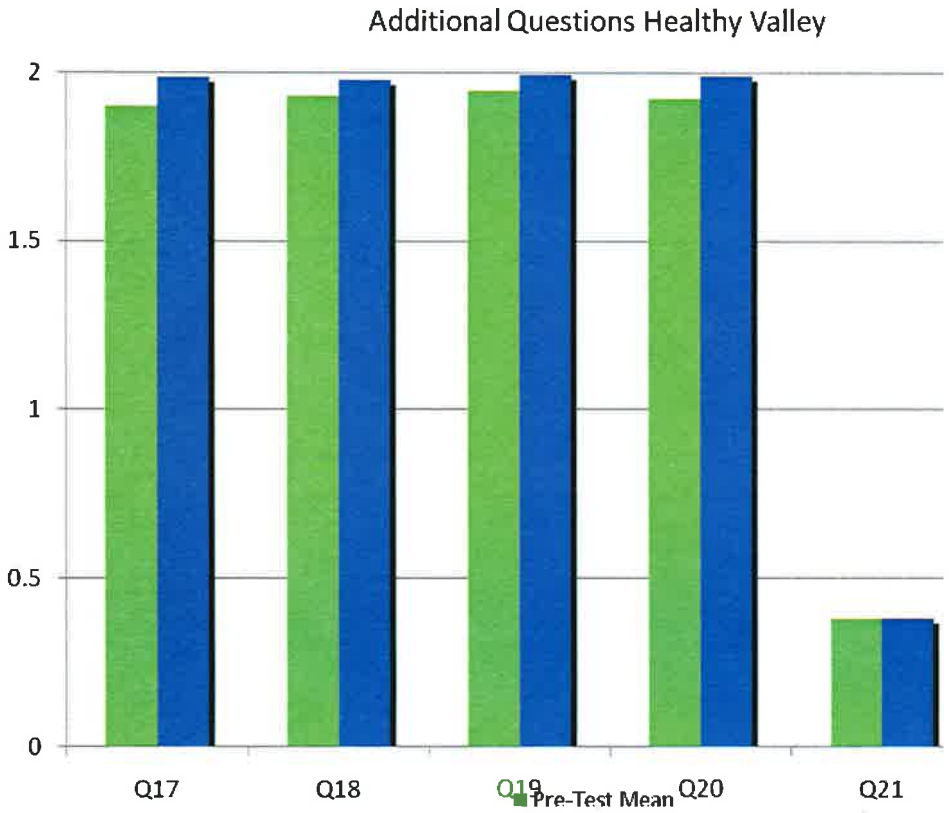
Demographics	
Hispanic	
yes	174
no	32
Race	
American Indian or Alaskan Native	0
Asian	22
Black or African American	2
Native Hawaiian or Other Pacific Islander	0
White	161

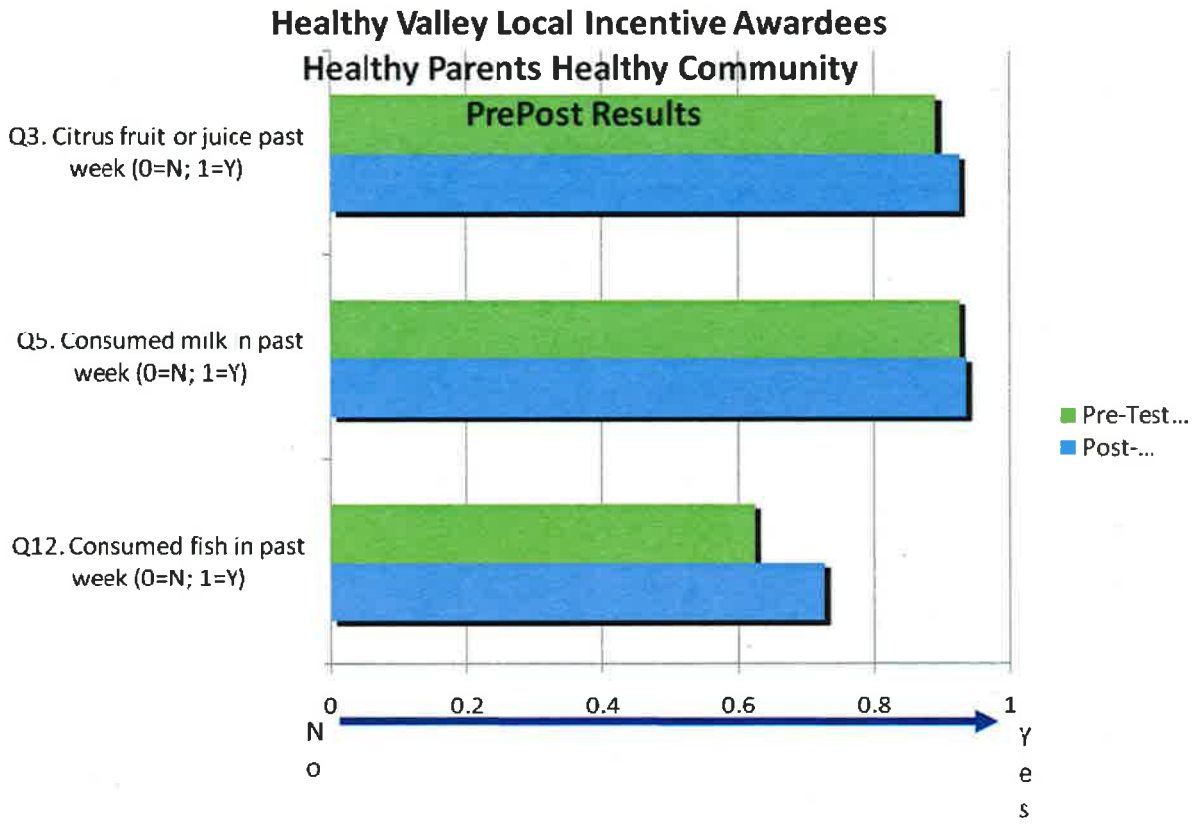
Average Age	41.1
Gender	
Males	8
Females	198

Results F/V Inventory additional questions

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
17. I feel that I can... eat fruit or vegetables as snacks.	1.90	1.99	0.08	0.001
18. I feel that I can... buy more vegetables the next time I shop.	1.93	1.98	0.05	0.007
19. I feel that I can... plan meals or snacks with more fruit during the next week.	1.95	2.00	0.05	0.004
20. I feel that I can... plan meals with more vegetables during the next week.	1.93	1.99	0.06	0.001
21. Did you attend any nutrition education workshops/classes last school year (2009-2010)?	0.38	0.38	0.00	1.000


Healthy Valley Local Incentive Awardees
Healthy Parents Healthy Community
PrePost Results
Q1. Eat F&V as snacks (1-4)
Q2. Drink sports drinks or punch (1-4)
Q4. Drink regular soda (1-4)
Q6. Fruit eaten per day (0-3)
Q7. Vegetables eaten per day (0-3)
Q8. Different kinds of fruit daily (1-4)
Q9. Different kinds of vegetable daily (1-4)
Q10. Drink milk (1-4)
Q11. Take skin off chicken (1-4)
Q13. 2 or more vegetables at main meal...
Q14. Read nutrition facts when shopping...
Q15. Run out of food before month end...
Q16. Self-rating of eating habits (1-10)
0
1
2
3
4
5
6
7
Pre-Test Mean


Additional Questions Healthy Valley
2
1.5
1
0.5
0
Q17
Q18
Q19
Q20
Q21
Pre-Test Mean


Healthy Valley Local Incentive Awardees
Healthy Parents Healthy Community
PrePost Results
Q3. Citrus fruit or juice past week (0=N; 1=Y)
Q5. Consumed milk n past week (0=N; 1=Y)
Q12. Consumed fish in past week (0=N; 1=Y)
0
0.2
0.4
0.6
0.8
1
No
Yes
Pre-Test...
Post-...

Network-funded contractor:	Humboldt COE - 08-85133
Contract number:	08-85133
Information provided by:	Linda Prescott
Telephone:	707-445-7042
Date:	7/20/2011
Email:	lprescott@humboldt.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Power Up! with Harvest of the Month
Target Population:	4th and 5th Grade

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
PowerPlay!	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Students from nine different 4th and 5th grade classrooms participated in the nutrition education interventions and impact outcome evaluation. The intensity of the nutrition education interventions varied among the classrooms.

Five of the classrooms located at Hoopa Elementary and Trinity Valley Elementary participated in eight monthly Harvest of the Month tasting activities which included reading a storybook from the Harvest of the Month literature list, tasting the produce, and using information from the educator newsletter such as reading food labels and other nutrition information found in the newsletter. However, the use of the educator newsletter in the Harvest of the Month activities was inconsistent.

Nutrition education intervention activities that took place with the one classroom at Grant Elementary included monthly Harvest of the Month tasting, reading selected storybook, and completing the activities in the Power Up! with Harvest of the Month workbook. Additionally, students in this classroom also took part in two additional Harvest of the Month extension activities that were connected to classroom celebrations. One intervention was the Twelve Days of Harvest which was a physical activity promotion activity. The second activity was centered around Valentine's Day.

The three remaining classrooms received nutrition education interventions of the greatest intensity. Two classrooms were located at Dows Prairie Elementary and one classroom was located at Morris Elementary. These three classrooms participated in the Harvest of the Month tastings, reading the selected storybook, and utilized the Power Up! with Harvest of the Month workbooks. Additionally, they took part in three school-wide nutrition education interventions. The school-wide activities included Twelve Days of Harvest, Healthy Valentine's Day celebration, ReThink Your Drink poster contest. Beyond the classroom, the students from these three classrooms visited a

local farm and took part in after school Harvest of the Month recipe preparation and tasting. Three times throughout the intervention period the students from these three classrooms also had the chance to taste the featured Harvest of the Month produce items through cafeteria tastings.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

The intensity of the physical activity interventions also varied among the classrooms. The five classrooms located at Hoopa Elementary and Trinity Valley Elementary participated in two physical activity promotional activities which were Twelve Days of Harvest and Pumpkin Patch Fitness. Also, Network Nutrition Education Staff incorporated a physical activity promotion each month when conducting the Harvest of the Month activities. Students in the one intervention classroom at Grant Elementary participated in Twelve Days of Harvest and Pumpkin Patch Fitness. The three intervention classrooms at Morris Elementary and Dow's Prairie took part in the Twelve Days of Harvest and Pumpkin Patch Fitness. These three classrooms also participated in Mileage Club over a four week period.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Training of teaching staff was limited and took place in a variety of ways. Lead teachers from participating school sites acted as liaison in providing Power Up! with Harvest of the Month workbooks. Network Nutrition Education staff also spent some time providing technical assistance and modeling lessons for participating teachers.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

Two Network Nutrition Education staff members worked together to conduct pre and post surveys in the intervention classrooms. Pre and Post surveys were conducted in the same manner in all classrooms.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

The intensity of the nutrition education interventions varied across the participating classrooms. All nutrition education components were offered to participating teachers and staff. Each school/classroom chose which interventions they would implement.

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 125, 4th and 5th grade students who participated in Power Up! with 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

a. 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:	Convenience Sample
b.	Control:	N/A

# of intervention matched pre/post measures collected	130
# of control matched pre/post measures collected	N/A

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.

	First Administered	Last Administered
Pre-test:	10/7/2010	11/17/2010
Post-test:	5/19/2011	6/13/2011
Follow-up:	N/A	N/A

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?	26

c. Describe how the data were collected.

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

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.

In analyzing the pre and post data for all schools combined the results for Healthy Foods and Beverages showed increases in the post-test mean for all categories measured with the exception of water which showed a decrease. These positive results are encouraging but indicate that greater nutrition education intervention needs to occur to show statistically significant changes overall. Considering the nutrition education interventions that took place within each of the nine participating classrooms, the intensity varied amongst the classrooms. As explained in other sections this report, limited nutrition education interventions took place within the three classrooms at Hoopa Elementary, the two classrooms at Trinity Valley Elementary, and the one classroom at Grant Elementary. Isolating data for the three schools from Morris Elementary and Dows Prairie Elementary where students received nutrition education of the greatest intensity, results show a statistically significant change in healthy foods and beverages overall as well as water consumption.

Analyzing the results for unhealthy foods, for all schools combined there was a slight decrease overall for consumption of unhealthy foods. Soda or soft drink consumption dropped slightly and consumption of punch, sports drinks, and fruit-flavored drinks increased slightly. None of these results pertaining to unhealthy foods were statistically significant. However, looking again at the data for Morris Elementary and Dows Prairie Elementary we find a greater drop in the post-mean for soda and soft drink consumption but an increase in punch, sports drinks, and fruit-flavored. Although these results were not statistically significant, the results support the efforts around ReThink Your Drink nutrition education especially addressing soda consumption. However, greater focus needs to be placed on other sugar laden beverages. Students appear to understand that soda is a high source of sugar and empty calories but have not necessarily grasped that many other popular beverages also contain high amounts of sugar and their consumption should be limited.

Looking at the results pertaining to physical activity, results for all schools combined showed increases that were statistically significant. Physical activity interventions were consistent across all nine participating classrooms. Statistically significant results also occurred in measures related to access to fruit and vegetable consumption at home. These results are promising and indicate that what students are learning about fruits and vegetables through the nutrition education interventions are impacting what is taking place in the home setting. See results tables at end of report.

b. Description of how evaluation results will be used:

The results described above will be used in planning nutrition education and physical activity promotion interventions activities for FFY 2012. We plan to continue to implement Harvest of the

Month activities and hope to standardize the use of the Power Up! with Harvest of the Month workbooks for all intervention classrooms. We also plan to standardize the training offered to staff implementing the activities in the classroom and after school programs. Additionally, we plan to increase the rigor of interventions around ReThink Your Drink as well as increase the number of students involved in the impact outcome evaluation.

7. Point of Contact

Name:	Linda Prescott
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.

None

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

Power Play!

Foerster, S., J. Gregson, et al. (1998). "The California Children's 5 a Day-Power Play! Campaign: Evaluation of a large-scale social marketing initiative." Family and Community Health 21(1): 46-64.

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

Yes

Network Youth Survey and *Network* High School Survey

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

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

None

All Schools Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	12.33	13.20	0.86	0.125
3. Milk	1.62	1.84	0.22	0.374
4. Yogurt or cheese	0.75	0.87	0.12	0.220
5. Cereal	0.86	0.86	0.00	1.000
7. Vegetables	2.04	2.20	0.16	0.287
8. Fruit	2.09	2.23	0.14	0.395
10. Juice	1.19	1.21	0.02	0.905
11. Water	3.72	3.65	-0.07	0.695
Total: fruit & vegetable (no juice)	4.14	4.46	0.32	0.204
Total: fruit, vegetable, juice	5.33	5.66	0.33	0.285
Unhealthy Foods	2.52	2.61	0.09	0.693
6. French fries or chips	0.57	0.57	0.01	0.926
9. Punch, sports drinks, fruit-flavored drinks	0.88	0.91	0.03	0.794
12. Soda or soft drinks	0.52	0.51	-0.01	0.929
13. Cookies, cakes, other sweets	0.54	0.67	0.13	0.180
Physical Activity	6.88	7.94	1.06	0.013
14. Days of 60 minutes moderate/vigorous	3.40	4.07	0.66	0.009
15. Days of 30 minutes outdoor play	3.51	3.83	0.32	0.175
Other				
16. Breakfast	0.91	0.91	0.00	1.000
17. Trying New Foods	1.32	1.34	0.02	0.759
Perceived Parental Consumption	4.81	4.69	-0.13	0.424
18. How often parents eat fruit	2.32	2.23	-0.10	0.300
19. How often parents eat vegetables	2.44	2.39	-0.05	0.568
Access	3.18	3.44	0.26	0.014
20. Fruits to eat at home	1.61	1.73	0.12	0.026
21. Vegetables to eat at home	1.56	1.68	0.12	0.074

Morris and Dows Prairie Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	13.77	15.79	2.02	0.008
3. Milk	1.83	2.43	0.60	0.198
4. Yogurt or cheese	0.90	1.11	0.21	0.155
5. Cereal	0.89	0.94	0.05	0.694
7. Vegetables	2.56	2.89	0.33	0.072
8. Fruit	2.47	2.65	0.18	0.462
10. Juice	1.22	1.35	0.13	0.442
11. Water	3.79	4.22	0.43	0.016
Total: fruit & vegetable (no juice)	5.03	5.56	0.53	0.119
Total: fruit, vegetable, juice	6.27	6.94	0.66	0.097
Unhealthy Foods	2.11	2.16	0.05	0.851
6. French fries or chips	0.48	0.48	0.00	1.000
9. Punch, sports drinks, fruit-flavored drinks	0.82	0.93	0.12	0.301
12. Soda or soft drinks	0.46	0.30	-0.16	0.086
13. Cookies, cakes, other sweets	0.44	0.53	0.10	0.451
Physical Activity	8.50	8.93	0.43	0.413
14. Days of 60 minutes moderate/vigorous	4.30	4.72	0.43	0.220
15. Days of 30 minutes outdoor play	4.21	4.22	0.02	0.955
Other				
16. Breakfast	0.96	0.94	-0.02	0.659
17. Trying New Foods	1.38	1.45	0.07	0.437
Perceived Parental Consumption	4.79	4.97	0.18	0.338
18. How often parents eat fruit	2.38	2.36	-0.02	0.830
19. How often parents eat vegetables	2.45	2.50	0.05	0.643
Access	3.37	3.51	0.14	0.271
20. Fruits to eat at home	1.67	1.79	0.11	0.090
21. Vegetables to eat at home	1.69	1.71	0.02	0.821

Network-funded contractor:	Los Angeles COE - 09-11228
Contract number:	09-11228
Information provided by :	Dr. Joanie Verderber, Maryam Shayegh, R2E2: Russell & English Research & Evaluation
Telephone:	(562) 922-6306
Date:	40755
Email:	Shayegh_Maryam@lacoe.edu

Section 1

1. Project Description and Goals

Project Name:	Network for a Healthy California - LACOE Coalition's Harvest of the Month and Tasting Trios Program
Target Population:	5th grade

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
PowerPlay!	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

A sample of 5th grade students enrolled in two classrooms in one school in each of four districts participated in the Harvest of the Month (HOTM) or HOTM Tasting Trios taste testing program, and received at least five classroom-based nutrition and physical activity lessons using Power Play materials.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

In addition to the Power Play lessons, a separate physical activity lesson and log was developed to define physical activity and help students with better recall.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

District Project Coordinators underwent a brief training on disseminating the student surveys and practiced modeling Power Play lessons for teachers in the classrooms.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

District Project Coordinators worked closely with classroom teachers on disseminating the pre and post surveys. Pre and post test were administered and collected by district project coordinators and/or classroom teachers. A food and physical activity log was implemented at posttest to improve student recall.

In 1-2 paragraphs, please provide a Description of the 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.

Impact/Outcome Objective 1:

By Sept 30, 2011, a sample of (200) 5th grade students who participated in Network for a Healthy California - LACOE Coalition's Harvest of the Month and Tasting Trios Program will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

Impact/Outcome Physical Activity Objective:

Impact/Outcome Sugar Sweetened Beverage Objective:

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:	

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

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	9/16/2011	10/28/2011
Post-test:	5/2/2011	6/2/2011
Follow-up:		

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?	9

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.
Findings are located in a separate Word file "LACOE FFY11 IOE Final Report 8-29 Pt2.doc"

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 need to emphasize the importance of standardizing the data collection process with project coordinators and participating teachers. It is clear that subcontracting districts implemented a variety of nutrition education activities in different dosages. We will use this information to plan the subsequent interventions and meet earlier to identify a consistent number of nutrition activities and encourage the same staff to administer the student survey in the participating classrooms. Also, the student survey will be reviewed to determine if any revisions are necessary to better align with planned nutrition education activities.

7. Point of Contact

Name:	Dr. Joanie Verderber, Maryam Shayegh, R2E2: Russell & English Research & Evaluation
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 and Network High School Survey
Yes

d. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)
0

6. Qualitative Evaluation Results

This is your opportunity to share with us anything that may not have been reflected in your data or elsewhere in this report. Consider the questions below, or offer us other qualitative reports of your successes and challenges over the last year.

What have been the biggest challenges and barriers you have faced while implementing your intervention or evaluation? What have you learned from them?

Subcontracting district project coordinators identified time constraints and inadequate support from some participating classroom teachers as the major barriers to implementation of interventions and evaluation. The posttests are administered after the final nutrition education intervention, which occurs during the same time as standardized testing and fifth grade graduation activities. The interventions varied based on the teachers who agreed to participate in the study at each school. Substantial amount of personnel time is required to plan and implement the wide variety of interventions. Lack of support from administrators and inadequate funding always creates additional challenges.

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?

The teachers who participated in the Harvest of the Month and Tasting Trios program noticed changes in the students' food choices or behaviors. Teachers reported students bringing healthier snacks to school and seemed to be more involved in the health promotion process. Collaboration among the subcontracting districts allowed resource sharing and use of standardized materials such as Power Play. Teachers stated the Power Play lessons were a valuable addition to the math and language arts curriculum. Students who received the Power Play lessons wrote letters to their school administrators stating they would like to increase their level of physical activity at school. A few lead teachers requested information about starting school wellness committees as a means to promote healthier changes for students and staff at their school. Nutrition coordinators reported more teachers incorporating nutrition and physical activity promotion into other core subject areas and implementing healthier classroom parties throughout the year. Teacher's comments include: • "Just wanted to let you know that I had the kids volunteer what they would like to bring for their healthy sundaes. One student brought bananas for everyone, 3 students brought cut up fruit, I brought the yogurt and granola, one brought nuts and THEY LOVED IT! Someone brought whipping cream and chocolate syrup. From that, they learned what a tablespoon was so they got 1 T. of whipping cream and 1/2 tablespoon of chocolate." • "Lesson on the health benefits of vegetables and the different nutrient content in different vegetables led to a persuasive writing challenge for her students, addressed to our district's food services director, Janet Wolf. The students all wrote letters suggesting the district replace iceberg lettuce with romaine lettuce. The students work was so passionate- I could tell the students were really concerned with their health after learning the nutrient content in both types of lettuce."

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 two of the contract, school year 2010-2011. The impact objective for the Coalition is as follows:

> By June 30, 2011, a sample of 5th grade students enrolled in two participating classrooms in one school within four 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:

- Perceived peer behavior
- Perceived peer intentions
- Openness to new foods
- Perceived parent behavior
- Socialization-encouragement
- Access to fruit and vegetables in the home
- Physical activity
- Student participation in nutrition activities at school
- Student observation of nutrition posters displayed at school
- Student participation in nutrition activities at home

Four districts—Garvey, Glendale, Rowland, and San Gabriel Unified School Districts—were selected to participate in the evaluation of Coalition activities. One school from each district participated. From each school, two 5th grade classrooms participating in the *Harvest of the Month* program were selected using a convenience sampling method. A total of eight classrooms participated in the evaluation.

Students answered questions from the 2010-2011 Los Angeles County Office of Education *Network for a Healthy California Youth Survey, Grade 5* (LACOE NYS), developed by the California Department of Public Health (CDPH *Network for a Healthy California Youth Survey – 2010-2011*[1]) and adapted for a 5th grade population. The survey assesses constructs of self-reported consumption of produce (vegetables, fruits, and 100% fruit juice), cereal, dairy, and unhealthy foods and drinks, perceived peer behavior, perceived parent consumption, socialization-encouragement, access to fruit and vegetables in the home, physical activity, nutrition activities at school, nutrition posters on display, and nutrition activities at home. 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 202 matched pairs. Data were analyzed using paired samples t-tests from two data points: the pretest was administered in fall 2010 (9/16/10 – 10/28/10), and the posttest was administered in spring 2011 (5/2/11 – 6/2/11).

Selected teachers from eight classrooms, at four schools, in four 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

[1] California Department of Public Health (CDPH). (2010). *Compendium of Surveys for Fruit and Vegetable Consumption and Physical Activity*. Sacramento, CA: Network for a Healthy California.

2010–2011 school year. The impact objective for the participating teachers is as follows:

By June 30, 2011, participating 5th grade teachers of the LACOE Coalition's *Network for a Healthy California* program in Garvey, Glendale, Rowland, and San Gabriel Unified School Districts will report on use of nutrition education activities and materials.

The findings from the evaluation are divided into three main sections, (1) results of the student responses to the LACOE NYS, (2) results of the teacher responses to the *Teacher Survey: 5th Grade*, and (3) conclusions, and 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]. Throughout this report the individual unified school district names are referred to as – Garvey, Glendale, Rowland, and San Gabriel – and not the formal title (e.g., Garvey Unified School District).

Figure 1. Sections of LACOE NYS Student Results with Related Constructs and Survey Item Numbers

Student Results - Sections	Constructs	Item Numbers*
Self-reported consumption	Self-reported consumption	1-11
Openness to new foods	Openness to new foods	12
Peer Influences	• Perceived Peer Intentions, • Perceived Peer Behaviors	17 - 22
School Influences	• Socialization – Encouragement • Student Participation in Nutrition Activities • Student Observation of Poster(s) Displayed at School	23-36
Home Influences	• Perceived Parent Behavior • Access to Produce in the Home • Nutrition Activities at Home	13-14, 37-43
Physical Activity	Self-reported Physical Activity	15-16

To increase the rigor of the evaluation, the CDPH 2010-2011 *Network for a Healthy California's Youth Survey* instrument was modified for consistency with the LACOE *Network for a Healthy California* Coalition program activities, and applied the constructs of perceived peer intentions and behaviors, socialization–encouragement, student participation in nutrition activities, student observation of nutrition posters displayed at school, and nutrition activities at home were added to the student survey. The teacher survey of nutrition education activities administered at pretest and posttest also increased the rigor of the evaluation.

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 2010-2011. 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 2010 to spring 2011. The sample includes 202 matched pairs of 5th grade students from two classrooms in one school in each of four school districts: Garvey, Glendale, Rowland, and San Gabriel. 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 most analyses require the use of scales. If students skip one or more questions, or answer, "I don't know" to a question on the pretest or posttest, a scale score is not computed for them. In other words, the N of an individual item analyzed within a construct, may be larger than the N of two or more items combined into a scale score, because students may have skipped one or more of the items, or answered I don't know, on the pretest or the posttest. Statistically significant *positive* results (e.g., eating *more* vegetables, eating *fewer* higher fat foods, exercising *more*) are noted by green highlighting in the cell. Statistically significant *negative* results (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) is identified with the description of the related item being analyzed [e.g., LACOE #1]. The LACOE NYS is found in the Appendix.

Figure 2 depicts the gender [LACOE NYS #45] of students that could be matched based on their student unique identification number.

Figure 2. Frequency (N) of matched students by gender

School District	Male	Female	Total
Glendale	27	23	**50**
Garvey	37	20	**57**
Rowland	22	26	**48**
San Gabriel	22	25	**47**
Total	**108**	**94**	**202**

Figure 3 presents the number of students at each district, and the total number of students, who participated at pretest, posttest, and those students that could be matched based on their student identification (ID) number.

Figure 3. 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)
Glendale	51	53	**50**
Garvey	67	68	**57**
Rowland	56	61	**48**
San Gabriel	55	58	**47**
Total	**229**	**240**	**202**

Self-Reported Consumption

Self-Reported Produce and Fruit Juice Consumption

Students reported how many times they ate vegetables and fruit, 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 [LACOE NYS #1]. Self-reported vegetable consumption significantly increased from pretest to posttest (1.32 to 1.60) for all districts combined.

Table 1. Self-reported vegetable consumption, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	1.70	1.98	0.28	0.251
Garvey	57	1.40	1.72	0.32	0.135
Rowland	48	0.94	1.29	0.35	0.117
San Gabriel	46	1.20	1.37	0.17	0.415

All Districts	201	1.32	1.60	**0.28**	**0.011**

Note: Number of times consumed the previous day. Scores range from 0 to 5.

Table 2 shows the average number of times students reported eating ***fruits*** the day before the survey [LACOE NYS #2]. Self-reported fruit consumption significantly increased at Glendale (2.00 to 2.58) and Rowland (1.40 to 1.92). The increase is also significant when all student data are combined (1.73 to 2.06).

Table 2. Self-reported fruit consumption, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	2.00	2.58	**0.58**	**0.017**
Garvey	57	1.86	1.96	0.11	0.609
Rowland	48	1.40	1.92	**0.52**	**0.049**
San Gabriel	46	1.63	1.78	0.15	0.448
All Districts	201	1.73	2.06	**0.33**	**0.003**

Note: Number of times consumed the previous day; scores range from 0 to 5.

Table 3 shows the average number of times students drank ***100% fruit juice*** the day before the survey [LACOE NYS #3]. No significant changes are seen at any district, or for all districts combined.

Table 3. Self-reported fruit juice consumption, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	1.30	1.44	0.14	0.589
Garvey	56	0.95	0.96	0.02	0.880
Rowland	48	1.19	1.33	0.15	0.405
San Gabriel	47	1.40	1.32	- 0.09	0.712
All Districts	201	1.20	1.25	0.05	0.578

Note: Number of times consumed the previous day; scores range from 0 to 5.

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 [LACOE NYS #1–3]. 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. Significant increases are seen at Glendale (5.00 to 6.00), Rowland (3.52 to 4.54) and in the combined data from all four districts (4.24 to 4.93).

Table 4. Self-reported fruit, vegetable, and fruit juice consumption, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	5.00	6.00	**1.00**	**0.040**
Garvey	56	4.20	4.68	0.48	0.220
Rowland	48	3.52	4.54	**1.02**	**0.007**
San Gabriel	46	4.20	4.50	0.30	0.478
All Districts	200	4.24	4.93	**0.70**	**0.001**

Note: Scale is comprised of three items, summed; scores range from 0 to 15.

Self-Reported Dairy Consumption

Students reported their dairy consumption with two items [LACOE NYS #4–5]. Thinking of the day before the survey, students provided 1) the number of times they drank milk of any kind, and 2) the number of times they reported eating yogurt, cottage cheese, cheese, or drank a yogurt drink. Options were none, one, two, or three or more times. Table 5 show the average number of times students drank milk, while Table 6 shows the average number of times students consumed yogurt, cottage cheese, cheese, or a yogurt drink. Self-reported milk consumption (Table 5) did not change significantly from pretest to posttest at any school district.

Table 5. Self-reported milk consumption, 2010–2011 School Year

District	N	Pretest	Posttest	Δ	p. =

		Mean	Mean		
Glendale	50	1.42	1.56	0.14	0.391
Garvey	57	1.54	1.42	- 0.12	0.397
Rowland	47	1.38	1.57	0.19	0.229
San Gabriel	47	1.49	1.21	- 0.28	0.079
All Districts	201	1.46	1.44	- 0.02	0.798

Note: Number of times consumed the previous day; scores range from 0 to 3.

As shown in Table 6, self-reported consumption of dairy products, other than milk such as yogurt, cottage cheese, cheese, and yogurt drinks [LACOE NYS #5] significantly increased at Rowland (an increase of 0.34 from 0.48 to 0.83) and for all students (0.53 at pretest to 0.75 at posttest for an increase of 0.22).

Table 6. Self-reported consumption of yogurt, cottage cheese, cheese, or yogurt drinks, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.76	0.90	0.14	0.473
Garvey	57	0.53	0.70	0.18	0.096
Rowland	46	0.48	0.83	**0.35**	**0.034**
San Gabriel	47	0.34	0.57	0.23	0.062
All Districts	200	0.53	0.75	**0.22**	**0.003**

Note: Number of times consumed the previous day; scores range from 0 to 3.

The two questions were combined to show the results for self-reported consumption of dairy products; the scale ranges from zero to six. As shown in Table7, a significant increase is observed at Rowland, where dairy consumption increased 0.57 points (from 1.85 to 2.41).

Table 7. Scale: Self-reported dairy product consumption (including any kind of milk, yogurt, cottage cheese, cheese, yogurt drink), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	2.18	2.46	0.28	0.287
Garvey	57	2.07	2.12	0.05	0.777
Rowland	46	1.85	2.41	**0.57**	**0.018**
San Gabriel	47	1.83	1.79	-0.04	0.837
All Districts	200	1.99	2.19	0.20	0.065

Note: Scale is comprised of two items, summed; scores range from 0 to 6.

Self-Reported Cereal Consumption

Table 8 shows self-reported consumption of either hot or cold cereal [LACOE NYS #6]. Students could report eating cereal zero, one, two, or three or more times the previous day. None of the changes from pre- to posttest are significant.

Table 8. Self-reported cereal consumption (including hot or cold cereal), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.84	0.78	-0.06	0.673
Garvey	57	0.51	0.39	-0.12	0.180
Rowland	47	0.77	0.72	-0.04	0.736
San Gabriel	47	0.66	0.68	0.02	0.860
All Districts	201	0.69	0.63	-0.05	0.356

Note: Number of times consumed the previous day; scores range from 0 to 3.

Self-Reported Fried and Higher Fat-containing Snack Foods Consumption

Students reported eating items such as fries, fried potatoes, hash browns, and chips [LACOE NYS #7]. Students reported eating these items zero, one, two, or three or more times the day before the survey was administered. As shown in Table 9, none of the changes from pre- to posttest are significant.

Table 9. Self-reported fried and higher fat-containing snack foods consumption (including French fries, fried potatoes, hash browns, and chips), **2010–2011 School Year**

District	N	Pretest	Posttest	Δ	p. =

		Mean	Mean		
Glendale	50	0.78	1.08	0.30	0.104
Garvey	57	1.05	1.04	-0.02	0.899
Rowland	46	0.63	0.46	-0.17	0.146
San Gabriel	47	0.68	0.70	0.02	0.900
All Districts	200	0.80	0.83	0.03	0.650

Note: Number of times consumed the previous day; scores range from 0 to 3.

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 [LACOE NYS #8–9]. Students reported drinking these items zero, one, two, or three or more times the day before the survey was administered.

Table 10 shows the results for consumption of punch, Kool-Aid®, Snapple®, Sunny Delight®, sports drinks or other fruit-flavored drinks [LACOE NYS #8]. None of the changes from pretest to posttest are statistically significant.

Table 10. Self-reported fruit-flavored drinks (including Kool-Aid®, Snapple,® Sunny Delight®, sports drinks, or other fruit-flavored drinks, not including 100% fruit juice), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.96	0.80	-0.16	0.415
Garvey	57	0.67	0.88	0.21	0.243
Rowland	47	0.62	0.70	0.09	0.552
San Gabriel	45	0.78	0.69	-0.09	0.570
All Districts	199	0.75	0.77	0.02	0.815

Note: Number of times consumed the previous day; scores range from 0 to 3.

The consumption of regular soda, pop, or soft drinks [LACOE NYS #9] is show in Table 11. Significant increases—denoting change *opposite* the desired direction—are seen at Glendale and when all district data is combined.

Table 11. Self-reported soft drink consumption (not including diet drinks), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.58	0.92	**0.34**	**0.004**
Garvey	57	0.42	0.63	0.21	0.057
Rowland	46	0.37	0.43	0.07	0.660

San Gabriel	44	0.50	0.39	-0.11	0.462
All Districts	197	0.47	0.60	**0.14**	**0.036**

Note: Number of times consumed the previous day; scores range from 0 to 3.

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 12, when these two items are combined, changes from pretest to posttest are not statistically significant.

Table 12. Scale: Self-reported fruit-flavored drink and soft drink consumption (including Kool-Aid®, Snapple,® Sunny Delight®, sports drinks, or other fruit-flavored drinks, not including 100% fruit juice or diet drinks), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	1.54	1.72	0.18	0.481
Garvey	57	1.09	1.51	0.42	0.088
Rowland	46	0.96	1.13	0.17	0.447
San Gabriel	43	1.28	1.09	-0.19	0.411
All Districts	196	1.21	1.38	0.17	0.163

Note: Scale is comprised of two items, summed; scores range from 0 to 6.

Self-Reported Sweets Consumption

One item assessed how often students reported eating sweet rolls, doughnuts, cookies, brownies, pies, or cakes [LACOE NYS #10]. Response options were zero, one, two, or three or more times. A significant increase, meaning increased consumption of sweets such as pastries and cakes, is seen at Garvey, where consumption increased from 058 to 0.88.

Table 13. Self-reported sweets consumption (including sweet rolls, doughnuts, cookies, brownies, pies, or cake), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.72	0.88	0.16	0.306
Garvey	57	0.58	0.88	**0.30**	**0.026**
Rowland	47	0.70	0.43	-0.28	0.079
San Gabriel	46	0.52	0.37	-0.15	0.146
All Districts	200	0.63	0.66	0.03	0.723

Note: Number of times consumed the previous day; scores range from 0 to 3.

Table 14. Self-reported breakfast consumption, 2010–2011 School Year

District	N	N (-)	N (+)	N Tied	p. =
Glendale	50	3	6	41	0.317
Garvey	56	3	6	47	0.317
Rowland	46	2	5	39	0.257
San Gabriel	46	7	3	36	0.206
All Districts	198	15	20	163	0.398

Note: Students reported eating breakfast the previous day (Yes=1 and No=0.)

Table 14a presents the mean score for breakfast consumption at pretest and posttest. Since "no" responses are coded zero, and yes responses coded "1," the mean represents the proportion of students indicating they ate breakfast. A large proportion of students at each district reported eating breakfast at the pretest; no changes from pre- to posttest are statistically significant.

Table 14a. Mean of self-reported breakfast consumption, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.86	0.92	0.06	0.322
Garvey	56	0.88	0.93	0.05	0.322
Rowland	46	0.87	0.93	0.07	0.261
San Gabriel	46	0.89	0.80	-0.09	0.209
All Districts	198	0.87	0.90	0.03	0.399

Note: Students reported eating breakfast the previous day (Yes=1 and No=0.)

Openness to New Foods

Self-Reported Openness to New Foods

Students responded to the question, "I like to try new foods" with 1=Almost never or never, 2=Sometimes, and 3=Almost always or always [LACOE NYS #12]. Significant increases are seen at Garvey and San Gabriel school districts. When all students are combined, a significant increase is also observed.

Table 15. Self-reported openness to new foods (i.e., "I like to try new foods"), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	49	2.27	2.37	0.10	0.255
Garvey	57	2.14	2.32	**0.18**	**0.032**

Rowland	47	2.02	2.13	0.11	0.133
San Gabriel	46	2.04	2.22	**0.17**	**0.010**
All Districts	199	2.12	2.26	**0.14**	**0.000**

Note: Scores range from 1 to 3.

Peer Influences

Perceived Peer Intentions

Students indicated their perception of whether or not their friends like to eat fruit [LACOE NYS #17] and vegetables [LACOE NYS #20]. "No" responses are coded zero, and yes responses are coded 1; "I don't know" responses have been omitted. Excluding the "I don't know" responses substantially reduced the number of cases available for analysis. The means presented in Tables 16 and 17 represent the proportion of students indicating their friends like to eat fruits and vegetables, respectively. As shown in Table 16, at least 88% of students at pretest reported their friends like to eat *fruit*; no changes from pretest to posttest are statistically significant. As shown in Table 17, between 21% (San Gabriel) and 76% (Glendale) of students at pretest reported their friends like to eat *vegetables*; no changes from pretest to posttest are statistically significant.

Table 16. Perceived peer intentions (i.e., "My friends like to eat fruits"), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	33	0.88	0.91	0.03	0.572
Garvey	23	0.91	1.00	0.09	0.162
Rowland	18	1.00	1.00	0.00	-
San Gabriel	17	0.88	0.94	0.06	0.332
All Districts	91	0.91	0.96	0.04	0.103

Note: Scored Yes=1 and No=0

Table 17. Perceived peer intentions (i.e., "My friends like to eat vegetables"), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	17	0.76	0.71	- 0.06	0.668
Garvey	14	0.50	0.64	0.14	0.165
Rowland	12	0.50	0.58	0.08	0.754
San Gabriel	14	0.21	0.21	0.00	1.000
All Districts	57	0.51	0.54	0.04	0.674

Note: Scored Yes=1 and No=0

Table 18 shows the results for the two items combined into one scale, with scores ranging from zero to two (which represents two "yes" answers). As with each individual item, no changes from pre- to posttest are statistically significant. Note also there are only 39 cases with valid data across all districts; the N= 39 include only students who responded "yes" or "no" to questions #17 and #20 on the pretest and posttest.

Table 18. Scale: Perceived peer intentions (i.e., "My friends like to eat fruits and vegetables"), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	14	1.57	1.64	0.07	0.671
Garvey	12	1.50	1.58	0.08	0.339
Rowland	6	1.67	1.67	0.00	1.000
San Gabriel	7	1.00	1.14	0.14	0.604
All Districts	39	1.46	1.54	0.08	0.412

Note: Scale is comprised of two items, summed; scores range from 0 to 2.

Perceived Peer Behaviors

Students indicated (with "yes"—coded 1 or "no"—coded 0) their perception of whether or not most of their friends eat fruit every day [LACOE NYS #18] and whether their *best* friend eats fruit every day [LACOE NYS #19]. These data are presented in Tables 19 and 20, respectively. Since "no" responses are coded zero, and yes responses coded "1," the mean represents the proportion of students who answered "yes" to the question. Again, with the exclusion of students who responded "I don't know," the number of cases available for analysis is substantially reduced.

As shown in Table 19, the change from pretest to posttest for peers eating fruit every day is statistically significant only at Garvey where 46% of students at pretest and 92% of students at posttest indicated their peers eat fruit every day.

Table 19. Perceived peer behavior for eating fruits, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	14	0.86	0.79	-0.07	0.336
Garvey	13	0.46	0.92	**0.46**	**0.008**
Rowland	7	0.43	0.57	0.14	0.604
San Gabriel	13	0.62	0.54	-0.08	0.673
All Districts	47	0.62	0.72	0.11	0.200

Note: Scored Yes=1 and No=0

As shown in Table 20, the change from pretest to posttest for the student's best friend eating fruit every day [LACOE NYS #19] is not statistically significant at any district or when all student data are combined.

Table 20. Perceived best friend behavior for eating fruits, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	22	0.86	0.86	0.00	1.000
Garvey	13	0.54	0.85	0.31	0.104
Rowland	8	0.75	0.63	-0.13	0.685
San Gabriel	7	0.57	0.43	-0.14	0.689
All Districts	50	0.72	0.76	0.04	0.659

Note: Scored Yes=1 and No=0

Table 21 shows the results for the two items [LACOE NYS #18-19] combined into one scale, with scores ranging from zero to two (which would represent two "yes" answers). None of the changes from pretest to posttest are statistically significant.

Table 21. Scale: Perceived peer and best friend behavior for eating fruit, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	9	1.56	1.78	0.22	0.169
Garvey	6	1.33	1.83	0.50	0.203
Rowland	4	1.25	1.50	0.25	0.789
San Gabriel	4	1.25	1.00	-0.25	0.718
All Districts	23	1.39	1.61	0.22	0.285

Note: Scale is comprised of two items, summed; scores range from 0 to 2

Students indicated (with "yes"—coded 1 or "no"—coded 0) their perception of whether or not most of their friends eat vegetables every day [LACOE NYS #21] and whether their *best* friend eats vegetables every day [LACOE NYS #22]. These data are presented in Tables 22 and 23, respectively. Since "no" responses are coded zero, and yes responses coded "1," the mean represents the proportion of students who answered "yes" to the question. As previously noted, excluding students that "do not know" what their friends eat reduces the sample size.

As shown in Table 22, the change from pretest to posttest for peers eating vegetables every day [LACOE NYS #21] is not statistically significant at any district. Likewise, as shown in Table 23 on the next age, the change from pretest to posttest for the student's best friend eating vegetables every day [LACOE NYS #22] is not statistically significant at any district.

Table 22. Perceived peer behavior for eating vegetables during the 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	12	0.50	0.33	-0.17	0.438
Garvey	11	0.73	0.73	0.00	1.000
Rowland	10	0.10	0.30	0.20	0.343
San Gabriel	6	0.17	0.33	0.17	0.363
All Districts	39	0.41	0.44	0.03	0.786

Note: Scored Yes=1 and No=0

Table 23. Perceived best friend behavior for eating vegetables, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	14	0.64	0.50	-0.14	0.336
Garvey	13	0.69	0.54	-0.15	0.337
Rowland	10	0.40	0.40	0.00	1.000
San Gabriel	7	0.29	0.00	-0.29	0.172
All Districts	44	0.55	0.41	-0.14	0.083

Note: Scored Yes=1 and No=0

Table 24 shows the results for the two items combined into one scale, with scores ranging from zero to two (which would represent two "yes" answers). None of the changes from pretest to posttest are statistically significant. Note the small sample size at each school district.

Table 24. Scale: Perceived peer and best friend behavior for eating vegetables 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	5	1.00	0.80	-0.20	0.374
Garvey	8	1.88	1.63	-0.25	0.351
Rowland	6	0.50	0.33	-0.17	0.695
San Gabriel	4	0.25	0.00	-0.25	0.391
All Districts	23	1.04	0.83	-0.22	0.135

Note: Scale is comprised of two items, summed; scores range from 0 to 2.

School Influences

Socialization – Encouragement

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" [LACOE NYS #23–26]. "No" responses were coded zero and "yes" responses were coded one; the "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 25, significant increases in teacher encouragement are seen at Garvey (increase of 0.92) and when all district data are combined (an increase of 0.32).

Table 25. Socialization-encouragement (i.e., What students' teachers tell students about eating vegetables)**, 2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	23	3.57	3.83	0.26	0.208
Garvey	24	2.21	3.13	**0.92**	**0.001**
Rowland	28	3.50	3.61	0.11	0.375
San Gabriel	13	3.62	3.38	-0.23	0.273
All Districts	88	3.18	3.50	**0.32**	**0.003**

Note: Scale is comprised of "Yes" answers to four items, summed; scores range from 0 to 4.

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" [LACOE NYS #27–30]. "No" responses were coded zero

and "yes" responses were coded one; the "yes" responses were added to create a scale ranging from zero to four. Responses recorded as "I don't know" have been omitted. As shown in Table 26, significant increases are seen at Garvey (0.58), San Gabriel (0.31) and when all valid student responses are combined (increase of 0.31).

Table 26. Socialization-encouragement (i.e., What students' teachers tell students about eating fruits)**, 2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	27	3.67	3.89	0.22	0.056
Garvey	26	2.88	3.46	**0.58**	**0.005**
Rowland	30	3.57	3.73	0.17	0.362
San Gabriel	13	3.46	3.77	**0.31**	**0.040**
All Districts	96	3.40	3.71	**0.31**	**0.000**

Note: Scale is comprised of "Yes" answers to four items, summed. Scores range from 0 to 4.

Nutrition Activities at School

Student Participation in Nutrition Activities

Students indicated which of several nutrition activities occurred at their school. These activities included a different teacher or a guest teaching about fruits or vegetables [LACOE NYS #31], making a recipe to try in class [LACOE NYS #32], their teacher teaching about fruits and vegetables [LACOE NYS #33], someone in the cafeteria asking them to try a fruit or vegetable [LACOE NYS #34], and doing a nutrition activity on a worksheet [LACOE NYS #35]. 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 27 through 31. The five items were also summed to create a scale that ranges from zero to ten; this cumulative scale is presented in Table 32, Student participation in nutrition activities at school.

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 [LACOE NYS #31]. The greatest increases are seen at Glendale (an increase of 1.54 points—from 0.34 to 1.88) and Garvey (an increase of 1.72 points—from 0.18 to 1.89).

Table 27. Students reported that a different teacher or guest taught them about fruits or vegetables, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.34	1.88	**1.54**	**0.000**
Garvey	57	0.18	1.89	**1.72**	**0.000**
Rowland	45	1.04	1.93	**0.89**	**0.000**
San Gabriel	46	1.28	1.70	**0.41**	**0.003**
All Districts	198	0.67	1.85	**1.18**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times).

As shown in Table 28, 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 [LACOE NYS #32]. The greatest increases are seen at Glendale (an increase of 1.72 points—from 0.18 to 1.90) and Rowland (an increase of 1.47 points—from 0.18 to 1.64).

Table 28. Students reported that they did or the teacher made a recipe with fruits or vegetables for them to try in class, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.18	1.90	**1.72**	**0.000**
Garvey	56	0.93	1.80	**0.88**	**0.000**
Rowland	45	0.18	1.64	**1.47**	**0.000**
San Gabriel	45	0.36	1.49	**1.13**	**0.000**
All Districts	196	0.43	1.72	**1.29**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times).

As shown in Table 29, 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 [LACOE NYS #33]. The greatest increase is seen at Glendale (an increase of 1.28 points—from 0.38 to 1.66).

Table 29. Students reported their teacher teaching them about fruits and vegetables in class, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.38	1.66	**1.28**	**0.000**
Garvey	56	0.84	1.38	**0.54**	**0.000**
Rowland	46	0.98	1.67	**0.70**	**0.000**
San Gabriel	43	0.65	1.30	**0.65**	**0.000**
All Districts	195	0.71	1.50	**0.79**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times)

Table 30 shows the average number of times at pretest and posttest that a cafeteria worker offered students a fruit or vegetable to try [LACOE NYS #34]. Significant increases are seen at Glendale, San Gabriel, and when all district data are combined.

Table 30. Students reported that someone working in the cafeteria offered them a fruit or vegetable to try, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.38	0.88	**0.50**	**0.002**
Garvey	57	0.63	0.67	0.04	**0.805**
Rowland	46	0.65	0.85	0.20	**0.183**
San Gabriel	46	1.09	1.50	**0.41**	**0.006**
All Districts	199	0.68	0.95	**0.28**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times)

Table 31 presents data for the average number of times students did a nutrition activity on a worksheet at pretest and at posttest [LACOE NYS #35]. Significant increases are seen at each district, and for all students, with increases ranging from 0.76 at San Gabriel to 1.55 at Glendale.

Table 31. Students reported that they did a nutrition activity on a worksheet, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	47	0.15	1.70	**1.55**	**0.000**
Garvey	56	0.34	1.55	**1.21**	**0.000**
Rowland	44	0.77	1.80	**1.02**	**0.000**
San Gabriel	46	0.96	1.72	**0.76**	**0.000**
All Districts	193	0.54	1.68	**1.15**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times)

Table 32 shows the combined scale of nutrition activities that students indicated occurred at their school [LACOE NYS #31–35]. 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 3.31 at San Gabriel to a high of 6.60 at Glendale.

Table 32. Scale: Student participation in nutrition activities at school (i.e., including 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)**, 2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	47	1.34	7.94	**6.60**	**0.000**
Garvey	54	2.89	7.31	**4.43**	**0.000**
Rowland	42	3.67	7.98	**4.31**	**0.000**
San Gabriel	42	4.33	7.64	**3.31**	**0.000**
All Districts	185	3.00	7.70	**4.70**	**0.000**

Note: Scale is comprised of five items, summed; scores range from 0 to 10.

Student Observation of Poster(s) Displayed at School

Students reported whether or not they saw nutrition posters displayed in their classroom or around school [LACOE NYS #36]. Table 33 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 33, significant differences are noted at all school districts except for Rowland.

Table 33. Student Observation of Nutrition Poster(s) Displayed in Classroom or Around School, 2010–2011 School Year

District	N	N (-)	N (+)	N Tied	p. =
Glendale	34	1	19	14	**0.000**
Garvey	46	0	16	30	**0.000**
Rowland	38	4	3	31	0.705
San Gabriel	29	1	7	21	**0.034**
All Districts	147	6	45	96	**0.000**

Note: Students reported seeing nutrition posters displayed in the classroom or around school (Yes=1 and No=0).

Table 33a presents the mean score for seeing nutrition posters in or around the student's classroom or school [LACOE NYS #36]. 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 Glendale (from 32% at pretest to 85% at posttest). A large proportion of Rowland students at the pretest (92%) indicated they had seen nutrition posters at their school.

Table 33a. Mean of students who reported viewing of nutrition posters, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	34	0.32	0.85	**0.53**	**0.000**
Garvey	46	0.63	0.98	**0.35**	**0.000**
Rowland	38	0.92	0.89	- 0.03	0.711
San Gabriel	29	0.48	0.69	**0.21**	**0.031**
All Districts	147	0.61	0.87	**0.27**	**0.000**

Note: Students reported seeing nutrition posters displayed in the classroom or around school (Yes=1 and No=0).

Home Influences

Parent's Produce Consumption

Students indicated how often their parents ate *fruit* [LACOE NYS #42] by responding "Never," "A few days a week," "Most days a week," "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* [LACOE NYS #43]. These results are displayed in Tables 34 and 35, respectively. Parental fruit (Table 34) and vegetable (Table 35) consumption, as reported by students, did not change significantly from pretest to posttest at any school district.

Table 34. Perceived parent behavior of fruit consumption, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	45	2.18	2.42	0.24	0.117
Garvey	45	2.24	2.36	0.11	0.280
Rowland	37	2.30	2.19	- 0.11	0.401
San Gabriel	35	2.11	2.20	0.09	0.413
All Districts	162	2.21	2.30	0.09	0.144

Note: Scored 0=Never, 1=A few days a week, 2=Most days a week, 3=Every day

Table 35. Perceived parent behavior of vegetable consumption, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	44	2.25	2.30	0.05	0.719
Garvey	42	2.52	2.45	-	0.474

				0.07	
Rowland	36	2.08	2.17	0.08	0.446
San Gabriel	37	2.14	2.16	0.03	0.845
All Districts	159	2.26	2.28	0.02	0.749

Note: Scored 0=Never, 1=A few days a week, 2=Most days a week, 3=Every day

The questions for parental fruit and vegetable consumption were combined into one scale [LACOE NYS #42–43]. The scores were summed and then divided by 2 (the number of items in the scale) so that the scale range remained from zero to three. Table 36 presents these data. As shown, none of the changes from pretest to posttest are statistically significant.

Table 36. Scale: Perceived parent behavior (i.e., fruits and vegetables consumption), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	42	2.23	2.40	0.18	0.141
Garvey	41	2.43	2.44	0.01	0.886
Rowland	34	2.19	2.18	- 0.01	0.876
San Gabriel	33	2.14	2.20	0.06	0.555
All Districts	150	2.25	2.32	0.06	0.214

Note: Scale is comprised of two items, averaged; scores range from 0 to 3.

Access to Produce in the Home

Students reported how often they have *fruits* to eat at home [LACOE NYS #13]. Response options were "Never," "Sometimes," "Always," coded 0, 1, and 2. Omitting students who answered, "I don't know," these results are displayed in Table 37. Access to fruits at home did not change significantly at any school district from pre- to posttest.

Table 37. Perceived access to fruits in home, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	49	1.78	1.80	0.02	0.766
Garvey	56	1.73	1.71	-0.02	0.799
Rowland	44	1.52	1.55	0.02	0.812
San Gabriel	46	1.52	1.59	0.07	0.473
All Districts	195	1.65	1.67	0.02	0.607

Note: Scored 0=Never, 1=Sometimes, 3=Always

Using the same response options, students indicated how often they had *vegetables* to eat at home [LACOE NYS #14]. These results are displayed in Table 38 on the following page. As shown, access to vegetables at home did not change significantly at any school district from pre- to posttest.

Table 38. Perceived access to vegetables in home, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	48	1.69	1.79	0.10	0.168
Garvey	54	1.61	1.70	0.09	0.301
Rowland	43	1.56	1.56	0.00	1.000
San Gabriel	42	1.67	1.69	0.02	0.785
All Districts	187	1.63	1.69	0.06	0.153

Note: Scored 0=Never, 1=Sometimes, 3=Always

These two questions were combined into one scale [LACOE NYS #13–14]. The scores were summed and then divided by 2 (the number of items in the scale) so that the scale range remained from zero to two. As shown in Table 39, changes from pretest to posttest are not statistically significant for any school district or when all student data are combined.

Table 39. Perceived access to fruits and vegetables in home, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	47	1.74	1.79	0.04	0.420
Garvey	53	1.68	1.71	0.03	0.626
Rowland	42	1.54	1.55	0.01	0.855
San Gabriel	42	1.60	1.65	0.06	0.359
All Districts	184	1.64	1.68	0.04	0.234

Note: Scale is comprised of two items, averaged; scores range from 0 to 2.

Nutrition Activities at Home

Students reported which of five nutrition activities they participated in at home. The range of nutrition activities at home included LACOE NYS items: [#37] taking home a nutrition newsletter; [#38] talking with a family member about the nutrition newsletter; [#39] making a recipe using fruits and vegetables with a family member; [#40] talking with a family member about eating fruits or vegetables; and [#41] helping a family member make a shopping list that included fruits or vegetables. Response options were "No," "Yes, 1 time," and "Yes, 2 or more times." These were scored 0, 1, and 2, respectively.

Table 40 shows the number of times students reported taking home a nutrition newsletter that they received in class [LACOE NYS #37]. Significant increases, ranging from 0.33 (San Gabriel) to 1.10 (Glendale), are observed at each district and when all student data are combined.

Table 40. Students reported, taking home a Nutrition Newsletter that they received in class, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	0.16	1.26	**1.10**	**0.000**
Garvey	56	0.30	1.20	**0.89**	**0.000**
Rowland	45	0.60	1.40	**0.80**	**0.000**
San Gabriel	46	0.52	0.85	**0.33**	**0.034**
All Districts	197	0.39	1.18	**0.79**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times)

Table 41 shows the number of times students reported talking with a family member about the Nutrition Newsletter [LACOE NYS #38]. Significant increases are seen at two school districts (Glendale and Rowland) and when all student data are combined.

Table 41. Students reported, talking with a family member about the Nutrition Newsletter, 2010–2011 School Year

District	N	Pretest	Posttest	Δ	p. =

		Mean	Mean		
Glendale	50	0.14	0.84	**0.70**	**0.000**
Garvey	56	0.43	0.50	0.07	0.532
Rowland	44	0.36	0.77	**0.41**	**0.002**
San Gabriel	46	0.35	0.37	0.02	0.868
All Districts	196	0.32	0.62	**0.30**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times)

Table 42 shows the number of times students reported making a recipe at home using fruits or vegetables they tried at school [LACOE NYS #39]. Significant and positive increases are seen at all school districts except for Garvey. When all district data are combined, the increase from pretest (0.53) to posttest (0.94) is also statistically significant.

Table 42. Students reported, making a recipe at home using fruits or vegetables they tried at school, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	49	0.53	1.29	**0.76**	**0.000**
Garvey	56	0.71	0.82	0.11	0.444
Rowland	43	0.33	0.86	**0.53**	**0.001**
San Gabriel	46	0.48	0.78	**0.30**	**0.038**
All Districts	194	0.53	0.94	**0.41**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times)

Table 43 shows the number of times students reported having a family member talk to them about fruits or vegetables [LACOE NYS #40]. Significant increases are seen at two school districts (Glendale and Rowland) and when all student data are combined.

Table 43. Students reported, having a family member talk to them about fruits or vegetables, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	1.12	1.74	**0.62**	**0.000**
Garvey	55	1.29	1.31	0.02	0.898
Rowland	45	1.04	1.58	**0.53**	**0.001**
San Gabriel	46	1.24	1.46	0.22	0.115
All Districts	196	1.18	1.52	**0.34**	**0.000**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times)

Table 44 shows the number of times students reported helping a family member make a shopping list that included fruits or vegetables [LACOE NYS #41]. A significant increase is observed at only school district—Glendale—that increased from 1.08 to 1.44 from pretest to posttest. The combined student data also yields a significant increase from pre- to posttest.

Table 44. Students reported, helping a family member make a shopping list that included fruits or vegetables, 2010–2011 School Year

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	1.08	1.44	**0.36**	**0.005**
Garvey	57	0.82	0.95	0.12	0.424
Rowland	45	1.04	1.18	0.13	0.382
San Gabriel	46	1.02	1.26	0.24	0.195
All Districts	198	0.98	1.20	**0.21**	**0.006**

Note: Scores range from 0 to 2 (0=No, 1=One time, 2=Two or more times)

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 45. As with many of the individual items, significant and positive increases are seen at each school district, and when all student data are combined.

Table 45. Scale of nutrition activities at home, 2010–2011 School Year (Students reported on nutrition activities that occurred at home – taking nutrition 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, helping family member make a shopping list that included fruits or vegetables)

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	49	3.00	6.61	**3.61**	**0.000**
Garvey	53	3.47	4.66	**1.19**	**0.007**
Rowland	42	3.40	5.79	**2.38**	**0.000**
San Gabriel	46	3.61	4.72	**1.11**	**0.003**
All Districts	190	3.37	5.43	**2.06**	**0.000**

Note: Scale is comprised of two items, summed; scores range from 0 to 10.

Physical Activity

Students reported which days in the past 7 they were physically active (any activity that made their heart beat fast for 60 minutes) for a total of at least 60 minutes [LACOE NYS #15]. Table 46 presents these data. The scale ranges from zero to seven (exercised every day the past week). Significant and positive increases in physical activity are seen at all school districts except for Glendale. 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.

Table 46. Self-reported physical activity for at least 60 minutes per day during past 7 days prior to survey (including zeros)**, 2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =

Glendale	50	4.42	4.30	-0.12	0.701
Garvey	57	2.61	4.18	**1.56**	**0.000**
Rowland	47	2.34	3.51	**1.17**	**0.001**
San Gabriel	46	2.76	3.30	**0.54**	**0.041**
All Districts	200	3.04	3.85	**0.81**	**0.000**

Note: Checked responses to each day of the week were summed. Scores indicate number of days physically active for at least 60 minutes during past 7 days prior to survey. Scores range from 0 to 7.

Students then reported which days in the past 7 they played outdoors for at least 30 minutes [LACOE NYS #16]. The scale ranges from zero to seven (exercised every day the past week). As presented in Table 47, significant and positive increases are seen at two of the four districts—Garvey and Rowland. The combined district increase in 30 minutes of outdoor activity is also significant.

Table 47. Self-reported outdoor play for at least 30 minutes per day during past 7 days prior to survey (including zeros), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	3.90	4.06	0.16	0.623
Garvey	57	2.56	4.07	**1.51**	**0.001**
Rowland	47	1.81	2.55	**0.74**	**0.028**
San Gabriel	46	2.20	2.37	0.17	0.567
All Districts	200	2.63	3.32	**0.69**	**0.000**

Note: Checked responses to each day of the week were summed. Scores indicate number of days physically active for at least 30 minutes during past 7 days prior to survey. Scores range from 0 to 7.

The two physical activity questions were combined into one scale [LACOE NYS #15–16]. All responses were summed and then divided by 2 to maintain the scale range from zero to seven to depict a week. As shown in Table 48, a significant increase in combined physical activity is seen at Garvey, Rowland, and when all student data are combined.

Table 48. Scale: Self-reported Physical Activity and Outdoor Play per day during past 7 days prior to survey (including zeros), **2010–2011 School Year**

District	N	Pretest Mean	Posttest Mean	Δ	p. =
Glendale	50	4.16	4.18	0.02	0.941
Garvey	57	2.59	4.12	**1.54**	**0.000**
Rowland	47	2.07	3.03	**0.96**	**0.001**
San Gabriel	46	2.48	2.84	0.36	0.115
All Districts	200	2.84	3.59	**0.75**	**0.000**

Note: Checked responses to each day of the week were summed. Scores indicate number of days physically active for at least 30 minutes during past 7 days prior to survey; scores range from 0 to 7.

All tables above provide results for individual districts within the Coalition, as well as all districts combined. A summary of results for the Coalition, by construct, are provided in Table 49. As denoted by green shading, the following scales are significant: [LACOE NYS #1-3] fruit, vegetable, and 100% juice consumption; [LACOE NYS #27-30] socialization/encouragement of fruits; [LACOE NYS #23-26] socialization/encouragement of vegetables; [LACOE NYS #31-35] student participation in nutrition activities at school; [LACOE NYS 37-41] nutrition activities at home; and [LACOE NYS #15-16] physical activity. Additionally, the following items are statistically significant: [LACOE NYS #1] vegetable consumption; [LACOE NYS #2] fruit consumption; [LACOE NYS #12] openness to trying new foods; and [LACOE NYS 36] observing nutrition posters at school.

Table 49. Summary of Results by Construct, Student Matched Pairs for the Coalition, 2010-2011 School Year

Construct	Scale	Item No.	N	Pretest Mean	Posttest Mean	Δ	p. =
Self-Reported Consumption							
▪ **Fruits, Vegetable, and Juice**	X	1-3	200	4.24	4.93	**0.70**	**0.001**
o **Vegetables**		1	201	1.32	1.60	**0.28**	**0.011**
o **Fruits**		2	201	1.73	2.06	**0.33**	**0.003**
o **100% fruit juice**		3	201	1.20	1.25	0.05	0.578
▪ **Dairy Products**	X	4-5	200	1.99	2.19	0.20	0.065
▪ **Cereal**		6	201	0.69	0.63	-0.05	0.356
▪ **Fried & Higher Fat Snack Foods**[2]		7	200	0.80	0.83	0.03	0.650
▪ **Fruit-Flavored & Soft Drinks2**	X	8-9	196	1.21	1.38	0.17	0.163
▪ **Sweets2**		10	200	0.63	0.66	0.03	0.723
Breakfast		11	198	0.87	0.90	0.03	0.399
Openness to New Foods		12	199	2.12	2.26	**0.14**	**0.000**
Perceived Peer Intentions	X	17,20	39	1.46	1.54	0.08	0.412
Perceived Peer Behaviors							
▪ **Fruits**	X	18-19	23	1.39	1.61	0.22	0.285
▪ **Vegetables**	X	21-22	23	1.04	0.83	-0.22	0.135
Socialization-Encouragement							
▪ **Fruits**	X	27-30	96	3.40	3.71	**0.31**	**0.000**
▪ **Vegetables**	X	23-26	88	3.18	3.50	**0.32**	**0.003**
Student Participation in Nutrition Activities at School	X	31-35	185	3.00	7.70	**4.70**	**0.000**
Student Observation of Nutrition Posters		36	147	0.61	0.87	**0.27**	**0.000**
Perceived Parent Behavior	X	42-43	150	2.25	2.32	0.06	0.214
Access to Produce in the Home	X	13-14	184	1.64	1.68	0.04	0.234
Nutrition Activities at Home	X	37-41	190	3.37	5.43	**2.06**	**0.000**
Self-Reported Physical Activity	X	15-16	200	2.84	3.59	**0.75**	**0.000**

[2] Note: a positive change infers an unhealthy behavior (e.g., eating fried and higher fat snacks).

TEACHER RESULTS

The teacher results are organized into the following sections: Nutrition Education Activities, Nutrition and Physical Activity Log Activities, Likelihood of Participation in Summer Institute about Nutrition Education, and Topics of Interest for Teacher Training.

Nutrition Education Activities

A pretest instrument was administered to teachers to determine the extent to which any nutrition education occurred prior to the student pretest survey as it could negatively impact reported changes in student responses from pretest to posttest. At the pretest, teachers were asked to report what, if any, nutrition education activities their students had participated in since the beginning of the 2010–2011 school year [Q #2]. Data from Garvey are not available. Of the six teachers from whom data were collected, half had conducted some type of nutrition education activity with the students prior to pretesting, ranging from one to four times. Glendale teachers reported no nutrition education activities. One Rowland teacher provided "nutrition education lessons" four times; the second Rowland teacher provided "nutrition education lessons," "taste test with fruits or vegetables," and "food preparation activity" (the teacher did not specify the number of times these activities were conducted). One San Gabriel teacher reported conducting one "nutrition education lesson."

At posttest, this question [Q #2] was asked again instructing teachers to indicate the nutrition education activities students participated in since the pretest survey was completed at the beginning of the 2010-2011 school year. Table 50 shows the number of times each activity was taught at each district and for all districts combined. Data are presented for all districts in descending order, from left to right. Therefore, the activities taught the most appear on the left. Teachers engaged in taste tests and nutrition education lessons more than the other activities. Note that nutrition education lessons were conducted only three times at Glendale between two classrooms. The nutrition activity workbook was used nine times each at Glendale and Rowland.

Table 50. Teacher-reported Nutrition Education Activities in which Students Participated at Posttest Survey Administration

District	Taste Test	Nutrition Education Lesson	Nutrition Workbook Activity	Food Preparation	Assignment from HOTM newsletter	Garden-based
Glendale	20	3	9	11	12	2
Garvey	13	17	13	9	18	0
Rowland	16	17	9	12	8	0

San Gabriel	29	35	19	13	1	0
All Districts	78	72	50	45	39	2

Note: Sum of number of times students participated in each activity

Nutrition and Physical Activity Log Activities

At posttest, teachers indicated if they, the district project coordinator, and/or another individual implemented a Nutrition Log Activity; Table 51 presents these data. As shown, a Nutrition Log Activity was taught five times at Rowland (by the district project coordinator), four times at San Gabriel (by the district project coordinator), three times at Garvey (by the teacher and district project coordinator), and two times at Glendale (once by the teacher and once by another person—a student volunteer).

Table 51. Teacher-reported Implementation of Nutrition Log Activity

District	Taught by Teacher	Taught by District Coordinator*	Taught by Other	Number of Times Taught
Glendale	1	0	1	2
Garvey	1	2	0	3
Rowland	0	2	0	5
San Gabriel	0	2	0	4
All Districts	2	6	1	14

Note: Who taught and number of times nutrition log activity was implemented.
*District Project Coordinator

At posttest, teachers indicated if they, the district project coordinator, and/or another individual implemented a Physical Activity Log Activity; Table 52 presents these data. As shown, a Physical Activity Log Activity was taught six times at Glendale (by the teacher and a student volunteer), four times at Rowland (by the district coordinator), two times at Garvey (by the district coordinator), and two times at San Gabriel (by the district coordinator).

Table 52. Teacher-reported Implementation of Physical Activity Log Activity

District	Taught by Teacher	Taught by District Coordinator	Taught by Other	Number of Times Taught
Glendale	1	0	1	6
Garvey	0	2	0	2
Rowland	1	2	0	4
San Gabriel	0	2	0	2
All Districts	2	6	1	14

Note: Who taught and number of times physical activity log activity was implemented.

Likelihood of Participation in Summer Institute about Nutrition Education

At posttest, teachers indicated how likely it was that they would participate in Summer Institute 2011 about nutrition education (scale ranged from 1="not likely" to 5="very likely"). As shown in Table 53, the likelihood of participating is higher at Rowland and San Gabriel (average of 2.5) compared to Glendale and Garvey (both participating teachers at each of these schools answered "1" for "not likely"). Only two of the eight teachers indicated they would be "likely" to participate, while no teacher answered "very likely."

Table 53. Teacher-reported Likelihood of Participation in Summer Institute

District	N	Min	Max	Mean
Glendale	2	1	1	1.0
Garvey	1	1	1	1.0
Rowland	2	1	4	2.5
San Gabriel	2	1	4	2.5
All Districts	7	1	4	1.9

Note: One item scored 1=Not likely to 5=Very likely

Topics of Interest for Teacher Training

At posttest, teachers indicated (by either selecting or not selecting each item) which of eight topics they would be interested in if teacher training was offered. The topics included: *2010 Dietary Guidelines for 'mericans*, Food safety, Food labeling, Food allergies, Type 2 diabetes in children, Childhood obesity, Food preparation in the classroom, Garden-based nutrition education curricula, Other nutrition education curricula, and Other related topics of interest (fill-in item). As shown in Table 54, presented in descending order from left to right, "Childhood obesity" and "Type 2 diabetes in children" were selected by five of the eight teachers overall. Of interest to half of the teachers (both teachers at Glendale and Rowland) was training on "Food preparation in the classroom." One Glendale teacher requested "fundraising to replace the school chocolate bar sales. I don't think the district should allow it, but it brings in so much needed funds."

Table 54. 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
Glendale	1	0	2	0	0	1	0	0	0
Garvey	1	2	0	0	2	1	0	0	1
Rowland	1	1	2	1	0	0	1	1	0
San Gabriel	2	2	0	2	1	1	0	1	0
All Districts	5	5	4	3	3	3	1	2	1

Note: Scored 0 if not selected and 1 if selected. Table presents sum of each item

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 demonstrated significant positive results among students in three areas related to the impact objective: both, fruit and vegetable consumption, and the consumption of fruit, vegetables, and fruit juice combined. Also reported for the Coalition were significant positive results for students' openness to try new foods, and in variables related to consumption, including socialization-encouragement by teachers for vegetables and fruits, student participation in nutrition activities at school, student observation of nutrition posters, nutrition activities at home, and physical activity.

When the Coalition is analyzed by individual districts within it, Glendale and Rowland reported significant positive results related to the impact objective, showing improvements in the consumption of fruit, and the consumption of fruit, vegetables, and fruit juice combined. Rowland also reported significant positive results for the consumption of dairy products other than milk, and the consumption of milk and other dairy products combined. Neither Garvey nor San Gabriel demonstrated significant positive results related to the impact objective, nor other nutrition-related behaviors. They both reported significant positive results in the openness of students to try new foods.

For some constructs, such as eating breakfast, perceived peer intentions, perceived parent behavior, and perceived access to produce at home, the pretest scores were high, 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, Perceived Peer Influence, School Influences, Home Influences, and Physical Activity.

CONSUMPTION

Fruits & Vegetables

- The Coalition demonstrated significant positive increases in consumption of both fruits and vegetables. Within the Coalition, there were no significant changes in any given district for vegetable consumption; however, both Glendale and Rowland reported significant positive increases in the consumption of fruit.

- At posttest, student-reported consumption of each, vegetables and fruits, was approximately two times the day prior to the survey, whereas 100% fruit juice was consumed about one time.
- When consumption of fruit, vegetables, and 100% fruit juice is examined, the Coalition demonstrated significant positive increases; students reported consuming them on average, 5 times the day prior to the survey. Glendale and Rowland reported significant increases.
- Garvey and San Gabriel School Districts demonstrated no significant positive increases in the consumption of fruit, vegetables, or 100% fruit juice.

Dairy Products

- There were no significant increases in the consumption of milk for the Coalition, nor any individual district within the Coalition. However, the consumption of other dairy products, including yogurt and cheese, increased significantly for the Coalition, as well as Rowland. Rowland also reported a significant increase in consumption of all dairy products.

Cereal

- There were no significant increases in the consumption of cereal for the Coalition, or any individual district within the Coalition. Students reported consuming cereal on average one or fewer times on the day prior to the survey.

Fried & High Fat Snacks

- There were no significant decreases in the consumption of fried and higher fat-containing snack foods for the Coalition, or any individual district within the Coalition. On the positive side, there were also no significant increases reported; students are maintaining their levels of consumption of these snack items. In addition, at posttest, students reported consuming fried and higher-fat snack foods on average no more than once the day prior to the survey.

Fruit-Flavor & Soft Drinks

- There were no significant changes, either positive or negative, in the consumption of fruit-flavored drinks. However, there was a significant *increase* in the consumption of soft drinks within the Coalition, as well as for Glendale alone. Despite these increases, consumption of soft drinks on average was no more than one time the day prior to the survey.

Sweets

- There were no significant changes, either positive or negative, in the consumption of sweets for the Coalition. However, there was a significant *increase* in the consumption of sweets for Garvey. Despite the lack of positive change in this area, student-reported consumption of sweets on average was less than one time day prior to the survey.

Breakfast

- There were no significant changes reported for breakfast consumption for the Coalition, or any individual district. However, there was little room for improvement as a large proportion of students already reported eating breakfast at the pretest.

OPENNESS TO TRY NEW FOODS

As a Coalition, students on average reported they *sometimes* "like to try new foods," which was a significant increase. However, Garvey and San Gabriel students reported significant increases in their openness to try new foods.

PERCEIVED PEER INFLUENCE

- There were no significant changes in perceived peer intentions for produce consumption.
- Perceived peer behavior was examined for friends as well as best friend. The perceived consumption of fruit by friends improved significantly only for Garvey; there was no change in the consumption of vegetables.

SCHOOL INFLUENCES

- For the Coalition, there was a significant increase in students reporting encouragement by their teachers to eat both fruit and vegetables. Individually, Garvey also reported a significant increase in both, with San Gabriel reporting a significant increase in only encouragement to eat fruit.
- The Coalition 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, a cafeteria worker offering them produce, doing a nutrition activity on a worksheet, and viewing a poster.

HOME INFLUENCES

- Despite significant increases in students reporting a variety of family influences to consume more fruits and vegetables (taking home a nutrition newsletter, talking with a family member about it, making a recipe at home using produce tried at school, having a family member talk to them about produce, and helping a family member make a shopping list that included produce), there were no significant changes reported in perceived parent consumption of produce, nor access to produce in the home.

PHYSICAL ACTIVITY

- The Coalition, and Garvey and Rowland individually, reported significant increases in the amount of physical activity for both 60 minutes per day and 30 minutes per day for the seven days prior to the survey, as well as when the two levels of physical activity were combined. San Gabriel reported a significant increase in 60 minutes of physical activity.

Teacher Results

At posttest, the eight teachers representing the four school districts reported on the nutrition education activities they used in the classroom, the use of the nutrition log and the physical activity lot, their potential participation in a Summer Institutes, and nutrition-related teacher training topics of personal interest. The conclusions related to those data are presented in the following.

NUTRITION EDUCATION ACTIVITIES

- Taste-testing and nutrition education lessons were the nutrition education activities used most frequently by teachers within the Coalition. Other activities were also used with less frequency, including nutrition workbook activity, food preparation, an assignment from the HOTM newsletter, and a garden-based activity. Garvey and San Gabriel used a nutrition workbook activity more often than Glendale or Rowland. Glendale was the only district implementing any garden-based activity.

NUTRITION LOG & PHYSICAL ACTIVITY LOG

- The nutrition log and physical activity log activities were taught most often by a district coordinator. On one occasion, Glendale had each log activity conducted by someone other than the teacher or district coordinator. No teacher at San Gabriel taught either log activity.
- Overall, the use of the log activities was high for the Coalition: 14 times each. However, the use of the activity varied across districts from two to six times.

SUMMER INSTITUTE

- Coalition teachers reported that they are not likely to participate in a summer institute about nutrition education, with teachers at Rowland and San Gabriel slightly more likely to participate than teachers at Glendale and Garvey.
- Topics of most interest to teachers were childhood obesity and Type 2 diabetes in children. Topics of little interest included nutrition labeling and nutrition education curricula.

DISCUSSION

The following discussion section addresses the survey items in the both the Los Angeles County Office of Education *Network for a Healthy California* Youth Survey (LACOE NYS) – Grade 5, and the

CDHS *Network for a Healthy California* Youth Survey – 2010, the data collection, curricular alignment, and the teacher survey.

SURVEY ITEMS

- 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, perceived parent consumption and access to fruits and vegetables at home, and physical activity items were used verbatim from the CDHS *Network for a Healthy California* Youth Survey – 2010.
- Students did not report on all of their fluid consumption. Items 8 and 9 excluded water, diet soda and drinks, and only included 100% fruit juice, power drinks, regular sodas, and punch, etc. The results could be misinterpreted to infer that students consume minimal amounts of fluids.[3] Items 4 and 5, ask students to report on their dairy product consumption, including milk consumption (item 4), and about yogurt and yogurt drinks, string cheese, and cottage cheese in item 5. There is no question that asks about other dairy product consumption (e.g., other cheeses, ice cream, flavored milk, buttermilk, sour cream, cream cheese, etc.).
- Other questions about consumption are open to interpretation. For example:
  - 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).
  - Openness to new foods (item 12, "'I like to try new foods . . .") might include fruits, vegetables, beverages, candy, snack foods, meats, and combination foods.
- Students may experience fatigue when responding to 45 items, which may influence the consistency and reliability of their answers.

DATA COLLECTION

- Accompanying the CDHS *Network for a Healthy California Youth Survey*, there were no directions or protocol for the administration of the survey. For that reason, R^2E^2 developed a protocol for the administration of the LACOE NYS; it was distributed with the copies of the student survey pretest and posttest (Appendix).
- Pretesting was conducted after instruction began in at least half of the classrooms, making the interpretation

[3] The coding of the survey included "water" in the new item 11.

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 student volunteer or district project coordinator. At pretest, data are missing for half the teachers; in half of the remaining 4 classrooms, someone other than the teacher administered the surveys. Of the 8 classrooms, over half (5) had someone other than the classroom teacher administer the posttest. In one classroom, it was a student volunteer. 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 (6 weeks) and posttest (4 weeks) were administered. A variety of nutrition education interventions may have been implemented during those periods that might have influenced the results of the student survey.
- In one classroom, the posttest was administered on a Monday, despite protocol directing teachers to administer the survey on a Tuesday, Wednesday, or Thursday. The deviation from protocol could influence results, particularly for consumption of certain food items as eating patterns on the weekends may differ from those during the school week.

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, peer influences, perceived peer intentions and behaviors, and perceived parent behaviors, may not be stressed in the interventions, but they are included in the *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.

TEACHER SURVEY

- Both teachers at one district, 25% of the total teacher sample, did not complete a teacher pretest. This reduces the already small sample size, making it difficult to draw conclusions about nutrition education conducted prior to pretesting.
- At posttest, teachers were asked to indicate the number of times they taught a nutrition education lesson. In a separate question, they were asked how many times they taught the nutrition or physical activity log activities. It is uncertain whether or not teacher responses to the first question included teaching the nutrition or physical activity log activity.

RECOMMENDATIONS

The findings discussed above lead to several recommendations for the third 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

Consistency of Implementation of Nutrition Education 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 (as an example, 5 nutrition education lessons, 4 taste tests, and 3 newsletter assignments). Train teachers to implement the activities to promote consistency across the Coalition.

  Recommendation: Train classroom teachers and district project coordinators to consistently implement the nutrition and physical activity logs.
- 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 consumption of produce and student access to produce at home.
- As there are variations in implementation across the four school districts, multiple factors may facilitate, or be barriers to, consistent school-, and district-wide teacher implementation of the HOTM 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.

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.
- 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, for example, peer intentions and behaviors.

  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 dairy products and cereals; peer behavior), 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

- Selected items on the *Youth Survey* might be revised to provide more clarity and specificity.
  - The question about students' openness to try new foods (Q#12) tends to be vague and open for varied interpretation. More specificity is needed, or multiple items are needed to define the extent to which students are willing to try new produce.
  - Question #10 asks about consumption of sweet rolls, doughnuts, cookies, brownies, pies, and cakes. If it

is the intent of the question to ask about consumption of sweet snacks, candy and candy bars should be included.

- ***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 8
- Ask students about water consumption
- 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®.
- Define what is meant by "new foods" (as in "try new foods").
- 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

- Additional items could be added to the *Teacher Survey* to help interpret results of the student survey.

  Recommendation: Add an item to the *Teacher Survey* asking about school policies related to distribution of milk to determine if individual districts restrict the type of milk offered to students.

  Recommendation: Add an item to determine if school breakfast is offered to students.

- Additional items could be added to the *Teacher Survey* to provide a richer description of what nutrition education- and HOTM-related activities were done in the classroom.

  Recommendation: Add specify items to the *Teacher Survey* to parallel all items used in the CADPH Youth Questionnaire Template, 2011-2012.

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: Pretesting must be done prior to any intervention.

Recommendation: Protocol for survey administration needs to be followed exactly by all survey administrators, and within a shorter period of time, ideally, one week.

Network-funded contractor:	Los Angeles USD - 10-10072
Contract number:	10-10072
Information provided by :	Roberta Acantilado
Telephone:	818.609.2569
Date:	40755
Email:	roberta.acantilado@lausd.net

Section 1

1. Project Description and Goals

Project Name:	Harvest of the Month
Target Population:	3rd, 4th, and 5th grade students

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
	0

In 1-2 paragraphs, please provide the 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 incorporate physical activity.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Network for a Healthy California—LAUSD has online training modules that are mandatory for all participating teachers. Teachers participating in the online trainings take an assessment at the end of the training and are able to print out a certificate. A database of all participating teachers who completed the online trainings is maintained by Network staff. In addition, there are in–person teacher training workshops. All participating teachers must provide at least 35 hours of nutrition education per year which includes one hour a month of Harvest of the Month, and other Nutrition education lessons in all content areas -as well as PowerPlay SIRK lessons .

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

All data was collected using the Network Youth Survey instrument, and was administered by staff of Sentient Research, 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 the Standardization Across All Classrooms

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. Teachers decide how to integrate the Harvest of the Month into their core 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.

Impact/Outcome Objective 1:

By Sept 30, 2011, a sample of 3rd, 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

a. 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
b. Control:	Convenience Sample

# of intervention matched pre/post measures collected	361
# of control matched pre/post measures collected	378

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

Where any other surveys used?	0

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	11/4/2010	11/18/2010
Post-test:	5/2/2011	6/8/2011
Follow-up:		

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	4
How many lessons from the intervention occurred *after* pre-tests?	31

c. Describe how the data were collected.

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

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 first examined descriptive statistics of all variables including grade and gender, as well as responses to each item in the Network Youth Survey. For categorical variables (e.g., gender and grade level) we calculated the frequency distributions and mode. For continuous measures we calculated the central location (means and medians), variation (standard error), and range. These statistics were calculated overall and by intervention group (Network and Comparison group). Differences between characteristics at baseline by condition (Network or Comparison group) were assessed using chi-square tests. For the outcome evaluation we examined changes from baseline to post-intervention (endline) in food consumption, physical activity, parents' consumption of fruits and vegetables, and availability of fruits and vegetables at home. These changes were assessed within each condition (difference from baseline to endline) using paired t-tests. In order to determine whether the change in the Network group from baseline to endline was significantly different from the change in the Comparison group over the same period we used mixed regression modeling. We created a separate model for each individual question and our model included intervention condition, time, the interaction of these two factors and school. In addition, students were included as a random effect in each model in order to account for the correlated nature of the data resulting from repeated measurements on the same student (at baseline and at endline). All analyses were conducted using SAS software version 9.2 (SAS Inc., Cary, NC). 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. There were somewhat more 3rd graders and fewer 4th graders in the Network group than in the Comparison group. However, there was no statistically significant difference in either student gender or grade level between the groups. There were no significant differences in food intake between the Network and Comparison groups, with the exception that students in the Network group experienced a significant decrease in cereal consumption compared to the Comparison group (see Table 2). 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, and lower levels of consumption of unhealthy foods at both baseline (milk, vegetables, fruits, French fries/chips, punch/sports drinks, soda, and doughnuts/cookies) and endline (milk, yogurt/cheese, vegetables, fruits, French fries/chips, punch/sports drinks, soda, and doughnuts/cookies). Within the Network group, students had a small positive trend in consumption of several healthy foods, such as milk (0.18), yogurt/cheese (0.08), vegetables (0.10) and fruits (0.31). Student increases in consumption of milk and fruit at endline compared to baseline were statistically significant among Network students. However, there was also an increase in French fries and chips (0.09), sports drinks (0.03), and soda (0.01), and the consumption of French fries and chips was nearly significant. Students in the Network group had slight decreases in the consumption of cereal (-0.07), fruit juice (-0.3), and doughnuts and cookies (-0.06), however, these decreases were not significant. Approximately 90% of students in the Network group reported eating breakfast in the previous day. This percentage dropped very slightly from baseline to endline, however not significantly. Finally, slightly more than 20% of students reported always liking to try new foods. This percentage increased slightly, but not significantly, from baseline to endline. Many students in the Network group consume too few vegetables and fruits. When looked at individually, nearly 20% of students reported not eating any vegetables, and nearly 25% reported eating vegetables only one time in the previous day at endline. Thirteen percent of students reported not eating any fruit, and 25% reported only eating fruit once in the previous day at endline. On average, it is possible that students in the Network group are consuming adequate amounts of fruits and vegetables on a daily basis. The students surveyed in this group consumed fruits and vegetables approximately twice 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 consumed fruits and vegetables more times each day than any other foods measured. Network students also reported eating substantial amounts of unhealthy foods in the previous day. On average, students ate French fries and chips, and doughnuts and cookies almost once, punch or sports drinks more than once, and non-diet soda about half of the time in the previous day. Furthermore, it appears that Network students may consume too much fruit juice, since students reported having fruit juice 1.5 times in the previous day, and the recommended daily intake of fruit juice for children is 6 ounces. Reducing intake of unhealthy foods and drinks could be a potential focus in the upcoming school year. Within the Comparison group, there were small increases in the consumption of milk (0.16), cereal (0.11), French fries/chips (0.14), vegetables (0.09), fruits (0.31), punch/sports drinks (0.06), fruit juice (0.16) and doughnuts/cookies (0.03). Increases in milk and fruit consumption were both statistically significant, as was the increase in French fries and chips. Comparison group students had a slight decrease in consumption of cheese (-0.01) and soda (0.6.), neither of which was statistically significant. Similar to the Network students, approximately 90% 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. Finally, slightly more than 20% of students reported always liking to try new foods. This percentage decreased slightly, but not significantly, from baseline to endline. There were no significant differences in physical activity between the Network and Comparison groups (see Table 3). While the changes from baseline to endline for the Network and Comparison groups were too similar to be significant, the Network group had higher levels of physical activity and playing outside in the past week at both baseline and endline. Overall changes for both groups were large relative to the changes reported in consumption of healthy and unhealthy foods. Within the Network group, students had a significant change in both physical activity and playing outdoors from baseline to endline. Students added 2/3 of a day of playing outside from baseline to endline. Furthermore while at baseline, Network students reported an average of 3.5 days of physical activity (for at least one hour) each week, at endline this had increased by nearly one day to 4.3 days per week. This is still less than the recommended one hour of exercise per day, 7 days a week for children, but a notable improvement. Still, at endline over 20% of Network students exercised only two days or less in the last week, suggesting that increasing physical activity for all students should be a focus in the upcoming year. Within the comparison group, students also had a significant increase from baseline to endline in both physical activity and playing outdoors in the last week. Changes in this group were not as large as for the Network group, however. Results were additionally analyzed comparing 3rd graders to the older grades to test if there were reading level limitations; these results showed no significant differences between third graders and older studetns.

b. Description of how evaluation results will be used:

Recommendation 1: Because our evaluation did not find a significant difference in fruit or vegetable consumption or physical activity between Network and control schools, we will add the Food Preferences Survey for Children to the Network Youth Survey for our 2011-12 evaluation. This will allow us to measure changes in preferences for foods from the HOTM, as well as several others, among both Network and control condition students. Recommendation 2: While maintaining a focus on the consumption of fruits and vegetables among Network students, emphasize assignments and newsletters that focus on decreasing the amount of unhealthy foods and drinks consumed. Similarly, while highlighting the importance of consuming healthy foods and beverages, use national guidelines and recommendations to provide clear and appropriate levels of different healthy food and beverage item consumption. Recommendation 3: Incorporate a physical activity curriculum in the LAUSD Network program by providing guidelines to Network teachers and making this a requirement along with nutrition education. Recommendation 4: Utilize the parent newsletter or homework assignments to encourage parents to make fruits and vegetables more available at home to increase consumption of these foods among students.

7. Point of Contact

Name:	Roberta Acantilado
Phone Number:	818.609.2569
Email Address:	roberta.acantilado@lausd.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. List any other journal references you feel are relevant. (consult Compendium of Surveys for references)

0

Table 1. Demographic characteristics of 3rd through 5th grade children in *Network* LAUSD evaluation, by intervention group, 2010-2011

	Network group (n=361)		Comparison group (n=379)		
Characteristic	n	%	n	%	P Value
Gender					0.51
Male	179	49.6	197	52.0	
Female	182	50.4	182	48.0	
Grade					0.08
3rd	110	30.5	91	24.0	
4th	122	33.8	154	40.6	
5th	129	35.7	134	35.4	

Table 2. Food intake based on 24 hour recall among 3rd through 5th grade children in *Network* LAUSD evaluation by intervention group, 2010-2011

Characteristic	*Network* group (n=361) Mean	SE	Comparison group (n=379) Mean	SE	P Value*
Consumption of Milk					
Baseline	1.55	0.05	1.42	0.05	
Endline	1.73	0.04	1.59	0.05	
Difference	0.18		0.16		0.81
P Value**	<.01		<.01		
Consumption of Yogurt/Cheese					
Baseline	0.75	0.04	0.78	0.04	
Endline	0.83	0.05	0.77	0.05	
Difference	0.08		-0.01		0.24
P Value**	0.13		0.85		
Consumption of Cereal					
Baseline	0.94	0.04	0.84	0.04	
Endline	0.87	0.04	0.91	0.04	
Difference	-0.07		0.08		0.03
P Value**	0.15		0.11		
Consumption of French fries/Chips					
Baseline	0.77	0.04	0.83	0.04	
Endline	0.86	0.05	0.97	0.05	
Difference	0.09		0.14		0.55
P Value**	0.08		0.01		

Consumption of Vegetables								
Baseline	1.92	(	0.08	)	1.63	(	0.08	)	
Endline	2.02	(	0.08	)	1.73	(	0.08	)	
Difference	0.10				0.09				0.99
P Value**	0.29				0.27				
Consumption of Fruits									
Baseline	2.02	(	0.08	)	1.89	(	0.08	)	
Endline	2.32	(	0.09	)	2.21	(	0.08	)	
Difference	0.31				0.31				0.95
P Value**	<.01				<.01				
Consumption of Punch/Sports drinks									
Baseline	1.07	(	0.05	)	1.09	(	0.05	)	
Endline	1.10	(	0.05	)	1.16	(	0.05	)	
Difference	0.03				0.06				0.66
P Value**	0.65				0.34				
Consumption of Fruit juice									
Baseline	1.52	(	0.07	)	1.34	(	0.07	)	
Endline	1.50	(	0.07	)	1.50	(	0.07	)	
Difference	-0.03				0.16				0.13
P Value**	0.74				0.07				
Consumption of Soda									
Baseline	0.57	(	0.04	)	0.76	(	0.05	)	
Endline	0.58	(	0.04	)	0.71	(	0.05	)	
Difference	0.01				-0.06				0.39
P Value**	0.82				0.31				
Consumption of doughnuts/cookies									
Baseline	0.88	(	0.05	)	0.91	(	0.05	)	
Endline	0.82	(	0.05	)	0.94	(	0.05	)	
Difference	-0.06				0.03				0.29
P Value**	0.25				0.64				

Consumption of breakfast			
Baseline	91.7%	90.5%	
Endline	89.8%	89.2%	
Difference	-1.9%	-1.3%	0.78
P Value**	0.33	0.51	
Try new foods, "always"			
Baseline	22.3%	23.0%	
Endline	23.0%	20.6%	
Difference	0.7%	-2.4%	0.51
P Value**	0.54	0.61	

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 or more times in the past 24 hours)

*P value indicates whether the change from baseline to endline was significantly different across the two groups

**P value indicates whether the change from baseline to endline was significantly different within each group

Table 3. Physical activity based on a 7-day recall among 3rd through 5th grade children in *Network* LAUSD evaluation by intervention group, 2010-2011

Characteristic	*Network* group (n=361) Mean	SE	Comparison group (n=379) Mean	SE	P Value*
Physical activity for at least 60 mins in the past week					
Baseline	3.55	0.12	3.49	0.12	
Endline	4.30	0.11	4.02	0.12	
Difference	0.75		0.52		0.24
P Value**	<.01		<.01		
Played outdoors for at least 30 mins in the past week					
Baseline	3.40	0.13	3.28	0.12	
Endline	4.07	0.12	3.87	0.12	
Difference	0.67		0.59		0.66
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 baseline to endline was significantly different across the two groups

**P value indicates whether the change from baseline to endline was significantly different within each group

Table 4. Fruit and vegetable availability at home and parent consumption among 3rd through 5th grade children in *Network* LAUSD evaluation by intervention group, 2010-2011

Characteristic	*Network* group (n=361) Mean	SE	Comparison group (n=379) Mean	SE	P Value*
How often do parents eat fruit					
Baseline	2.29	0.04	2.29	0.05	
Endline	2.29	0.04	2.16	0.05	
Difference	0.00		-0.09		0.15
P Value**	0.94		0.13		
How often do parents eat vegetables					
Baseline	2.33	0.04	2.30	0.04	
Endline	2.30	0.04	2.22	0.05	
Difference	-0.02		-0.04		0.60
P Value**	0.80		0.64		
Are fruits available at home					
Baseline	1.76	0.02	1.74	0.02	
Endline	1.83	0.02	1.81	0.02	
Difference	0.06		0.07		0.99
P Value**	0.01		0.01		
Are vegetables available at home					
Baseline	1.61	0.03	1.65	0.03	
Endline	1.73	0.03	1.70	0.03	
Difference	0.11		0.06		0.17
P Value**	<.01		0.12		

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 baseline to endline was significantly different across the two groups
**P value indicates whether the change from baseline to endline was significantly different within

Network-funded contractor:	Long Beach, City of, Department of Health & Human Services Agency
Contract number:	08-85135
Information provided by :	Lara Turnbull
Telephone:	562-570-4294
Date:	7/6/2011
Email:	lara.turnbull@longbeach.gov

Section 1

1. Project Description and Goals

Project Name:	Long Beach Jr. Beach Runners
Target Population:	7-13 years old

Primary Curriculum Used:	
MyPyramid and Re-Think Your Drink Resources	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

As part of the Jr. Beach Runners Program, Network funded staff conducted 8 1-hour nutrition education lessons on the importance of eating fruits and vegetables, MyPyramid, decreasing sugar sweetened beverages and increasing daily physical activity. The lessons were part of a larger program that included daily physical activity facilitated by staff with Long Beach Parks, Recreation and Marine. The nutrition lessons all included a food tasting that corresponded to the lesson being taught. All recipes were selected from the Network for a Healthy California's Kids...Get Cookin'! recipe book.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Network funded staff promoted daily physical activity and included recommendation for 60 minutes on most days of the week into each nutrition education lesson. Network funded staff also demonstrated 1-time only physical activity games that children could play alone, in groups and/or with their families. Staff from Parks, Recreation and Marine implemented the structured physical activity curriculum that involved various drills, walking (kids used pedometers to track steps/mileage), and active games. All of the activities were documented and converted to miles. In October, the kids had the opportunity to run in the 1-mile Kids Fun Run at the Long Beach Marathon. For most kids this completed a total of 26.2 miles (a full marathon).

In 1-2 paragraphs, please provide a Description of the Standardized Training:

All nutrition education lessons were conducted by Network funded staff. All lessons were implemented in the same format and using the same teaching tools and resources. All participants received the same handouts and also had the opportunity to sample the same recipes.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

All surveys were administered by Network funded staff. All participants received the same instructions and surveys were administered in the same format at all sites.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

All sites received 8 1-hour lessons conducted by Network funded staff. All sites also participated in the physical activity curriculum administered by Parks.

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 3rd-6th grade students who participated in Long Beach Jr. Beach Runners will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

Impact/Outcome Physical Activity Objective:

By Sept 30, 2011, a sample of 3rd-6th grade students who participated in Long Beach Jr. Beach Runners will report increased daily physical activity from the pre-test to the post-test.

Impact/Outcome Sugar Sweetened Beverage Objective:

By Sept 30, 2011, a sample of 3rd-6th grade students who participated in Long Beach Jr. Beach Runners will report increased knowledge of the amount of sugar in and health effects of drinking sugar sweetened beverages.

2. Evaluation Design

a. 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?

Other (Specify in next field)	Specify Other: Afterschool programs operated by Long Beach Parks, Recreation and Marine

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

a. Intervention:	Convenience Sample
b. Control:	

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: Knowledge

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	6/28/2010	7/12/2010
Post-test:	3/29/2011	4/14/2011
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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	

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.

This reporting period we had 104 matching pre/post surveys from children who participated in the Long Beach Jr. Beach Runners Program. We measured changes in daily physical activity and consumption of fruits, vegetables, healthy and unhealthy foods using the Network Youth Survey. We also, using this survey, measured changes in access at home and reported fruit and vegetable consumption among their parents. In addition, knowledge questions were used to measure changes in their understanding of how many cups of fruits and vegetables children should have and effects of drinking sugar sweetened beverages.

Knowledge: We had 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 cups of fruits and vegetables that kids should have, the number of teaspoons are equal to 4 grams of sugar and the health problems that drinking too much sugar can cause.

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 as well as the number of days spent playing outdoors for at least 30 minutes.

Consumption: We saw significant increases in the consumption of milk, yogurt and cheese. We also had significant increases in the number of kids eating breakfast, trying new foods and parents eating more vegetables at home. Although not significant, we did see a decrease in all of the unhealthy foods measured except for cookies and cakes which had a slight increase. We also had all of the healthy foods with some measurement of increase, and although not significant, is viewed as a positive outcome of the program especially considering some already had relatively high numbers at the pre-survey. We saw virtually no change in reported access to fruits and vegetables in the home.

b. Description of how evaluation results will be used:

Results from our impact evaluation are used to help shape and refine our Jr. Beach Runners Lessons and format. Based on our current findings we plan to change the days of the week we have the participants complete the pre/post surveys. For those participants who meet on Mondays we will ask them to complete the pre-surveys on the Tuesday, Wed, or Thursday prior to lesson #1. This change has been made as we believe that some of the preference results may not accurately reflect the impact of our intervention as some kids have been in a structured program the day prior to the surveys when others (Monday kids) typically were at home all day. We also plan to add more activities directed at the families in hopes of having a greater impact on the foods purchased and consumed in the home. We hope this increased intervention activity will result in greater increases in the healthy foods consumed as well as increased access to fruits and vegetables at home. We also face the challenge of having our participants take their pre-surveys during summer and post-surveys during the spring as many of the kids are in different sports programs, camps, day care, etc. in Summer than they are in the Spring. As a result we would like to add a follow-up survey to all returning participants to be completed when the program starts back up in July, 2012. This will be a way to measure long-term change and will also be

approximately 1-year from the time they took their original survey In addition to using the results to shape our Jr. Beach Runners Program, our Impact Evaluation findings are used to attract program sponsors/funding and have also been included as part of the nomination for the Governor's Council on Physical Activity's Spotlight Awards. The Jr. Beach Runners Program is currently being considered for the "Park Program of the Year" award. We look forward to another year of the Jr. Beach Runners program, to more happy faces as the kids reach their marathon goals, try new fruits and vegetables and grow to become healthy champions for their family and friends outside of the Jr. Beach Runners Program!

7. Point of Contact

Name:	Lara Turnbull
Phone Number:	562-570-4294
Email Address:	lara.turnbull@longbeach.gov

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 and Network High School Survey

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

Knowledge Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Knowledge				
Total Score (Q1-Q4)	1.07	3.13	2.07	0.000
Q1	0.41	0.91	0.50	0.000

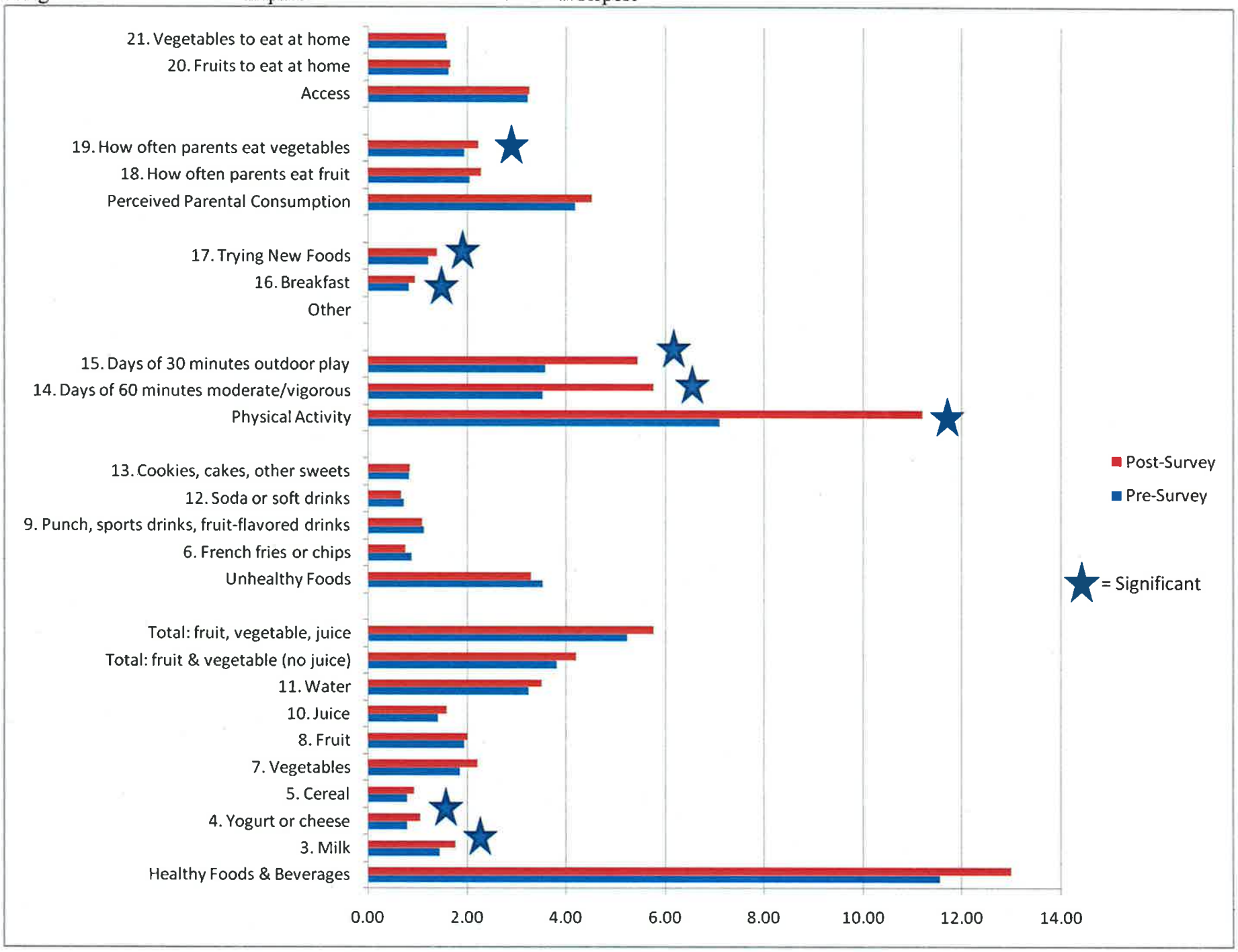
Q2	0.20	0.76	0.56	0.000
Q3	0.25	0.69	0.44	0.000
Q4	0.20	0.77	0.57	0.000

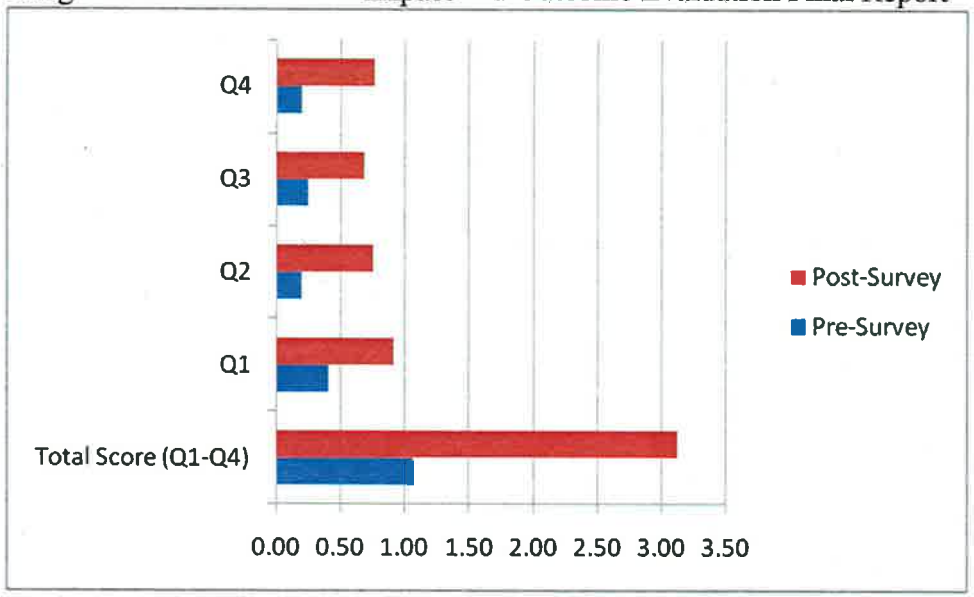
Network Youth Survey Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.56	13.01	1.45	0.077
3. Milk	1.44	1.77	0.33	0.011
4. Yogurt or cheese	0.79	1.06	0.27	0.047
5. Cereal	0.79	0.93	0.14	0.184
7. Vegetables	1.85	2.21	0.36	0.140
8. Fruit	1.94	2.01	0.07	0.760
10. Juice	1.40	1.59	0.18	0.320
11. Water	3.23	3.50	0.27	0.225
Total: fruit & vegetable (no juice)	3.82	4.19	0.38	0.338
Total: fruit, vegetable, juice	5.22	5.77	0.54	0.282
Unhealthy Foods	3.53	3.29	-0.24	0.485
6. French fries or chips	0.87	0.74	-0.13	0.289
9. Punch, sports drinks, fruit-flavored drinks	1.13	1.08	-0.05	0.688
12. Soda or soft drinks	0.71	0.66	-0.05	0.719
13. Cookies, cakes, other sweets	0.82	0.83	0.02	0.884
Physical Activity	7.11	11.20	4.10	0.000
14. Days of 60 minutes moderate/vigorous	3.53	5.76	2.23	0.000
15. Days of 30 minutes outdoor play	3.58	5.44	1.87	0.000
Other				
16. Breakfast	0.82	0.94	0.12	0.004
17. Trying New Foods	1.22	1.40	0.18	0.019
Perceived Parental Consumption	4.19	4.52	0.33	0.239
18. How often parents eat fruit	2.05	2.28	0.23	0.104
19. How often parents eat vegetables	1.94	2.23	0.29	0.049
Access	3.21	3.25	0.03	0.792
20. Fruits to eat at home	1.63	1.66	0.03	0.670
21. Vegetables to eat at home	1.58	1.57	-0.01	0.890

Demographics

Average Age	9.1
Gender	
Males	52
Females	52


21. Vegetables to eat at home
20. Fruits to eat at home
Access
19. How often parents eat vegetables
18. How often parents eat fruit
Perceived Parental Consumption
17. Trying New Foods
16. Breakfast
Other
15. Days of 30 minutes outdoor play
14. Days of 60 minutes moderate/vigorous
Physical Activity
13. Cookies, cakes, other sweets
12. Soda or soft drinks
9. Punch, sports drinks, fruit-flavored drinks
6. French fries or chips
Unhealthy Foods
Total: fruit, vegetable, juice
Total: fruit & vegetable (no juice)
11. Water
10. Juice
8. Fruit
7. Vegetables
5. Cereal
4. Yogurt or cheese
3. Milk
Healthy Foods & Beverages
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
Post-Survey
Pre-Survey
= Significant


Q4
Q3
Q2
Q1
Total Score (Q1-Q4)
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50
Post-Survey
Pre-Survey

Long Beach USD FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Long Beach USD - 10-10052
Contract number:	10-10052
Information provided by :	Robin Sinks
Telephone:	562-997-0632
Date:	40751
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

Primary Curriculum Used:	
A wide variety of skills-based nutrition education resources	
Secondary Curriculum Used:	
Harvest of the Month	

In 1-2 paragraphs, please provide the 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, who then passes on the registration for the entire school site to the LBUSD *Network for a Healthy California (Network)* staff.

- Prior to the start of a new school year, an eight month schedule of produce is selected by LBUSD's *Network* staff and 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 ordered and 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 to be shared.
- Each month, participating classroom teachers receive a *HOTM* Educator Newsletter that provides nutrient and historical information on the produce highlighted that month.
- Each month, grade level lead 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. Grade level lead teachers are asked to share this with all the participating teachers in their grade levels.
- 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, participating school sites receive a supply of *HOTM* Parent Newsletters that provide nutrient information on the highlighted produce and a corresponding recipe. These Parent Newsletters are 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 2010-11 school year, 39 *Network*-eligible elementary school sites participated (1,046 classrooms; 25,351 K-5th grade students). For purposes of program planning, a link to an electronic survey was 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 six 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.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:
None

In 1-2 paragraphs, please provide a Description of the Standardized Training:
Training:
A 1.5-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 grade level lead teachers to remind them of the produce delivery date and encourage them to work closely with the teachers 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 in January. Attendance was voluntary and limited to 50 teachers. 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 the Standard Administration of Data
At the beginning of the year, each of the twelve teachers administering the *Network* Youth Survey were provided with written instructions on the administration of the pre-test and copies of the pre-tests for all students in their classrooms. Completed surveys were sent to the LBUSD *Network* staff for coding onto locally developed scantrons. In May, additional written instructions were provided on the administration of the post-test (students should have completed the pre-test, participated in at least five of the eight program months activities/lessons), copies of the post-tests and scantrons for all students in their classrooms. Completed scantrons were sent to the LBUSD *Network* staff. Pre- and post-test scantrons were run by the LBUSD Research and Evaluation Office; data files were emailed to the LBUSD *Network* staff for inclusion into the *Network* data files and analysis.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms
Teachers in all classrooms have access to the Health Education Content Standards and district-approved Health Education textbooks. Teachers in all *Network*-eligible school sites are able to attend all teacher trainings and participate in the variety of nutrition education activities, including *HOTM*; participation by individual teachers is voluntary. 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 in the manner discussed. A review of Weekly Time Logs from the twelve teachers involved in the Impact Evaluation indicates an average of 21 hours of nutrition education during the eight month period.

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 184 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.

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?

Classrooms

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

a. Intervention:	Convenience Sample
b. Control:	

# of intervention matched pre/post measures collected	184
# 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	0

Where any other surveys used?	None

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/1/2010	10/19/201
Post-test:	5/23/2011	6/10/2011
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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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 change in means for the Healthy Foods & Beverages (questions 3-5, 7, 8, 10, 11) total increased by 0.27 points after the intervention. The p-value is not significant, indicating that there is no evidence that the consumption of healthy foods & beverages increased due to the intervention.

- Consumption of milk increased by .08 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 .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 cereal decreased by .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 vegetables increased by .016 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 fruit increased by .07 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 juice increased by .15 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 decreased by .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.
- Consumption of total fruit and vegetables (no juice) increased by .23 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, juice increased by .38 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 the Unhealthy Foods & Beverages (questions 6, 9, 12, 13) total decreased by 0.19 points after the intervention. The p-value is not significant, indicating that there is no evidence that the consumption of unhealthy foods & beverages decreased due to the intervention.

- Consumption of french fries or chips increased by .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 punch, sports drinks, fruit-flavored drinks decreased by .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 soda or soft drinks 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.
- Consumption of cookies, cakes, other sweets decreased by .21 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 Physical Activity (questions 14, 15) total increased by 0.81 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 .56 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 .26 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 eating breakfast (question 16) 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 trying new foods (question 17) total increased by 0.02 points after the intervention. The p-value is not significant, indicating that there is no evidence that trying new foods increased due to the intervention.

The change in means for Perceived Parental Consumption (questions 18, 19) total increased by 0.20 points after the intervention. The p-value is not significant, indicating that there is no evidence that perceived parental consumption was due to the intervention.

- Perceived parental consumption of fruit increased by .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.
- Perceived parental consumption of vegetables increased by .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 change in means for Access to Fruits and Vegetables at home (questions 20, 21) total increased by 0.14 after the intervention. The p-value is not significant, indicating that there is no evidence that access to fruits at vegetables at home was due to the intervention.

- Access of fruit to eat at home increased by .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.
- Access of vegetables to eat at home increased by .11 after the intervention. The p-value is significant indicating that the data do give reason to conclude that the intervention had an effect.

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 indicate that the intervention showed significant changes in decreasing the consumption of cookies/cakes/other sweets, increasing the number of days of physical activity (specifically, days of 60 minutes moderate/vigorous exercise/activity), and increasing access to vegetables to eat at home.

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.

There were some concerns expressed about the specific wording of the Youth Survey and how 4th/5th grade student might interpret several items: specificity of *string* cheese (rather than any cheeses) and reporting how many *times* they consumed a specific food/beverage (rather than amounts or servings). Given the wording of the survey, it is difficult to know how much of an item students might be consuming (consumption of individual healthy and unhealthy foods appears low, yet it is unknown how much of a healthy or unhealthy item is consumed per time). Revision of the survey, use of a different survey, focus groups or observation of respondents may provide clarification.

b. Description of how evaluation results will be used:

Evaluation results will be shared with teachers in an effort to ensure they have an understanding not only of program implementation but also of its potential impact on student behaviors. The results of the Youth Survey will be reviewed by 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.

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. 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
Healthy Foods & Beverages	10.84	11.10	0.27	0.477
3. Milk	1.40	1.48	0.08	0.293
4. Yogurt or cheese	0.61	0.62	0.01	0.875
5. Cereal	0.79	0.76	-0.04	0.604
7. Vegetables	1.48	1.64	0.16	0.212
8. Fruit	1.86	1.93	0.07	0.583
10. Juice	1.26	1.41	0.15	0.236
11. Water	3.43	3.27	-0.16	0.248
Total: fruit & vegetable (no juice)	3.34	3.57	0.23	0.258
Total: fruit, vegetable, juice	4.60	4.98	0.38	0.127
Unhealthy Foods	3.12	2.93	-0.19	0.359
6. French fries or chips	0.65	0.66	0.01	0.886
9. Punch, sports drinks, fruit-flavored drinks	1.01	0.99	-0.01	0.899
12. Soda or soft drinks	0.58	0.58	0.00	1.000
13. Cookies, cakes, other sweets	0.91	0.70	-0.21	0.011
Physical Activity	4.53	5.34	0.81	0.014
14. Days of 60 minutes moderate/vigorous	2.39	2.95	0.56	0.003
15. Days of 30 minutes outdoor play	2.14	2.40	0.26	0.171
Other				
16. Breakfast	0.86	0.85	-0.01	0.716
17. Trying New Foods	1.22	1.24	0.02	0.618
Perceived Parental Consumption	4.14	4.34	0.20	0.175
18. How often parents eat fruit	2.07	2.11	0.05	0.542
19. How often parents eat vegetables	2.06	2.08	0.03	0.771
Access	3.15	3.29	0.14	0.077
20. Fruits to eat at home	1.64	1.66	0.02	0.624
21. Vegetables to eat at home	1.50	1.61	0.11	0.026

Demographics

Average Age	9.6
Gender	
Males	#VALUE!
Females	#VALUE!

Network-funded contractor:	Marin County Health and Human Services - 10-10161
Contract number:	10-10161
Information provided by :	Ellen M. Szakal
Telephone:	415-473-2612
Date:	40738
Email:	eszakal@co.marin.ca.us

Section 1

1. Project Description and Goals

Project Name:	Bahia Vista Elementary School Third Grade Nutrition Education & Physical Activity Intervention
Target Population:	8/9 year olds in third grade

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
Growing Classroom, Farm to Fork, Reading Across My Pyramid, Nutrition to Grow On, TEAM Nutrition, Kids Cook Farm Fresh Foods	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Health Educator provided both classroom and garden-based nutrition education classes using Network approved lesson plans, Harvest of the Month activities, and fruit and vegetables taste tests in an effort to increase fruit and vegetable consumption. Third grade classroom teachers utilized the HOTM workbooks, and incorporated positive messages around fruit and vegetable consumption in academic lesson plans when appropriate.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Both health educator and third grade teachers encouraged students to balance healthy eating with lots of physical activity instead of watching TV or playing video games. Nutrition education intervention and HOTM fruits and vegetables were introduced to the physical activity coach (PlayWorks!), so that he might incorporate positive messages around specific fruits and vegetables during supervised play time.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

The Health Educator worked with the NWP Nutritionist in developing a nutrition education plan which specified nutrition education activities to be implemented. The fruits and vegetables selected for promoting aligned with the fruits and vegetables specified in the HOTM workbook 2010-2011. In addition, fruits and vegetables were provided for taste testing through the "Fruits and Vegetables" program; Health educators and teachers used these taste testing opportunities to discuss the benefits of eating more fruits and vegetables. Third grade teachers received three trainings to discuss the intervention; its purpose, the HOTM work book, and the pre-post survey tool (Youth Survey).

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

Health educator administered both the pre and the post survey to third grade students, providing the same directions and amount of time both before and after the intervention.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

Health educator administered both the pre and the post survey to all third grade students in all third grade classrooms, providing the same directions and amount of time both before and after 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.

Impact/Outcome Objective 1:

By Sept 30, 2011, a sample of at least 75 3rd grade students who participated in Bahia Vista Elementary School Third Grade Nutrition Education & 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.

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?

Classrooms

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

a. Intervention:	Convenience Sample	
b. Control:		Specify Other: N/A

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

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/22/2010	11/2/2010
Post-test:	5/24/2011	5/24/2011
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?	5 lessons

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.

1. Results showed a significant decrease in the overall consumption of unhealthy foods by the students, specifically a decrease in the amount of soda consumption. We feel this decrease was influenced by Harvest of the Month workbook lessons that encourage drinking more water and reducing soda consumption. The decrease was possibly reinforced by the "Rethink Your Drink" campaign efforts, as well.

2. Results showed a significant increase in students' overall physical activity for both aerobic activity and outdoor free play. This increase is likely due to the PlayWorks! Program, which (Continued) provides regular structured physical activity and play with consistent positive nutrition messages. The PlayWorks! coach was given the HOTM workbook so that each month, nutrition messages in the classroom aligned with nutrition messages during play.

3. Results indicated no significant change in healthy food and beverage consumption. While there was an increase in fruit, vegetable, and water consumption, it was not statistically significant. The maintenance of fruit and vegetable consumption levels show that produce has become part of the students' foods of choice. Additionally, the question on preferences (HOTM fruits/vegetables at the end of the survey) shows that the students, to a large degree, are aware of these items and like them. We have had a presence at Bahia Vista Elementary School for the past nine years, and students there have had exposure to nutrition education and positive and consistent nutrition education messages since kindergarten. It is not surprising then that the changes we see in these items are not statistically significant.

b. Description of how evaluation results will be used:

Evaluation results will be shared with the Bahia Vista Elementary School Community with the intent that the information be used in future nutrition education planning. Unfortunately, the Nutrition Wellness Program will no longer be a presence at the school, but nutrition/garden/physical activity education will, no doubt, continue as before.

7. Point of Contact

Name:	Ellen M. Szakal
Phone Number:	415-473-2612
Email Address:	eszakal@co.marin.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 and Network High School Survey

No

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

0

6. Qualitative Evaluation Results

This is your opportunity to share with us anything that may not have been reflected in your data or elsewhere in this report. Consider the questions below, or offer us other qualitative reports of your successes and challenges over the last year.

What have been the biggest challenges and barriers you have faced while implementing your intervention or evaluation? What have you learned from them?

1. The biggest challenge facing the health educator was that the Bahia Vista Elementary School was on academic review this school year. Because of this, teachers were required to meet strict academic performance guidelines and there was little flexibility in their schedule. This resulted in the need for increased flexibility and creativity in the health educator's planning, including support to teachers in completing HOTM activities.

2. There were some concerns with the developmental appropriateness of the tool: the language of the questions is too complicated for this age group, relying on recall is subjective and children may provide an answer that they think you want. In addition, one day's worth of eating may not be typical, whereas food eaten over a week may suggest average consumption.

3. Survey results showed a significant decrease in soda consumption, but not a significant increase in water consumption, which suggests that efforts be made to teach students the benefits of drinking at least 8 glasses of water a day.

4. Regarding the Impact Evaluation's final questions on fruit and vegetable preferences, we recommend that the evaluation of a child's familiarity with fruits and vegetables be separate and distinct from questions about their preferences for fruits and vegetables. The current scoring system weighs knowledge on a continuum (don't know = 1, don't like = 2, etc), which may or not reflect the information we are trying to gather (familiarity).

What have you learned from them (per Health Educator)?:

1. The overall experience with the students was distinctly positive with the students enjoying the lessons both in and out of the classroom. They enjoyed the opportunity to taste produce, learn (Continued) about the agricultural profile, reinforce the awareness of nutrition and discover recipes for these produce items. Students respond well to hands on activities and seem to remember these events more clearly than memorization activities. The students responded well to new meal time offerings in the school cafeteria which featured a produce-rich salad bar and enthusiastically supported this meal program. This reinforces the messages given throughout the intervention. Additionally, the students are choosing healthy snacks to bring to school and for classroom celebrations with greater frequency.

2. The outcome of the surveys, from my perspective, is quite positive; the reduction of soft drinks/sodas and processed foods shows the students are gaining awareness and making better choices. It also can infer that their parents are making better choices for their families, with an increased awareness of processed foods/ sodas. The consumption of fruits and vegetables for these students was maintained and slightly increased (though not statistically significant), showing that produce has become a more stable part of their diets. Just through the school lunch program and the FFVP program, our students are receiving more fresh produce, both vegetables and fruits each and every day. In conclusion, I feel that the intervention supports the efforts to increase healthy habits: eating less processed food; drinking more water and less soda, eating fruits and vegetables each day and increasing physical activity.

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?

There were many:

1. The students have responded to the salad bar with excitement and continued enthusiasm. The decorum surrounding the installment has been outstanding and children are sharing with the health educator that they are feeling healthier and have more energy. This is not only a huge success for the children but also a success for the school food service program who overcame many obstacles in the installation in the salad bar.

2. During times when students participated in food preparation, every hand in the classroom was raised to help with the chopping of fruits or sautéing of vegetables.

3. When students are able to witness the tomatoes and cabbage growing, they feel a sense of pride in knowing they played a role in the development of that plant.

4. Near the end of the school year, one classroom made a thank you booklet for the health educator; many students drew the garden and stated that the health educator was super woman.

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	13.43	13.19	-0.24	0.738
3. Milk	1.73	1.56	-0.17	0.198
4. Yogurt or cheese	0.97	0.76	-0.22	0.126
5. Cereal	1.10	0.95	-0.15	0.268
7. Vegetables	1.92	2.09	0.17	0.525
8. Fruit	2.42	2.65	0.23	0.297
10. Juice	1.76	1.48	-0.28	0.086
11. Water	3.52	3.69	0.17	0.400
Total: fruit & vegetable (no juice)	4.35	4.74	0.39	0.307
Total: fruit, vegetable, juice	6.09	6.18	0.09	0.843
Unhealthy Foods	3.26	2.59	-0.67	0.029
6. French fries or chips	0.82	0.79	-0.03	0.850
9. Punch, sports drinks, fruit-flavored drinks	0.88	0.68	-0.20	0.174
12. Soda or soft drinks	0.64	0.42	-0.22	0.040
13. Cookies, cakes, other sweets	0.94	0.71	-0.23	0.052
Physical Activity	6.16	8.44	2.29	0.000
14. Days of 60 minutes moderate/vigorous	3.38	4.56	1.18	0.000
15. Days of 30 minutes outdoor play	2.79	3.94	1.14	0.000
Other				
16. Breakfast	0.87	0.88	0.01	0.741
17. Trying New Foods	1.17	1.20	0.03	0.709
Perceived Parental Consumption	4.81	4.92	0.11	0.708
18. How often parents eat fruit	2.33	2.31	-0.02	0.898
19. How often parents eat vegetables	2.47	2.45	-0.02	0.886
Access	3.29	3.19	-0.10	0.334
20. Fruits to eat at home	1.68	1.64	-0.04	0.552
21. Vegetables to eat at home	1.54	1.52	-0.01	0.829

Demographics

Average Age	8.1
Gender	
Males	36
Females	43

Network-funded contractor:	Marin County Health and Human Services - 10-10161
Contract number:	10-10161
Information provided by :	Oscar Guardado
Telephone:	415-473-6731
Date:	7/12/2011
Email:	oguardado@co.marin.ca.us

Section 1

1. Project Description and Goals

Project Name:	Impact Evaluation Bahia Vista School
Target Population:	25-35
Intervention Target	Parents

Primary Curriculum Used:
Harvest of the Month
Secondary Curriculum Used:
Toolbox for Community educators

Description of Nutrition Education Intervention:

Harvest of the Month Newsletters were sent home monthly in students' Friday folders. All parents were invited to participate in off campus monthly classes which included taste tests, and followed the Toolbox for Community Educators. Recipes prepared for taste testing came from Harvest of the Month family newsletters.

Description of Physical Activity Intervention:

Two of the parent classes included a physical activity component in the lesson plan.

Description of Standardized Training:

All third grade parents received the monthly HOTM newsletters (both Community and Family). All parents were invited and encouraged to participate in monthly classes. All parents received a Network-approved cookbook (those parents that attended classes received the Network-approved lesson plan). All third grade parents received the pre and post survey in the Friday folder.

Description of Standard Administration of Data

All parents were provided a written survey in the Friday folders which were sent home with students. The survey included a brief written instruction on how to complete and where to return (school administration).

Description of Standardization across all classrooms

All parents of third graders were included in this evaluation. Process for data collection and outreach for interventions was the same for all parents in each of the four classrooms. Outreach to the parents was supported by school administration.

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 at least 50 parents who participated in Impact Evaluation Bahia Vista School 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?

Schools

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

a. Intervention:	Convenience Sample	
b. Control:	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 (cups)	
Goal 2/Objective 2	0	

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/11/2010	10/11/2010
Post-test:	5/23/2011	5/23/2011
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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

How were the surveys administered?

...self-administered without 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.

This was the first year using the Fruit and Vegetable Survey; last year we used the Food Behavior Check List. The intervention consisted of the HOTM newsletters sent home to the third grade parents, and third grade parents were encouraged to attend monthly classes to reinforce nutrition education. Focused outreach to third grade parents was done though invitation flyers, followed by "reminder" phone calls. Despite the extra effort, third grade parent attendance was low at workshops. Results show that there was a decrease in the consumption of fruits and vegetables. The P values in all of the questions are higher than 0.05, indicating no significance, therefore no significant impact from the interventions.

b. Description of how evaluation results will be used:

The evaluation results indicate that the current parent outreach and nutrition education interventions did not have the anticipated impact on participant's nutritional behaviors. These results suggest that there needs to be a dialogue about strategies for improving third grade parent nutrition education engagement.

7. Point of Contact

Name:	Oscar Guardado
Phone Number:	415-473-6731
Email Address:	oguardado@co.marin.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 and Network High School Survey

No

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

0

6. Qualitative Evaluation Results

This is your opportunity to share with us anything that may not have been reflected in your data or elsewhere in this report. Consider the questions below, or offer us other qualitative reports of your successes and challenges over the last year.

What have been the biggest challenges and barriers you have faced while implementing your intervention or evaluation? What have you learned from them?

There were three major challenges faced while providing these interventions.

1. The Bahia Vista School is under review by the state. This review has increased the curriculum requirements for the school and in turn has created challenges in providing additional/outside resources. Although the school in concept embraces the parent nutrition education, time and resources were not available to provide parent education classes on campus. Third grade parent attendance at classes held at the Health and Wellness Campus was low. Even though monthly calls were made and support services/incentives were offered to parents such as free childcare, we did not see as many parents as we anticipated. It appears that the location and time was unsuitable for busy parents.

2. It is the parent educator's understanding that not all parents were proficient in English or Spanish (the primary language for some parents were Vietnamese and indigenous dialects of Mexico). We did not have the tools to serve these individuals, and responses on surveys seemed to indicate that the survey was not always understood. Low class attendance and HOTM Newsletter literacy issues may explain disappointing survey results.

3. Noting the challenges in #1 and #2 it is our belief that this population would benefit from instructor–led interventions in an environment that is convenient. We also believe that this would decrease inaccuracies and errors associated with the administration and completion of the survey tool. Our biggest issue is the engagement of parents in structured nutrition education. Once parents participate, they express satisfaction with the tools and demonstrate changes in nutrition habits and knowledge. Unfortunately these successes were not captured in survey results.

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?

Considering the challenges faced in engaging Bahia Vista parents, those that did attend the nutritional classes did an excellent job in marketing the program to the larger community. As a result of their marketing and outreach by WIC and Food Stamps, we received many inquiries and requests for similar programs at other schools. Due to the limitations placed on class enrollment, we could not open the class to everyone who wanted to attend. Instead, we invited interested residents to participate in CX3 events (i.e. invitations to our community picnic event resulted in attendance of 400 canal residents including those that helped with outreach in the classrooms).

Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	3.08	2.92	-0.15	0.280
Q2. Citrus fruit or juice past week (0=N; 1=Y)	1.10	1.06	-0.04	0.420
Q3. Fruit eaten per day (0-3)	1.40	1.31	-0.08	0.398
Q4. Different kinds of fruit daily (1-4)	2.94	2.83	-0.12	0.392
Q5. Different kinds of vegetable daily (1-4)	2.94	2.78	-0.16	0.209
Q6. Vegetables eaten per day (0-3)	1.33	1.28	-0.05	0.669
Q7. 2 or more vegetables at main meal (1-4)	2.75	2.61	-0.14	0.391

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruits (Q2, Q3, Q4) (Range 0-3)	2.22	2.09	-0.13	0.084
Veggies (Q5, Q6, Q7) (Range 0-3)	1.69	1.56	-0.12	0.239
Fruits & Veggies (all) (Range 0-7)	4.67	4.29	-0.38	0.033

Demographics

Hispanic	
yes	48
no	3
Race	
American Indian or Alaskan Native	0
Asian	3
Black or African American	0
Native Hawaiian or Other Pacific Islander	0
White	5

Average Age	33.9
Gender	
Males	15
Females	36

MCOE FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Merced COE - 10-10071
Contract number:	10-10071
Information provided by :	Angela Prine
Telephone:	209-381-5974 Ext 4603
Date:	7/31/2011
Email:	aprine@mcoe.org

Section 1

1. Project Description and Goals

Project Name:	Merced County Office of Education's Harvest of the Month
Target Population:	10-12, 4th & 5th grades

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
	0

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

The intervention that we make available goes along with our Harvest of the Month (HOTM) program. We offer several opportunities and resources to our teachers to ensure that they have the necessary tools to effectively conduct nutrition education with their students. The main facet of our program is the HOTM packet; which is supplied to each of our teachers on a monthly basis. This packet provides the teacher with everything they will need for that month pertaining to the featured fruit or vegetable. It includes: an educator newsletter, one parent newsletter for each student, fun food fact calendar, age-appropriate story books with nutrition themes, and a kid-friendly recipe page which showcases the taste test of the featured produce and also includes two-three recipes that the teacher can make with the help of students. Here at Merced County Office of Education, we think the best way for our students to learn about nutrition and healthful ways of eating is to actually participate in the tasting and making process. This is why a great deal of our efforts are focused toward "cooking in the classroom;" using our kid-friendly recipes. All of our 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 our participating teachers with the option of receiving a taste test box every week. Each box comes with the necessary ingredients and supplies that the teacher would need to conduct the taste test in their classroom. We even had stickers made especially to include in the taste test boxes. Each teacher received enough stickers for each of their students. The stickers had cartoon fruits and vegetables on them and in big letters, the phrase "I Tried It." The intention of providing the stickers was to enhance the tasting experience. In addition to the taste test and recipe boxes, we went into the classroom and conducted a few lessons on MyPyramid followed by a healthy taste test demonstration. We also provided our students with National Nutrition Month packets and summer packets to reinforce the healthy messages at home. The National Nutrition Month packets had brochures on fruits and vegetables, physical activity, and healthy recipe cards. The summer packets had information on how to stay healthy during the summer. These were given out after the intervention took place, in the hopes that they would use this reinforcement information over the summer. In addition to what we provided our teachers, we also helped with promoting HOTM with our school cafeterias and communities. We did this by participating in cafeteria taste tests of featured produce, and by participating in community and school health fairs. At the cafeteria taste tests, we had a very colorful and eye-appealing booth set up to capture the students' attention. It was decorated with fruit and veggie crepe wall hangings and various posters. We made it fun by asking them questions about general nutrition. We then provided "I Tried It" stickers to the age-appropriate students. At the health fairs we set up a taste test booth in similar fashion to what we had at the cafeteria taste tests in addition to having an obstacle course. So, not only were we promoting nutrition education, we were also promoting physical activity. The taste test consisted of trying mostly in-season fruit. The obstacle course was set up as a relay so that the students could encounter the obstacle course two-at-a-time.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Although we promote physical activity to our teachers during the entire school year, we concentrated our spring teacher trainings on physical activity-related ideas and resources. At these trainings we provided demonstrations of physical activities that included nutrition education that they could easily incorporate into their lesson plans. We also provided them with age-appropriate CDs filled with nutrition-related songs to encourage movement among their students. In addition to this we provided our teachers with several physical activity resources and books to help give the teachers ideas on how to have a healthy, active classroom, and how to incorporate physical activity games into their core subjects. 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. The students went two-by-two through the obstacle course. When we gave the signal, they would walk across a balancing beam, pass through the over-under bar hurdles, hippity-hop to the tunnel, then crawl through the tunnel, and finally grab a foam fruit or veggie and throw it in the big blow up basketball hoop.

In 1-2 paragraphs, please provide a Description of the 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 and their students.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

At all of the pretests and posttests there was at least two Network staff there to facilitate the surveys to the students. We gave an explanation to the students regarding what the survey comprised of. We then were there to answer any questions that the students had concerning the actual survey. We made sure that all of the surveys were filled out completely. Most of the surveys were administered one classroom at a time. We did have one school district that decided it would best suit their needs if we conducted the surveys to a whole grade level during their physical education time.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

We do not have a set standardization among our teachers, classrooms, and grade levels. Everything that we provide to them is offered and they have the choice of doing it or not. 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 our teachers to do certain things, our participation goes drastically down.

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 827 school grade students who participated in Merced County Office of Education's 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.

Impact/Outcome Physical Activity Objective:

Impact/Outcome Sugar Sweetened Beverage Objective:

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?

Schools

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

a. Intervention:	Convenience Sample
b. Control:	

# of intervention matched pre/post measures collected	827
# 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	Network Youth Survey

Where any other surveys used?	Process Evaluation

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/4/2010	########
Post-test:	4/28/2011	6/2/2011
Follow-up:		

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	5
How many lessons from the intervention occurred *after* pre-tests?	28

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.

In the "Unhealthy Foods" category there was a statistically significant decrease in the consumption of cookies, cakes, and other sweets. This can be attributed to these items not being offered to the students as rewards or at parties by the teachers/schools. It could also be attributed to our nutrition education emphasizing that these foods are not ideal choices for the students. In the "Physical Activity" category there was a statistically significant decrease in the amount of moderate/vigorous play that the students participated in. There was a statistically significant decrease in the amount of outdoor play that the students participated in as well. We work with a high population of English as a Second Language (ESL) students and we think this happened because there was a great deal of students who did not understand how the question was written and instead of asking for clarification about this, they just filled on one day for each question. In the "Other" category there was a statistically significant decrease in the amount of students that ate breakfast the previous day. There was also a statistically significant decrease in the amount of students that were willing to try new foods. Our approach of wanting to put the students' minds at ease about taking this survey and reassuring them that this is not a test seems to have had the reverse affect. Overall, we think that the students just did not take the survey seriously. My colleagues and I witnessed a few students each that raced through filling in the bubbles just to ensure that they were the first ones done. In the last category "Access," there was an overall statistically significant increase in the amounts of fruits and vegetables being offered at home. This can be attributed to the effectiveness of our nutrition education items that we sent home to the parents.

b. Description of how evaluation results will be used:

Since our results were not reflective of what we feel is being provided to the students, I think it is necessary that we continue to do what we are already doing, which is offering the taste tests and produce to the students in hopes that they try the produce and the recipes. We need to also focus on doing more lessons in the classroom. Maybe the students would retain the information more if it coming from someone other than the teacher. I think it is imperative that we emphasize that even though this survey is not a test, it still needs to be answered thoroughly and accurately. Also, this year we were very cognizant of teachers' class time and we left it up to them how they wanted us to conduct the surveys which led to inconsistencies in how the survey was administered. I think that needs to change for next year.

7. Point of Contact

Name:	Angela Prine
Phone Number:	209-381-5974 Ext 4603
Email Address:	aprine@mcoe.org

8. Relevant Journal References

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	8.21	8.04	-0.17	0.268
3. Milk	1.55	1.57	0.02	0.621
4. Yogurt or cheese	0.70	0.69	-0.01	0.742
5. Cereal	0.81	0.78	-0.03	0.349
7. Vegetables	1.88	1.77	-0.11	0.064
8. Fruit	1.91	1.93	0.02	0.794
10. Juice	1.34	1.30	-0.05	0.376
Total: fruit & vegetable (no juice)	3.80	3.70	-0.10	0.273
Total: fruit, vegetable, juice	5.15	4.99	-0.15	0.198
Unhealthy Foods	2.99	2.90	-0.09	0.315
6. French fries or chips	0.64	0.64	0.00	0.886
9. Punch, sports drinks, fruit-flavored drinks	1.05	1.09	0.04	0.291
11. Soda or soft drinks	0.62	0.59	-0.03	0.393
12. Cookies, cakes, other sweets	0.68	0.59	-0.09	0.017
Physical Activity	7.43	7.03	-0.40	0.012
13. Days of 60 minutes moderate/vigorous	3.88	3.61	-0.27	0.002
14. Days of 30 minutes outdoor play	3.57	3.43	-0.15	0.119
Other				
15. Breakfast	0.89	0.86	-0.04	0.009
16. Trying New Foods	1.25	1.19	-0.06	0.004
Perceived Parental Consumption	4.51	4.46	-0.06	0.389
17. How often parents eat fruit	2.21	2.14	-0.07	0.055
18. How often parents eat vegetables	2.24	2.27	0.03	0.487
Access	3.25	3.32	0.07	0.020
19. Fruits to eat at home	1.64	1.67	0.03	0.106
20. Vegetables to eat at home	1.60	1.63	0.04	0.090

Demographics

Average Age	9.7
Gender	
Males	#VALUE!
Females	#VALUE!

Network-funded contractor:	Monrovia USD
Contract number:	10-10069
Information provided by :	Lizett Olivares
Telephone:	626 471-3077
Date:	40750
Email:	lolivares@monrovia.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	HOTM Cooking in the Classroom Lessons
Target Population:	3rd grade

Primary Curriculum Used:	
contractor developed nutrition education lessons	
Secondary Curriculum Used:	
Harvest of the Month	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

There were 8 nutrition education lessons taught to eligible student participants in the intervention group. The lessons were 45 minutes in length and included the following content: Harvest of the Month, recipe preparation and taste test, California Health Education Content standard, and a nutrition-related application of the standard. Control group was administered the pre-assessment survey, but did not undergo the intervention lessons. The lessons were presented to the students as a Cooking in the Classroom lesson where a trained nutrition educator went into the intervention classroom each month to conduct the nutrition education lesson.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

0

In 1-2 paragraphs, please provide a Description of the 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. The 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 8 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 follow 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 the Standard Administration of Data

Pre and Post assessment surveys were administered by the educators. Educators read aloud each question to the participants and provided clarification if needed.

In 1-2 paragraphs, please provide a Description of the 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.

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 150 3rd grade students who participated in HOTM Cooking in the Classroom 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

a. 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
b. Control:	Convenience Sample

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.

	First Administered	Last Administered
Pre-test:	10/1/2010	10/31/2010
Post-test:	6/1/2011	6/24/2011
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?	0

c. Describe how the data were collected.

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

How were the surveys administered?

...read aloud to classroom and followed the state guidelines on administrating the surveys.

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. Of these, only 367 matched pre- and post-test samples were obtained for both intervention and control groups. 172 matched surveys were from student participants in 13 classrooms that received the HOTM Cooking in the Classroom nutrition education lessons. Pre and post data were collected from the intervention group over a nine month period. Pre and post data from 195 students at 12 non-Network classrooms were collected and used for comparison. The intervention group received eight 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 did not experience any significant increases in food consumption as compared to the control group. However, the control group significantly decreased consumption in the following types of healthy food: yogurt and cheese (0.76 to .59 $p<0.027$), cereal (1.04 to 0.71 $p<0.000$), vegetables (2.12 to 1.66 $p<0.006$), juice (1.68 to 1.41 $p<0.035$), total fruit/vegetable/juice consumption (5.88 to 5.14 $p<0.016$), and fruits to eat at home (1.77 to 1.68 $p<0.031$).

Both the intervention and the control groups experienced a significant increase in overall and interval physical activity minutes (intervention: 3.82 to 5.71 $p<0.000$) (control: 4.71 to 6.12 $p<0.000$). Baldwin Park Unified School District is an active recipient of the Healthy and Active Communities grant (HEAC) which could be associated with the positive impact in this category. In addition, the intervention group was exposed to one physical activity promotion Cooking in the Classroom lesson.

The control group increased significantly in breakfast consumption from 0.08 to 0.18 ($p<0.002$). It is unknown why breakfast participation increased at the control sites. Breakfast promotion is conducted by all teachers in the month of May at all schools due to state testing. While the post assessments at all school sites were conducted in June, the impact of the teachers at the control sites may have been greater than the impact from the teachers with students in the intervention group.

Although there were no significant increases in healthy food consumption or significant decreases in unhealthy food consumption, this was the first year the Network was present in the four participating school sites from Baldwin Park. In addition, no prior nutrition education or promotions had been conducted by any other program. As widely published data has shown, behavior change takes time and one year of nutrition education may not be sufficient to increase fruit and vegetable consumption or other healthy foods. It should be noted that there were no significant decreases in consumption for these categories in the intervention group as compared to the comparison group. The nutrition lessons conducted at the intervention sites may have been impactful in protecting against significantly decreasing healthy food consumption while not significantly increasing unhealthy food consumption as compared to the control group. Furthermore, a similar type of intervention was conducted with parents at each of intervention sites and it was shown to be significantly effective in increasing fruit and vegetable consumption and self-efficacy. 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.

At the intervention sites, many parents vocalized that their children wanted them to make the recipe they tried in The Cooking in the Classroom lesson. Parents were eager to attend the parent meetings so they could learn how to prepare the recipes their children loved. They appreciated the time we took to teach them how to prepare fruit and vegetable recipes because they do not have enough confidence to prepare them at home. 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 to field trips. Children also

vocalized and were observed reading nutrition facts labels. One of four intervention sites decided to eliminate unhealthy food choices for fundraisers and two intervention sites limited the amount of unhealthy food choices to one choice at parent meetings in order to model healthy behavior for the students. These policy changes were driven in part by nutrition education efforts at the intervention sites and more changes are expected to occur in the next school year.

Lastly, teachers from the intervention sites are also new to Network activities and do not have extensive experience and training in nutrition education and integration as compared to Monrovia Unified School District teachers. Although the intervention is solely based on the Cooking in the Classroom lessons, teachers are also actively involved in the HOTM program. The HOTM Cooking in the Classroom lessons have been shown to significantly increase fruit and vegetable consumption and self-efficacy among 4th and 5th grade Monrovia USD students. Fourth and 5th grade students may be more capable of accurately filling out the Youth survey than 3rd graders. In summary, conducting standards based nutrition education lessons with the intervention group prevented significant decrease in consumption of fruits, vegetables, yogurt, cheese, cereal, and juice. The health skills that were addressed in the lessons included analyzing influences of food and drink choices, accessing valid nutrition information, reading and understanding Nutrition Facts Labels, and promoting healthy lifestyles to others. It is evident that the intervention conducted affected behavior regarding food choices in a positive trend (See attached charts). In contrast, the absence of standards-based nutrition education may hinder the opportunity for children to improve their food and drink preferences, especially fruit and vegetable consumption.

b. Description of how evaluation results will be used:

The data collected from this impact evaluation will be used as benchmark information and will be compared to a similar intervention next school year. There is some evidence that the HOTM Cooking in the Classroom Lessons may have had a positive influence in the student population at the four Network school sites. Therefore, the same students (intervention and control) will be followed in 4th grade and receive seven additional lessons developed by the contractor with the same format and foundation. The lessons will have a stronger focus on strategies to increase healthy food and drink consumption. Partnerships with each school site and child nutrition services will be strengthened to increase promotion and access to healthy foods. Featured recipes will be evaluated to ensure they are practical, affordable, and culturally appropriate. 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:	626 471-3077
Email Address:	lolivares@monrovia.k12.ca.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 and Network High School Survey

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

Results- Youth Intervention

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.00	10.35	-0.65	0.142
3. Milk	1.33	1.32	-0.01	0.877
4. Yogurt or cheese	0.69	0.57	-0.12	0.115
5. Cereal	0.82	0.79	-0.03	0.681
7. Vegetables	1.70	1.46	-0.24	0.107
8. Fruit	1.70	1.83	0.13	0.326
10. Juice	1.51	1.27	-0.25	0.069
11. Water	3.24	3.14	-0.10	0.500
Total: fruit & vegetable (no juice)	3.39	3.30	-0.09	0.693
Total: fruit, vegetable, juice	4.92	4.60	-0.32	0.280
Unhealthy Foods	3.27	3.18	-0.09	0.688
6. French fries or chips	0.70	0.76	0.07	0.411
9. Punch, sports drinks, fruit-flavored drinks	0.97	0.98	0.02	0.850
12. Soda or soft drinks	0.70	0.65	-0.05	0.559
13. Cookies, cakes, other sweets	0.90	0.78	-0.11	0.201
`hysical Activity	3.82	5.71	1.89	0.000
14. Days of 60 minutes moderate/vigorous	2.08	3.02	0.94	0.000
15. Days of 30 minutes outdoor play	1.74	2.68	0.94	0.000
Other				
16. Breakfast	0.15	0.12	-0.02	0.451
17. Trying New Foods	0.75	0.73	-0.02	0.730
Perceived Parental Consumption	5.03	5.01	-0.02	0.912
18. How often parents eat fruit	2.50	2.53	0.04	0.752
19. How often parents eat vegetables	2.51	2.48	-0.03	0.831
Access	3.25	3.30	0.05	0.623
20. Fruits to eat at home	1.64	1.69	0.05	0.362
21. Vegetables to eat at home	1.61	1.61	-0.01	0.928

Demographics

Average Age	8.0
Gender	
Males	117
Females	91

Results- Youth Control

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	13.57	11.23	-2.34	0.001
3. Milk	1.58	1.55	-0.04	0.665
4. Yogurt or cheese	0.76	0.59	-0.18	0.027
5. Cereal	1.04	0.71	-0.32	0.000
7. Vegetables	2.12	1.66	-0.46	0.006
8. Fruit	2.04	2.03	-0.01	0.972
10. Juice	1.68	1.41	-0.28	0.035
11. Water	3.06	3.23	0.17	0.493
Total: fruit & vegetable (no juice)	4.16	3.70	-0.46	0.066
Total: fruit, vegetable, juice	5.88	5.14	-0.74	0.016
Unhealthy Foods	3.71	3.68	-0.03	0.891
6. French fries or chips	0.91	0.92	0.02	0.859
9. Punch, sports drinks, fruit-flavored drinks	1.26	1.14	-0.12	0.230
12. Soda or soft drinks	0.59	0.67	0.07	0.368
13. Cookies, cakes, other sweets	1.04	0.96	-0.08	0.411
Physical Activity	4.71	6.12	1.41	0.000
14. Days of 60 minutes moderate/vigorous	2.53	3.29	0.76	0.001
15. Days of 30 minutes outdoor play	2.17	2.85	0.68	0.001
Other				
16. Breakfast	0.08	0.18	0.10	0.002
17. Trying New Foods	0.74	0.79	0.05	0.288
Perceived Parental Consumption	5.23	5.46	0.23	0.151
18. How often parents eat fruit	2.58	2.67	0.09	0.362
19. How often parents eat vegetables	2.65	2.76	0.10	0.310
Access	3.41	3.33	-0.08	0.341
20. Fruits to eat at home	1.77	1.68	-0.09	0.031
21. Vegetables to eat at home	1.64	1.64	0.01	0.933

Demographics

Average Age	8.0
Gender	
Males	98
Females	118

Network-funded contractor:	Montebello - 09-11260
Contract number:	09-11260
Information provided by:	Kristin Fyfe
Telephone:	(323) 887-7966
Date:	7/26/2011
Email:	fyfe_kristin@montebello.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Harvest of the Month
Target Population:	5th grade

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
	0

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Harvest of the Months taste tests paired with lessons from MUSD-created teacher packets were conducted in MUSD classrooms. Prior to the taste test, MUSD teachers receive Harvest of the Month packets with a variety of lessons to choose from that integrate nutrition education with core subject areas such as language arts, history, social studies, math, health, etc. Integration of nutrition into core subject areas facilitates implementation of nutrition lessons and enhances retention. Components of packets include instructions and suggested timeline on how to implement lessons, facts about the featured produce item in both prose and poetry, facts about a highlighted nutrient, Thinking Maps, photos of produce at various stages as a plant and as food, letter home from students to parents, parent newsletters and assorted student skill-building worksheets. The main topic is fruit and vegetables, though other nutrition concepts such as MyPyramid, sugar-sweetened beverages, meal times and assembling healthy snacks are also woven in. Teachers ranged in conducting between 2 and 11 lessons in the packet per month.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

N/A

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Specific instructions on how to conduct lessons and taste test are included in each month's teacher packet. Teachers are also able to sign up for any of 3 2-hour trainings on Harvest of the Month and integration of nutrition into other academic subjects. Site Lead Teachers also provide training and advice to teachers at their schools.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

MUSD pre- and post- surveys were administered aloud by MUSD Network consultants. GUSD control group surveys were conducted by classroom teachers.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

Process evaluations were collected monthly from MUSD IOE teachers for information regarding which components of the packet were taught, for how long, over how many days and teachers' thoughts on the program and student progress.

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 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.

Impact/Outcome Physical Activity Objective:

Impact/Outcome Sugar Sweetened Beverage Objective:

2. Evaluation Design

a. 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:	Random Sample
b. Control:	Convenience Sample

# of intervention matched pre/post measures collected	143
# of control matched pre/post measures collected	155

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

Where any other surveys used?	Nutrition Education Survey; Self-Efficacy Survey

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	11/19/2010	12/9/2010
Post-test:	6/2/2011	6/13/2011
Follow-up:		

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	9
How many lessons from the intervention occurred *after* pre-tests?	19

c. Describe how the data were collected.

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

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.

From the Network Youth Survey, there was a significant decrease for the intervention group in milk consumption ($t(142) = 2.34$, $p<.05$), yet a significant increase in aggregate fruit and vegetable consumption ($t(142) = 2.12$, $p<.05$) and a near significant increase in vegetable consumption ($t(142) = 1.91$, $p=.059$). Number of days with 60 minute of moderate/vigorous physical activity ($t(142) = 3.68$, $p<.01$), number of days with 30 minutes of outdoor play ($t(142) = 5.41$, $p<.01$) and aggregate physical activity ($t(142) = 5.49$, $p<.01$) all increased significantly. Students' willingness to try new foods increased by a nearly statistically significant amount ($t(142) = 1.92$, $p=.058$). Within the control group, there were statistically significant increases in aggregate healthy foods ($t(152) = 2.18$, $p<.05$), fruit consumption ($t(152) = 2.35$, $p<.05$) and water consumption ($t(152) = 4.13$, $p<.01$). Cereal consumption decreased significantly ($t(152) = 2.11$, $p<.05$). As with the MUSD control group, number of days with 60 minute of moderate/vigorous physical activity ($t(152) = 4.37$, $p<.01$), number of days with 30 minutes of outdoor play ($t(152) = 5.66$, $p<.01$) and aggregate physical activity ($t(152) = 5.82$, $p<.01$) all increased significantly. Aggregate perceived parental fruit and vegetable consumption ($t(152) = 2.18$, $p<.05$) and perceived parental fruit consumption ($t(152) = 2.68$, $p<.01$) both increased significantly. Lastly, almost all measures of self-efficacy increased significantly, including how much students felt they could ask someone to cook their favorite vegetable for dinner ($t(152) = 2.39$, $p<.05$), ask someone to serve their favorite fruit for dinner ($t(152) = 2.98$, $p<.01$), ask someone to have fruit where they can reach them ($t(152) = 5.55$, $p<.01$), and aggregate self-efficacy for increasing access to fruit and vegetables ($t(152) = 4.73$, $p<.01$). This year our control group participants were classrooms in Glendale Unified that are very likely not SNAP-Ed eligible, for lack of a more socioeconomically similar and appropriate control group without Network programs. Many Glendale Unified teachers conducted their own nutrition education in their classrooms, perhaps motivated in part by our evaluation. They also administered their own pre- and post-tests and we are unsure of how or whether they guided the students in their answers. For these reasons, the control group data do not serve their purpose of accurately portraying what would have occurred in MUSD classrooms without Harvest of the Month intervention. MUSD's gains, while significant, are also likely tempered by Harvest of the Month lessons earlier in the school year and in previous school years elevating the pre-test data. MUSD's gains are also in spite of increasing class sizes and a shortened school year.

Qualitative Findings

In spite of increased class sizes and a shortened school year, we are still present in all schools and in all grades PreK through high school. In several schools, our program is implemented by all or almost all teachers. Teachers are passionate about nutrition and the Harvest of the Month program, and many report that the staff at their school seek out opportunities to promote nutrition now and/or that students elect to bring fruits and vegetables for parties in lieu of less nutritious choices. Our Harvest of the Month rotation this past year featured many vegetables, and teachers were surprised by the positive response from students. Roasted brussels sprouts, for example, were so well liked that they are now included on the regular school lunch menu. A parent in our Viviendo Saludable parent nutrition class reported making a binder to collect all of the nutrition information on the menu slicks so she could remember the tips. Site Lead Teachers reported strong working partnerships with the Nutrition Services Supervisor at their site, which allowed teachers to receive their taste test freshly prepared at a time that was convenient for the teachers to make the most of the lesson. We are also in the process of finalizing nutrition focus standards for the district to be adopted by the board, which will highlight the importance of nutrition education and encourage broader change.

b. Description of how evaluation results will be used:

This upcoming year we will conduct formative assessments with sample groups of teachers from various schools for more rigorous evaluation and a clearer picture of how we can adapt to changes in the classroom. With larger class sizes, fewer days and more additional assignments than in previous years, our teachers decreased the amount of time spent on nutrition education from the beginning to the end of the year. Although we achieved statistically significant increases in fruit and vegetable consumption as well as physical activity, we will continue to adjust our intervention to complement the changing classroom environment for strong evaluation results.

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

Baranowski T, Davis M, Resnicow K, Baranowski J, Doyle C, Smith M, Lin L, Wang DT. Gimme 5 fruit and vegetables for fun and health: Outcome Evaluation._Health Education & Behavior 2000; 27(1):96-111.

Results - Intervention

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods	9.30	9.66	0.36	0.31
3. Milk	1.64	1.45	-0.20	0.02
4. Yogurt or cheese	0.61	0.52	-0.08	0.25
5. Cereal	0.83	0.76	-0.06	0.42
7. Vegetables	1.51	1.75	0.24	0.06
8. Fruit	1.59	1.78	0.19	0.17
Total: fruit & vegetable	3.10	3.53	0.43	0.04
11. Water	3.12	3.39	0.27	0.06
Unhealthy Foods	3.06	3.19	0.13	0.52
6. French fries or chips	0.62	0.74	0.13	0.09
9. Punch, sports drinks, fruit-flavored drinks	1.04	1.13	0.08	0.40
12. Soda or soft drinks	0.62	0.62	0.00	1.00
13. Cookies, cakes, other sweets	0.78	0.71	-0.08	0.46
Physical Activity	6.20	8.08	1.88	0.00
14. Days of 60 minutes moderate/vigorous	3.54	4.24	0.71	0.00
15. Days of 30 minutes outdoor play	2.64	3.80	1.16	0.00
Other	2.04	2.14	0.10	0.07
16. Breakfast	0.85	0.87	0.02	0.57
17. Trying New Foods	1.18	1.26	0.09	0.06
Perceived Parental Consumption	4.47	4.66	0.20	0.18
18. How often parents eat fruit	2.15	2.28	0.14	0.11
19. How often parents eat vegetables	2.20	2.35	0.15	0.11
Access				
20. Fruits to eat at home	1.74	1.77	0.03	0.56
21. Vegetables to eat at home	1.64	1.63	-0.01	0.88
Fruit AND Vegetables to eat at home (19 & 20)	3.40	3.43	0.03	0.71
Bullying/Teasing				
22. Bullied	0.11	0.18	0.07	0.07
Self-Efficacy	12.27	12.63	0.36	0.24
23. Ask someone to cook favorite vegetable for dinner	2.93	2.94	0.01	0.95
24. Ask someone to serve favorite fruit for dinner	3.10	3.23	0.13	0.26
25. Ask someone to have fruits and fruit juices within reach	3.44	3.51	0.07	0.47
26. Ask someone to have cup up vegetables within reach	2.80	2.94	0.14	0.26
Taste Preference	4.41	4.48	0.08	0.41
27. I like the taste of most fruits	2.59	2.63	0.04	0.46
28. I like the taste of most vegetables	1.82	1.85	0.03	0.59

Demographics

Average Age	10.14
Gender	
Males	78
Females	65

Results - Control

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods	10.33	11.05	0.71	0.03
3. Milk	1.31	1.30	-0.01	0.93
4. Yogurt or cheese	0.63	0.66	0.03	0.72
5. Cereal	0.69	0.55	-0.15	0.04
7. Vegetables	2.02	2.10	0.08	0.53
8. Fruit	1.84	2.20	0.36	0.02
Total: fruit & vegetable	3.86	4.26	0.40	0.08
11. Water	3.79	4.25	0.46	0.00
Unhealthy Foods	2.55	2.40	-0.15	0.39
6. French fries or chips	0.59	0.56	-0.03	0.67
9. Punch, sports drinks, fruit-flavored drinks	0.73	0.75	0.02	0.79
12. Soda or soft drinks	0.50	0.47	-0.03	0.69
13. Cookies, cakes, other sweets	0.73	0.62	-0.12	0.11
Physical Activity	6.70	8.74	2.04	0.00
14. Days of 60 minutes moderate/vigorous	3.78	4.59	0.80	0.00
15. Days of 30 minutes outdoor play	2.89	4.14	1.26	0.00
Other	2.14	2.18	0.04	0.49
16. Breakfast	0.92	0.89	-0.03	0.28
17. Trying New Foods	1.21	1.30	0.09	0.09
Perceived Parental Consumption	4.53	4.81	0.28	0.03
18. How often parents eat fruit	2.18	2.39	0.21	0.01
19. How often parents eat vegetables	2.27	2.37	0.10	0.15
Access				
20. Fruits to eat at home	1.82	1.86	0.04	0.27
21. Vegetables to eat at home	1.69	1.76	0.06	0.16
Fruit AND Vegetables to eat at home (19 & 20)	3.52	3.62	0.10	0.15
Bullying/Teasing				
22. Bullied	0.14	0.11	-0.04	0.30
Self-Efficacy	12.01	13.41	1.41	0.00
23. Ask someone to cook favorite vegetable for dinner	2.98	3.22	0.24	0.02
24. Ask someone to serve favorite fruit for dinner	3.16	3.46	0.31	0.00
25. Ask someone to have fruits and fruit juices within reach	2.89	3.58	0.68	0.00
26. Ask someone to have cup up vegetables within reach	2.96	3.18	0.22	0.07
Taste Preference	4.45	4.54	0.09	0.38
27. I like the taste of most fruits	2.54	2.61	0.07	0.25
28. I like the taste of most vegetables	1.91	1.93	0.03	0.70

Demographics

Average Age	10.06
Gender	
Males	79
Females	74

FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Monterey County Health Department - 10-10158
Contract number:	10-10158
Information provided by :	Niaomi Hrepich
Telephone:	(831) 796-2872
Date:	6/14/2011
Email:	hrepichns@co.monterey.ca.us

Section 1

1.Project Description and Goals

Project Name:	Monterey County Health Department
Target Population:	9-11 years

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
PowerPlay!	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Over the school year, *Network* staff provided 6-8 Harvest of the Month Taste testings to the students. During the nutrition education intervention, the students would learn facts about the different fruit or vegetable, do physical activity and then taste the specific item. The students also did 2-3 PP! lessons such as Rate the Taste and Power of Advertising over the course of the impact evaluation. Each class also had a visit from a local Chef, the students assisted the Chef in preparing 4 different recipes that included a variety of fruits and vegetables. After the students prepared the food they were able to taste all of the different recipes

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

None

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Network Staff worked with the Teachers individually to make sure the lessons were provided and consistent. *Network* Staff also provided some of the nutrition education.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

Network Staff conducted the pre and post tests for all classrooms

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

Some of the lessons may have been slightly different or fruit and vegetable may have been different in each classroom. Next year we are going to try and keep this more consistent as well.

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 200, 4th grade students who participated in Monterey County Health Department 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?

Classrooms

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

a.	Intervention:	Random Sample
b.	Control:	N/A

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

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	11/15/2010	12/9/2010
Post-test:	5/17/2011	6/10/2011
Follow-up:	N/A	N/A

Were any pre-test data collected AFTER the intervention began?	Yes
How many lessons from the intervention occurred *before* pre-tests?	1 for 2 of the classes
How many lessons from the intervention occurred *after* pre-tests?	6

c. Describe how the data were collected.

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

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.

Our survey tool did indicate one statistically significant change in the students in the category of Healthy Food and Beverages. The amount of water reported by the students increased. From the pretest to the post-test, students reported a 29% increase in water consumption. None of the other questions or categories showed statistical significance, most categories remained unchanged. See the results table at the end of this report.

Having a Local Chef come and do food prep with the students was very successful. The students had a great time preparing and tasting different recipes. We will definitely continue to bring in more food prep experiences during the year. This past year we also had more interest from the cafeteria staff, we partnered on taste testings, we hope to bring more tastings into the school year next year. For one of the school districts we partner with, they are in the process of revising the Wellness Policy, including more taste testings in the cafeteria's and reviewing nutrition curriculum and physical activity components to better serve the students.

b. Description of how evaluation results will be used:

We are planning on providing more consistent nutrition lessons in the classes that participate in Impact Evaluation in the following year. The Staff will be providing the same nutrition and physical activity lesson plan to each class, a more consistent message. We will also include more role playing in each lesson. The lessons will continue to include taste testings and we will include more hands on food preparation, as the students enjoy preparing recipes. We will also continue our partnership with Local Chef visits to the class (using the same one for all classes).

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.

None

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

Foerster, S., J. Gregson, et al. (1998). "The California Children's 5 a Day-Power Play! Campaign: Evaluation of a large-scale social marketing initiative." Family and Community Health 21(1): 46-64.

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

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

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

None

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	10.90	10.91	0.02	0.962
3. Milk	1.46	1.47	0.02	0.832
4. Yogurt or cheese	0.68	0.77	0.09	0.275
5. Cereal	0.89	0.84	-0.05	0.462
7. Vegetables	1.68	1.70	0.02	0.865
8. Fruit	1.90	1.71	-0.19	0.089
10. Juice	1.49	1.30	-0.18	0.086
11. Water	2.89	3.18	0.29	0.026
Total: fruit & vegetable (no juice)	3.56	3.40	-0.16	0.395
Total: fruit, vegetable, juice	5.03	4.69	-0.34	0.132
Unhealthy Foods	2.94	3.10	0.16	0.417
6. French fries or chips	0.74	0.69	-0.06	0.563
9. Punch, sports drinks, fruit-flavored drinks	0.91	1.07	0.16	0.052
12. Soda or soft drinks	0.50	0.50	0.00	1.000
13. Cookies, cakes, other sweets	0.78	0.83	0.06	0.459
Physical Activity	3.87	3.96	0.09	0.743
14. Days of 60 minutes moderate/vigorous	1.90	2.01	0.11	0.482
15. Days of 30 minutes outdoor play	1.97	1.94	-0.04	0.818
Other				
16. Breakfast	0.91	0.88	-0.03	0.298
17. Trying New Foods	1.26	1.29	0.03	0.636
Perceived Parental Consumption	4.54	4.63	0.09	0.591
18. How often parents eat fruit	2.21	2.19	-0.02	0.867
19. How often parents eat vegetables	2.29	2.31	0.02	0.830
Access	3.38	3.37	-0.01	0.858
20. Fruits to eat at home	1.75	1.77	0.02	0.670
21. Vegetables to eat at home	1.60	1.60	0.00	1.000

Demographics

Average Age	9.2
Gender	
Males	118
Females	103

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:	7/25/2011
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
Intervention Target	Adults

Primary Curriculum Used:
Healthy Meals, Healthy Families

Description of Nutrition Education Intervention:

Of the 16 questions on the adult Food Behavior Checklist (FBC) survey, 14 were chosen as target behaviors and addressed in the lessons. A series of five nutrition education classes were provided in three 60-minute sessions and 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. A total of 257 adults participated in at least one class; 200 pre-tests and 134 post-tests were completed resulting in a total of 104 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 63 pre-tests and 46 post-tests were completed in order to collect 45 matched tests. *Please see Part II – Section 6: Qualitative Evaluation Results (challenges and barriers) for a discussion on the Comparison Group.*

The nutrition education intervention was conducted with adults at 16 sites, including eight shelters, four schools, two emergency food sites, one public housing site and one Head Start site. Over 72% 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 schools, emergency food sites and public housing sites. Fruits and vegetables were incorporated into each class and since many of these adults were parents, the role of the parent and the child at family meals, portion sizes and helping children have a healthy weight were discussed. Skills such as meal planning, shopping, cooking and reading food labels were also 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. Instructors had to address nutrition misinformation as well; many participants had questions and often times, these classes were the only opportunity to talk about their nutrition concerns.

Description of Physical Activity Intervention:

None

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 on an informal basis.

Description of Standard Administration of Data

Intervention Group: The FBC survey was used at all sites and was provided in English or Spanish based on participant preference. LIA staff administered the FBC and the participant data card at the first class (pre) and at the last class (post). Site staff administered the FBC survey one month after the last class (follow-up).
Comparison Group: The FBC survey 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 FBC 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.

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 Health Educator, 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 and the preferences and needs of participants 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.

Impact/Outcome Objective 1:

By Sept 30, 2011, 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

a. What design was used?

Other (Specify in next field)	Specify Other: Pre-test & post-test with a one-month follow-up for the Intervention Group plus a pre and post-test with a 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	
b.	Control:	Convenience Sample	

# of intervention matched pre/post measures collected	104
# of control matched pre/post measures collected	45

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)	

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/7/2010	5/19/2011
Post-test:	10/21/2010	6/2/2011
Follow-up:	11/22/2010	7/6/2011

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

c. Describe how the data were collected.

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

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.

Intervention Group:

A total of 104 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 13 of the 14 targeted behaviors. Of those 13, eight were statistically significant improvements:
Q #16: Overall rating of eating habits (Post; 1-mo F/U)
Q #1: Eating fruits and vegetables as snacks (Post)
Q #6: The number of cups of fruit eaten daily (Post; 1-mo F/U)
Q #8: The variety of fruit eaten each day (Post)
Q #7: The number of cups of vegetables eaten daily (Post; 1-mo F/U)
Q #13: Two or more vegetables at main meal (Post; 1-mo F/U)
Q #14: Read food labels when shopping (1-mo F/U)
Q #4: Drink regular soda (Post)

Five of the 14 behaviors improved but not significantly:
Q #3: Citrus fruit or citrus juice in past week (Post; 1-mo F/U)
Q #9: The variety of vegetables eaten each day (Post; 1-mo F/U)
Q #2: Drink fruit drinks, sports drinks or punch (Post; 1-mo F/U)
Q #5 Drink milk or use milk on cereal in the past week (1-mo F/U)
Q #15: Run out of food before month end (1-mo F/U)

One of the 14 behaviors showed no change:
Q #10: Drink milk
Milk consumption remained at "yes, often", indicating an existing positive nutrition behavior. Most of the participants were drinking milk or using milk on cereal regularly before the intervention began.

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 also drinking sugar-sweetened beverages less often and eating or drinking citrus fruit/juice more often. Lastly, these participants were 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 all changed behaviors except one, question #10 "drink milk", where intake remained at adequate levels.

Comparison Group:

A total of 45 matched surveys were collected for the Comparison Group. Low-income adults residing in public housing or shelters were used for comparison in place of WIC participants used in previous years. The pre-tests from the Comparison Group appeared similar to the pre-tests of the Intervention Group and had lower overall scores than those of the WIC Comparison Group in FFY10. This indicates that the FFY11 group had a lower nutrition knowledge base and was more reflective of the target population group.

The results indicate that there were no significant improvements in behavior for the Comparison Group for any of the 14 targeted behaviors except for one. There was a significant increase in frequency of eating two or more vegetables at the main meal, although the reason for this improvement is not clear. There was a slight decrease from the pre-test to post-test for two of the targeted behaviors related to the variety of both fruit and vegetables consumed daily. For the remaining 11 targeted behaviors, there were slight improvements but no significant changes. 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 those participating in the classes. See results tables at end of report.

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.

None

c. Did you use the Food Behavior Checklist?	Yes

Food Behavior Checklist:

Townsend MS, Kaiser LL, Allen LH, Joy AB, Murphy SP. Selecting items for a food behavior checklist for a limited resource audience. Journal for Nutrition Education and Behavior. 2003;35:69-82.

Murphy S, Kaiser LL, Townsend MS, Allen L. Evaluation of Validity of Items in a Food Behavior Checklist. J Am Diet Assoc.

2001;101:751-756, 761. Banna JC, Becerra LE, Kaiser LL, Townsend MS. Using Qualitative Methods to Improve Questionnaires for Spanish Speakers: Assessing Face Validity of a Food Behavior Checklist. J AM Diet Assoc. 2010;110:80-90.	
Did you use the Fruit and Vegetable Checklist	No
Did you use the Fruit and Vegetable Inventory?	No

Results - Intervention Group Matched Pre/Post-Surveys

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.56	2.79	0.22	0.005
Q2. Drink sports drinks or punch (1-4)	2.09	1.95	-0.14	0.066
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.79	0.85	0.06	**0.181**
Q4. Drink regular soda (1-4)	2.05	1.91	-0.13	0.043
Q5. Consumed milk in past week (0=N; 1=Y)	0.86	0.86	0.00	1.000
Q6. Fruit eaten per day (0-3)	1.22	1.45	0.23	0.001
Q7. Vegetables eaten per day (0-3)	1.18	1.30	0.12	0.032
Q8. Different kinds of fruit daily (1-4)	2.36	2.52	0.17	0.034
Q9. Different kinds of vegetable daily (1-4)	2.35	2.49	0.14	0.158
Q10. Drink milk (1-4)	2.76	2.74	-0.02	0.774
Q11. Take skin off chicken (1-4)	2.82	3.00	0.18	0.031
Q12. Consumed fish in past week (0=N; 1=Y)	0.58	0.56	-0.02	0.697
Q13. 2 or more vegetables at main meal (1-4)	2.29	2.53	0.24	0.003
Q14. Read nutrition facts when shopping (1-4)	2.26	2.38	0.12	0.122
Q15. Run out of food before month end (1-4)	1.95	1.99	0.04	0.640
Q16. Self-rating of eating habits (1-10)	5.34	5.69	0.35	0.016

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.64	1.83	0.18	0.005
Veggies (Q 7, 9,13) (Range 0-3)	1.29	1.46	0.16	0.007
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.45	3.89	0.44	0.000

Results - Intervention Group Matched Pre-Survey vs/ 1-Month Follow-up

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.62	2.73	0.11	0.408
Q2. Drink sports drinks or punch (1-4)	2.07	1.93	-0.14	0.159
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.78	0.85	0.07	**0.199**
Q4. Drink regular soda (1-4)	2.04	1.84	-0.21	0.079
Q5. Consumed milk in past week (0=N; 1=Y)	0.90	0.89	-0.01	0.658
Q6. Fruit eaten per day (0-3)	1.26	1.57	0.31	0.000
Q7. Vegetables eaten per day (0-3)	1.23	1.50	0.27	0.004
Q8. Different kinds of fruit daily (1-4)	2.45	2.62	0.17	0.083
Q9. Different kinds of vegetable daily (1-4)	2.43	2.58	0.14	0.221
Q10. Drink milk (1-4)	2.70	2.73	0.03	0.780
Q11. Take skin off chicken (1-4)	2.92	2.97	0.06	0.636
Q12. Consumed fish in past week (0=N; 1=Y)	0.68	0.59	-0.08	0.109
Q13. 2 or more vegetables at main meal (1-4)	2.35	2.68	0.32	0.004
Q14. Read nutrition facts when shopping (1-4)	2.16	2.73	0.57	0.000
Q15. Run out of food before month end (1-4)	1.80	1.76	-0.04	0.738
Q16. Self-rating of eating habits (1-10)	5.50	6.16	0.66	0.004

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.68	1.89	0.22	0.012
Veggies (Q 7, 9,13) (Range 0-3)	1.36	1.59	0.23	0.015
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.56	4.03	0.48	0.007

Results Intervention Group Matched Post-Survey vs. 1-Month Follow-up

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.65	2.71	0.05	0.615
Q2. Drink sports drinks or punch (1-4)	1.97	1.93	-0.04	0.683
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.78	0.82	0.04	**0.471**
Q4. Drink regular soda (1-4)	1.92	1.92	0.00	1.000
Q5. Consumed milk in past week (0=N; 1=Y)	0.84	0.88	0.04	0.260
Q6. Fruit eaten per day (0-3)	1.39	1.56	0.17	0.053
Q7. Vegetables eaten per day (0-3)	1.29	1.43	0.14	0.442
Q8. Different kinds of fruit daily (1-4)	2.45	2.51	0.07	0.470
Q9. Different kinds of vegetable daily (1-4)	2.51	2.51	0.00	1.000
Q10. Drink milk (1-4)	2.82	2.76	-0.07	0.439
Q11. Take skin off chicken (1-4)	2.92	2.89	-0.03	0.807
Q12. Consumed fish in past week (0=N; 1=Y)	0.59	0.64	0.04	0.495
Q13. 2 or more vegetables at main meal (1-4)	2.52	2.60	0.08	0.400
Q14. Read nutrition facts when shopping (1-4)	2.35	2.69	0.34	0.001
Q15. Run out of food before month end (1-4)	1.97	1.83	-0.15	0.252
Q16. Self-rating of eating habits (1-10)	5.55	6.00	0.45	0.020

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.75	1.84	0.09	0.262
Veggies (Q 7, 9,13) (Range 0-3)	1.43	1.51	0.08	0.314
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.72	3.90	0.18	0.231

Results - Comparison Group Matched

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.47	2.73	0.27	0.050
Q2. Drink sports drinks or punch (1-4)	2.36	2.24	-0.11	0.229
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.69	0.76	0.07	**0.323**
Q4. Drink regular soda (1-4)	2.14	2.00	-0.14	0.204
Q5. Consumed milk in past week (0=N; 1=Y)	0.89	0.91	0.02	0.323
Q6. Fruit eaten per day (0-3)	1.26	1.38	0.11	**0.286**
Q7. Vegetables eaten per day (0-3)	1.19	1.31	0.11	**0.250**
Q8. Different kinds of fruit daily (1-4)	2.52	2.39	-0.14	0.294
Q9. Different kinds of vegetable daily (1-4)	2.51	2.47	-0.04	0.719
Q10. Drink milk (1-4)	2.82	2.89	0.07	0.473
Q11. Take skin off chicken (1-4)	2.51	2.40	-0.11	0.404
Q12. Consumed fish in past week (0=N; 1=Y)	0.53	0.58	0.04	0.486
Q13. 2 or more vegetables at main meal (1-4)	2.29	2.53	0.24	0.026
Q14. Read nutrition facts when shopping (1-4)	1.84	2.07	0.22	0.105
Q15. Run out of food before month end (1-4)	1.91	1.93	0.02	0.893
Q16. Self-rating of eating habits (1-10)	5.84	6.34	0.50	0.051

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.63	1.67	0.04	0.644
Veggies (Q 7, 9,13) (Range 0-3)	1.34	1.44	0.10	0.220
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	3.47	3.70	0.23	0.159

Network-funded contractor:	Pasadena USD - 08-85146
Contract number:	08-85146
Information provided by :	Katia Ahmed
Telephone:	626-798-2458
Date:	6/16/2011
Email:	kahmed@pusd.us

Section 1

1. Project Description and Goals

Project Name:	Skilled Based Nutrition Education Workshops
Target Population:	18-59
Intervention Target	Parents

Primary Curriculum Used:
Network Approved

Description of Nutrition Education Intervention:

Parents received a series of 5 nutrition workshops lasting 90 minutes per session. Workshops provided parents with information on My Pyramid, Reading Food Labels, Increasing Fruits and Vegetables consumption, Calcium and Breakfast, and Fats and Protein. In addition to a nutrition lesson, parents participated in a cooking hands-on activity related to the nutrition topics previously discussed.

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 100 Parents who participated in Skilled Based Nutrition Education Workshops 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?

Other (Specify in next field)	Specify Other: Pre-test comparison of FBC and Post-test/5 to eight week follow-up Self Efficacy Survey

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	

# of intervention matched pre/post measures collected	160
# 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	Food Behavior Checklist (Cups)	
Goal 2/Objective 2	Other-Specify	Specify Other: Self Efficacy

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	11/1/2010	4/4/2011
Post-test:	11/5/2010	4/8/2011
Follow-up:	12/6/2010	5/16/2011

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

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.

The workshops were delivered in 90 minutes time slots during 5 consecutive days. Since many participants had been involved in the activity of the Network for the past three years, the interventions were mainly focused on hands on, skilled based cooking activities and less on conducting an in depth nutrition lesson at each workshop. Most of the participants were mothers of children within our school district, but the males attended the lessons seem to have an integral part in planning and making meals in the household. The results as discussed above demonstrated statistical significance in overall consumption of fruit and veggies consumption; therefore,

concluding that the Network activities also improve eating habits among eligible SNAP-Ed participants.

Discussion of Results for Food Behavioral Checklist for pre/post comparison:
The surveys were administered as pre-test prior to the first intervention and the post test was administered after the completion of the fifth intervention. The combined intervention data demonstrates that the nutrition education series was significant in increasing the consumption of fruits and vegetables decreasing sugar sweetened beverages such as sport drinks or punch and sodas, the consumption of juice and milk though decrease did not show significance), statistical significances were demonstrated in daily consumption of fruits, vegetables and in the variety of the produces, significantly increasing the participants' frequency of reading food fact labels, significantly increasing the participants' frequency of food insecurity. In addition, participants demonstrated statistical significance in drinking milk, removing skin off the chicken, consuming fish and adding 2 or more serving of vegetables at main meal. Participants demonstrated statistical significant in self-rating of eating habits. Overall the results demonstrated statistical significance in consumption of fruit, veggies and both fruit and veggies.

Discussion of Results for Adult Self-Efficacy Survey:
The surveys were administered at posttest and again five to eight weeks after the completion of the fifth intervention. Participants demonstrated statistical significance in choosing fruit and veggies when in a hurry, as part of their lunch most day, when tired, eating away from home, at dinner most days, eating extra serving of veggies at dinner and consume at least four cups of fruit and veggies most days. Participants did not demonstrate statistical significance even though decrease in ordering at least one vegetable dish at restaurant or make a choice of other available fruit or veggies if their favorite fruit and veggies were not available and ability in purchasing fruit and veggies when out of money.

Our fruit and vegetable lesson helped our parents understand the importance of incorporating more fruit and vegetable to their diets, and at the same time it gave them the opportunity to learn how to measure how much fruits and vegetables they eat; Therefore, our impact evaluation reflected how much parents understood our lessons. For example, I noticed our impact showed truthful results because parents were eager to share how much they have increased fruit and vegetable consumption while they answered questions related to this topic. In addition, the fruit and vegetable lesson helped parents understand how much a cup is; Therefore, they felt comfortable identifying the right number of cups. I definitely believe, having lessons targeting survey questions in a more specific way works better while answering the impact evaluation survey. It was wonderful to hear from a male parent about how much he appreciated coming to our nutrition Workshop after his wife kept asking him to join her. He shared how much he learned during the 5 lessons, and now how all the changes his wife was trying to make at home make more sense to him. Overall, parents acknowledged the importance of making better food choices to achieve a healthier lifestyle.

b. Description of how evaluation results will be used:

Based on the positive results working with our parents for the past three years and data demonstrating statistical significance in overall fruit and veggies consumption, we are planning to change our IOE venue to reach out to our youth. We propose to work with our middle school students (6th-8th grade) next year to increase the rigor of the evaluation. We propose to use a pre-test and post-test measuring the specific 5-series nutrition education lessons.

7. Point of Contact

Name:	Katia Ahmed
Phone Number:	626-798-2458
Email Address:	kahmed@pusd.us

8. Relevant Journal References

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

None

c. Did you use the Food Behavior Checklist?	Yes
Did you use the Fruit and Vegetable Checklist	No
Did you use the Fruit and Vegetable Inventory?	No

Townsend MS, Kaiser LL, Allen LH, Joy AB, Murphy SP. Selecting items for a food behavior checklist for a limited resource audience. Journal for Nutrition Education and Behavior. 2003;35:69-82.

Murphy S, Kaiser LL, Townsend MS, Allen L. Evaluation of Validity of Items in a Food Behavior Checklist. J Am Diet Assoc. 2001;101:751-756, 761.

Banna JC, Becerra LE, Kaiser LL, Townsend MS. Using Qualitative Methods to Improve Questionnaires for Spanish Speakers: Assessing Face Validity of a Food Behavior Checklist. J AM Diet Assoc. 2010;110:80-90.

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

Henry, H, Reimer, K, Smith, C, 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. J Am Diet Assoc. 2006;106:841-849.

Food Behavior Checklist Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	2.84	3.18	0.34	0.000
Q2. Drink sports drinks or punch (1-4)	1.85	1.68	-0.17	0.032
Q3. Citrus fruit or juice past week (0=N; 1=Y)	0.86	0.90	0.04	0.145
Q4. Drink regular soda (1-4)	1.88	1.44	-0.43	0.000
Q5. Consumed milk in past week (0=N; 1=Y)	0.89	0.91	0.01	0.619
Q6. Fruit eaten per day (0-3)	1.32	1.60	0.28	0.000
Q7. Vegetables eaten per day (0-3)	1.41	1.68	0.27	0.000
Q8. Different kinds of fruit daily (1-4)	2.77	2.98	0.21	0.011
Q9. Different kinds of vegetable daily (1-4)	2.89	3.08	0.19	0.009
Q10. Drink milk (1-4)	2.94	3.11	0.17	0.039
Q11. Take skin off chicken (1-4)	3.31	3.59	0.28	0.000
Q12. Consumed fish in past week (0=N; 1=Y)	0.66	0.75	0.09	0.034
Q13. 2 or more vegetables at main meal (1-4)	2.75	3.07	0.32	0.000
Q14. Read nutrition facts when shopping (1-4)	2.51	2.96	0.44	0.000
Q15. Run out of food before month end (1-4)	2.40	2.66	0.26	0.001
Q16. Self-rating of eating habits (1-10)	5.59	6.88	1.29	0.000

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruit (Q 3, 6, 8) (Range 0-3)	1.89	2.09	0.21	0.000
Veggies (Q 7, 9,13) (Range 0-3)	1.68	1.94	0.26	0.000
Fruit & Veggies (Q1, 3, 6-9,13) (Range 0-7)	4.18	4.76	0.58	0.000

Demographics			
Hispanic			
yes	152	**Average Age**	39.9
no	8	**Gender**	
Race		Males	8
American Indian or Alaskan Native	0	Females	152
Asian	1		
Black or African American	3		
Native Hawaiian or Other Pacific Islander	0		
White	3		

Adult Self-Efficacy Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Total Self-Efficacy (10-50)	37.20	42.13	4.93	0.000
a ...could eat FV when in a hurry (1-5)	3.68	4.31	0.62	0.000
b ...could eat FV as part of lunch most days (1-5)	3.84	4.22	0.38	0.001
c ...could eat FV when feeling tired (1-5)	3.69	4.17	0.48	0.000
d ...could eat FV when eating away from home (1-5)	3.55	3.95	0.39	0.007
e ...could eat FV for dinner most days (1-5)	3.94	4.32	0.38	0.011
f ...could have extra serving of vegetables at dinner (1-5)	3.75	4.09	0.35	0.020
g ...could eat at least 4 cups FV most days (1-5)	3.60	4.13	0.54	0.003
h ...could order at least one vegetable dish at restaurant (1-5)	3.61	4.16	0.55	0.109
i ...could order other FV when favorites not available (1-5)	3.79	4.18	0.39	0.109
j ...could buy more FV even when you don't have much money (1-5)	3.87	4.10	0.23	0.109

Network-funded contractor:	Riverside, County of, Community Health Agency - 10-10107
Contract number:	10-10107
Information provided by :	Veronica Huff, Diane Wayne and Nancy Allende
Telephone:	(951) 358-5889
Date:	10/27/11
Email:	Dwayne@rivcocha.org and nallende@rivcocha.org

Section 1

1. Project Description and Goals

Project Name:	Sunny Sands Elementary School
Target Population:	4th & 5th graders

Primary Curriculum Used:	
PowerPlay!	
Secondary Curriculum Used:	
Harvest of the Month Educator Newsletter	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

The students were taught lessons from the "Are you Ready to Get the Power? Power Play workbooks. Students were able to define and name different types of fruits and vegetables and how many cups are recommended daily. They learned about key characteristics and health benefits (the "pros") of fruits and vegetables. Students did activities which enabled them to identify their current fruit and vegetable intake and then set their own personal goals for improvement. They learned about reading the Nutrition Facts on labels and compared them with other foods to identify the healthiest food choice.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Students learned about the benefits of physical activity and how many minutes are recommended daily. They identified their current level of physical activity and then set personal goals for improvement. Students learned to identify their barriers in getting enough physical activity.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Standardized Training provided to the Lead Teacher and principal of Sunny Sands Elementary School. Information on conducting the Power Play lessons was given and how to conduct the taste test trios. The lead teacher then provided training to all teachers conducting the impact evaluation.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

The Network Youth survey, (paper and pencil pre and post-test surveys) were copied and delivered to Sunny Sands Elementary School by the Network staff. Once pre and post-test were completed Network staff collected them from the Lead Teacher at Sunny Sands Elementary School.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

Each student's identification number was labeled on a barcode sticker and placed on the pre- and post tests. Each teacher administered the test in their classrooms. The surveys were self-administered with classroom level guidance.

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 339 4th and 5th grade students who participated in Power Play! and Harvest of the Month Taste Tests Trios 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?

Classrooms

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

a. Intervention:	Convenience Sample
b. Control:	

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

Where any other surveys used?	No

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/26/2010	10/26/2010
Post-test:	5/20/2011	5/20/2011
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?	8

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.

The findings were statistically significant in the following areas; decreased juice consumption, decreased water consumption, an overall decrease in consumption of unhealthy foods, decreased consumption of cookies, cakes other sweets, and an increase in overall physical activity (both in days of 60 minutes moderate/vigorous and days of 30 minutes of outdoor play). A p-value less than <0.05 is statistically significant.

b. Description of how evaluation results will be used:

The results will be shared with school district staff to encourage continued support of activities and programs which promote healthy eating practices and physical activity such as increasing fruit and vegetable consumption, daily physical activity for students, and decreasing consumption of sugar sweetened beverages.

In addition, we will review the results to improve our impact intervention for the following year.

7. Point of Contact

Name:	Veronica Huff, Diane Wayne and Nancy Allende
Phone Number:	(951) 358-5889
Email Address:	nallende@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!*

Power Play was used

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

Yes, Network Youth Survey used

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

0

Qualitative Evaluation Results

This is your opportunity to share with us anything that may not have been reflected in your data or elsewhere in this report. Consider the questions below, or offer us other qualitative reports of your successes and challenges over the last year.

What have been the biggest challenges and barriers you have faced while implementing your intervention or evaluation? What have you learned from them?

The biggest challenge was influencing teachers to provide health and nutrition information to their students due to their focus on student testing and other educational requirements. Our Lead Teacher was extremely motivated and was able to encourage teachers to do nutrition and physical activity promotion for their classes, but we were not convinced all of the other teachers were so motivated. Participating teachers expressed how they enjoyed the lessons and made time for all of the activities and they really connected with the students.

Students also participated in two SPARK classes which focused on nutrition and physical activity.

Educating and exciting parents with similar nutrition information will be a stronger focus of the next year's intervention so that they might purchase more of the fruits and vegetables to serve at home for the children. In addition, we will add surveys that measure change in student preference for fruits and vegetables to measure more results of Harvest of the Month.

We will also work closer with our Power Play Coordinator to promote the changes we all want to see. This should also help increase the school district's participation rate for Power Play.

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?

One outstanding moment that day was when the students thanked their teacher for all the activities and were excited to share them with their families. "When kids take home what they learned in school and share it with family...that's outstanding." Sunny Sands Lead Teacher The teacher spent her own money to feed 30 children that day for the second time in the year!

We are hoping that the community will sponsor a farmers' market that accepts EBT for parents at one of our schools in Palm Springs this year. They tried it last year and were very pleased with the idea of establishing a farmers' market.

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.41	10.95	-0.46	0.121
3. Milk	1.43	1.38	-0.05	0.448
4. Yogurt or cheese	0.53	0.61	0.07	0.176
5. Cereal	0.70	0.66	-0.04	0.470
7. Vegetables	1.89	1.82	-0.07	0.470
8. Fruit	1.75	1.80	0.05	0.580
10. Juice	1.27	1.10	-0.17	0.032
11. Water	3.83	3.57	-0.26	0.007
Total: fruit & vegetable (no juice)	3.64	3.63	-0.02	0.922
Total: fruit, vegetable, juice	4.92	4.73	-0.18	0.370
Unhealthy Foods	3.17	2.79	-0.39	0.010
6. French fries or chips	0.69	0.66	-0.03	0.636
9. Punch, sports drinks, fruit-flavored drinks	0.96	0.89	-0.07	0.268
12. Soda or soft drinks	0.70	0.63	-0.07	0.252
13. Cookies, cakes, other sweets	0.82	0.60	-0.22	0.001
Physical Activity	5.98	7.21	1.23	0.000
14. Days of 60 minutes moderate/vigorous	2.96	3.77	0.81	0.000
15. Days of 30 minutes outdoor play	3.03	3.44	0.42	0.007
Other				
16. Breakfast	0.87	0.91	0.05	0.066
17. Trying New Foods	1.18	1.26	0.07	0.091
Perceived Parental Consumption	4.55	4.60	0.05	0.619
18. How often parents eat fruit	2.20	2.24	0.03	0.636
19. How often parents eat vegetables	2.28	2.31	0.04	0.541
Access	3.36	3.41	0.06	0.307
20. Fruits to eat at home	1.70	1.76	0.06	0.059
21. Vegetables to eat at home	1.64	1.63	-0.01	0.768

Demographics

Average Age	9.5
Gender	
Males	153
Females	158

FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	San Bernardino Superintendent of Schools - 10-10065
Contract number:	10-10065
Information provided by :	Melodee R. Lopez
Telephone:	909-386-2435
Date:	7/18/2011
Email:	Melodee_Lopez@sbcss.k12.ca.us

Section 1

1. Project Description and Goals

Project Name:	Power Play!
Target Population:	ages 9-12

Primary Curriculum Used:	
PowerPlay!	
Secondary Curriculum Used:	
	0

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

By July 31st of each year 2011-2013, carry out and report on an Impact/Outcome Evaluation (IOE) to assess change in fruit and vegetable consumption and related factors such as access to fruit and vegetables at home and perceived parental consumption among a group of at least 150 4th and 5th grade students participating in Power Play! fruit and vegetable classes.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

0

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Trained by regional Powerplay Coordinator.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

0

In 1-2 paragraphs, please provide a Description of the 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.

Impact/Outcome Objective 1:

By Sept 30, 2011, a sample of 150 4th and 5th grade students who participated in PowerPlay! will report an increase in fruit and vegetable consumption and an increase in one or more factors related to fruit and vegetable consumption.

Impact/Outcome Physical Activity Objective:

Impact/Outcome Sugar Sweetened Beverage Objective:

2. Evaluation Design

a. 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
b. Control:	Random Sample

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 surveys used?	Efficacy FV Preparation Baranowski et al. 2000), Self-Efficacy FV Eating Behaviors (Baranowski et al. 2000)

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	4/19/2011	4/20/2011
Post-test:	5/23/2011	5/24/2011
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

c. Describe how the data were collected.

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

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 for fruits and vegetables, knowledge of healthy foods, nutrition behaviors, 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. For the numerous nutritional behaviors, an alpha level of .01 was used to reduce the likelihood of a type 2 error.

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 aerobic exercise. The main effect of time, $F(1, 242) = 2.21$, $p = .13$ was not significant and the time by group interaction, $F(1, 242) = .642$, $p = .42$ was not significant. The current data indicate that the program did not change the number of days exercised 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 number of days played outside in the past 7 days. The main effect of time, $F(1, 232) = 2.03$, $p = .15$ was not significant and the time by group interaction, $F(1, 232) = 1.10$, $p = .29$ was not significant. The current data indicate that the program did not change the number of days played outside 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 self-efficacy to ask parents for fruits and vegetables. The main effect of time, $F(1, 191) = .397$, $p = .53$ was not significant and the time by group interaction, $F(1, 191) = 1.83$, $p = .18$ was not significant. The current data indicate that the program did not change the self-efficacy 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 self-efficacy to eat fruits and vegetables. The main effect of time, $F(1, 191) = .01$, $p = .98$ was not significant and the time by group interaction, $F(1, 191) = .21$, $p = .65$ was not significant. The current data indicate that the program did not change the self-efficacy 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 self-efficacy to prepare fruits and vegetables. The main effect of time, $F(1, 197) = 2.73$, $p = .10$ was not significant and the time by group interaction, $F(1, 197) = .87$, $p = .35$ was not significant. The current data indicate that the program did not change the self-efficacy 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 asking for fruits and vegetables at home. The main effect of time, $F(1, 213) = .80$, $p = .37$ was not significant and the time by group interaction, $F(1, 213) = .93$, $p = .33$ was not significant. The current data indicate that the program did not change the frequency of asking behaviors 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 milk consumption on the previous day. The main effect of time, $F(1, 226) = 2.67$, $p = .10$ was not significant and the time by group interaction, $F(1, 226) = .61$, $p = .43$ 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, $F(1, 227) = 2.46$, $p = .11$ was not significant and the time by group interaction, $F(1, 227) = .62$, $p = .43$ was not significant. The current data indicate that the program did not change the frequency of soda 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 fruit juice consumption on the previous day. The main effect of time, $F(1, 227) = .02$, $p = .88$ was not significant and the time by group interaction, $F(1, 227) = .53$, $p = .46$ was not significant. The current data indicate that the program did not change the frequency of fruit juice 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 water consumption on the previous day. The main effect of time, $F(1, 224) = .97$, $p = .32$ was not significant and the time by group interaction, $F(1, 224) = .41$, $p = .52$ was not significant. The current data indicate that the program did not change the frequency of water 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 consuming sweets including sweet rolls, doughnuts, cookies, brownies, pie, or cake. The main effect of time, $F(1, 225) = 4.02$, $p = .04$ was statistically significant and the time by group interaction, $F(1, 225) = .03$, $p = .85$ was not significant. The current data indicate that the program did not change the frequency of eating sweets among those students participating in intervention. Interestingly, sweet consumption for the intervention group increased from pretest to posttest ($m=.54$ to $m=.67$) and increased for the control group ($m=.64$ to $m=.79$) indicating an increase in sweets consumption for both 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 consuming French fries or chips on the previous day. The main effect of time, $F(1, 225) = 2.99$, $p = .09$ was not significant and the time by group interaction, $F(1, 225) = 1.41$, $p = .24$ was not significant. The current data indicate that the program did not change the frequency of consuming French fries or chips 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 consuming vegetables the previous day. The main effect of time, $F(1, 224) =$

2.63, p = .10 was not significant and the time by group interaction, F(1, 224) = .05, p = .81 was not significant. The current data indicate that the program did not change the frequency of consuming vegetables 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 consuming fruits the previous day. The main effect of time, F(1, 222) = .21, p = .64 was not significant and the time by group interaction, F(1, 222) = .01, p = .98 was not significant. The current data indicate that the program did not change the frequency of consuming fruits 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 consuming fruits the previous day. The main effect of time, F(1, 222) = .21, p = .64 was not significant and the time by group interaction, F(1, 222) = .01, p = .98 was not significant. The current data indicate that the program did not change the frequency of consuming fruits 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 consuming hot or cold cereal on the previous day. The main effect of time, F(1, 225) = 10.20, p = .01 was statistically significant but the time by group interaction, F(1, 225) = .29, p = .58 was not significant. The current data indicate that the program did not change the frequency of consuming fruits among those students participating in intervention. Interestingly, cereal consumption for the intervention group increased from pretest to posttest (m=.61 to m=.74) and increased for the control group (m=.75 to m=.94) indicating an increase in cereal consumption for both groups.

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 eating. The main effect of time, F(1, 209) = .13, p = .72 was not significant and the time by group interaction, F(1, 209) = .92, p = .34 was not significant. The current data indicate that the program did not change the nutritional knowledge of 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 perception of the frequency parental fruit consumption. The main effect of time, F(1, 151) = .84, p = .36 was not significant and the time by group interaction, F(1, 151) = .83, p = .36 was not significant. The current data indicate that the program did not change the perception of parental fruit consumption of 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 perception of the frequency parental vegetable consumption. The main effect of time, F(1, 145) = .38, p = .53 was not significant and the time by group interaction, F(1, 145) = .39, p = .53 was not significant. The current data indicate that the program did not change the perception of parental vegetable consumption of 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 perception of fruit availability in the home The main effect of time, $F(1, 209) = 2.85$, $p = .09$ was not significant and the time by group interaction, $F(1, 209) = 2.84$, $p = .09$ was not significant. The current data indicate that the program did not change the perception of fruit availability of 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 perception of vegetable availability in the home The main effect of time, $F(1, 198) = 1.54$, $p = .21$ was not significant and the time by group interaction, $F(1, 198) = 1.54$, $p = .21$ was not significant. The current data indicate that the program did not change the perception of vegetable availability of students participating in intervention.

b. Description of how evaluation results will be used:

Results will be used to inform and guide the intervention in the upcoming grant year, especially targeting specific lessons in Power Play that are less didactic. The intervention this year took place in a compressed timeframe, in the future this will not be an issue.

7. Point of Contact

Name:	Dr. Robert G. 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.

NA

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 and Network High School Survey

Yes

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

Nutrition knowledge (Kelder et al. 2005), Self-Efficacy FV Asking Behaviors (Baranowski et al. 2000), Self-Efficacy FV Preparation (Baranowski et al. 2000), Self-Efficacy FV Eating Behaviors (Baranowski et al. 2000)

Demographics				
	Intervention Group (n=141)		Control Group (n= 140)	
	n	%	n	%
School Site				
Palm	40	28.40	44	31.40
Cypress	38	27.00	40	28.60
Lytle Creek	63	44.60	56	40.00
Gender				
Female	73	49.70	90	61.20
Male	74	50.30	57	38.80
Grade Level				
4th	59	41.80	55	39.30
5th	82	58.20	85	60.70
Living Status				
Mother and father	92	69.20	91	67.40
Mother and Step-father	3	2.30	9	6.70
Father and Step-mother	1	0.80	2	1.50
Mother only	17	12.80	22	16.30
Father only	4	3.00	2	1.50
Grandparent(s)	9	6.80	3	2.20
Other	7	5.10	6	4.40

Means and Standard Deviations by Group and Time

	Intervention Group (n=140)		Comparison Group (n= 141)	
	M	SD	M	SD
FV Asking Self-Efficacy (1-9)				
Pretest	6.55	1.64	6.60	1.65
Posttest	6.79	1.58	6.51	1.58
FV Preparing Self-Efficacy (1-12)				
Pretest	7.38	1.47	7.36	1.50
Posttest	7.10	1.47	7.28	1.73
FV Eating Behaviors Self-Efficacy (3-30)				
Pretest	24.11	4.32	24.23	4.00
Posttest	24.23	4.08	24.09	4.90
Days Exercised (0-7)				
Pretest	2.38	2.09	2.34	1.94
Posttest	2.47	2.17	2.62	2.17
Days Played Outside (0-7)				
Pretest	2.21	2.15	2.21	2.05
Posttest	1.87	1.52	2.16	1.69
Fruit Consumption				
Pretest	1.75	1.39	1.89	1.49
Posttest	1.80	1.50	1.94	1.50
Vegetable Consumption				
Pretest	1.57	1.51	1.63	1.50
Posttest	1.76	1.52	1.77	1.51
Milk Consumption				
Pretest	1.44	0.90	1.31	0.90
Posttest	1.49	0.89	1.46	0.91
Soda Consumption				
Pretest	0.52	0.65	0.61	0.88
Posttest	0.57	0.69	0.74	0.81
Fruit Juice Consumption				
Pretest	1.07	1.15	1.21	1.22
Posttest	1.02	1.13	1.29	1.12
Water Consumption				
Pretest	3.18	1.56	3.25	1.58
Posttest	3.14	1.62	3.08	1.56
Cereal Consumption				
Pretest	0.61	0.65	0.75	0.63
Posttest	0.74	0.72	0.94	0.64
Sweets Consumption				
Pretest	0.55	0.77	0.64	0.88
Posttest	0.67	0.84	0.79	0.80
French Fries or chips Consumption				
Pretest	0.58	0.68	0.70	0.78
Posttest	0.77	0.83	0.73	0.79

Nutrition Knowledge (1-10)				
Pretest	8.73	0.93	8.60	1.02
Posttest	8.65	0.70	8.64	1.04
Frequency of FV Asking Behaviors (1-9)				
Pretest	5.45	1.99	5.66	1.86
Posttest	5.71	2.28	5.65	2.03
Fruit Availability				
Pretest	2.79	0.43	2.77	0.47
Posttest	2.79	0.41	2.65	0.49
Vegetable Availability				
Pretest	2.64	0.48	2.68	0.49
Posttest	2.54	0.54	2.68	0.49
Try new Foods (0-3)				
Pretest	2.16	0.46	2.13	0.41
Posttest	2.22	0.48	2.20	0.47

Santa Ana USD FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	Santa Ana USD - 08-85156
Contract number:	08-85156
Information provided by :	Jennifer Chavez
Telephone:	714-558-5688
Date:	6/15/2011
Email:	jennifer.chavez@sausd.us

Section 1

1. Project Description and Goals

Project Name:	Santa Ana Unified Impact Evaluation
Target Population:	3rd grade

Primary Curriculum Used:	
Dairy Council	
Secondary Curriculum Used:	
	0

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

3rd grade Dairy Council material "Shaping Up My Choices" for our impact evaluation lessons. We completed 3 nutrition education interventions, 1-cooking demo lessons and 1-physical activity lesson. We had 2 interventions schools and 1 control school.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

One of the nutrition education lessons that was conducted from the Shaping Up my Choices 3rd grade edition book was lesson #7 "Get Ready, Get Set, Get Moving." After this lesson we then went back later and provided the physical activity demonstration using the "Shake it up! with fruits and veggies" handout. This handout contains ideas for integrating physical activity with nutrition education. This is also paired up the Shake It Up CD. Each Shake It Up song has a corresponding physical activity movement(s).

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Network Curriculum Specialists collaborated with each other to choose which lessons from Shaping Up My Choices they felt would best fit the needs of our student population. All intervention schools received the same lessons and teaching aids (handouts, charts, graphs, taste tests etc...). Each class received 45 minutes of instruction at both intervention schools.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

Scantrons were developed by Santa Ana Unified School District Research and Evaluation (SAUSD R&E) department. All scantrons were coded, dated and scanned within SAUSD R&E for data analysis.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

All intervention schools received the same lessons and teaching aids (handouts, charts, graphs, taste tests etc...). Each class received 45 minutes of instruction at both intervention schools.

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 293 grade students who participated in Santa Ana Unified 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.

Impact/Outcome Physical Activity Objective:

Impact/Outcome Sugar Sweetened Beverage Objective:

2. Evaluation Design

a. 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
b. Control:	Convenience Sample
# of intervention matched pre/post measures collected	293
# of control matched pre/post measures collected	111

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

Where any other surveys used?	0

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	Nov. 2010	1/0/1900
Post-test:	Apr. 2011	1/0/1900
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?	0

c. Describe how the data were collected.

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

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 average age of students for both the Intervention group and the Control group is 8.4 years. The Intervention group had a higher number of males than females, 153 compared to 141. This is different in the Control group which had a higher number of females than males, 60 compared to 51.

In the Intervention group (Madison and Carver Elementary), the only category that showed statistical significance between pre-test and post-test is Physical Activity with a difference of +1.07 ($p < .01$). For the category itself and for its individual questions, there is a positive gain in days of 60 minutes (+.37) or 30 minutes (+.65) of physical activity. Although the difference for the other categories were not statistically significant, individual questions within some of these categories were statistically significant at the $p < .05$ level or better. The consumption of milk and yogurt or cheese increased, .08 for milk and .22 for yogurt and cheese. Access to fruits to eat at home also increased by .08, we believe this to have increased since Carver Elementary participates in our Harvest of the Month Parent Cooking Classes. Madison Elementary is part of the Healthy Eating Active Community grant and both schools are part of the Fresh Fruit and Vegetable grant. We are unclear as to why we see a negative gain (+.14) in consumption of cookies, cakes, other sweets especially since our District Wellness Policy limits classroom parties to four times per year. This is considered a negative gain because the hope was that consumption of such unhealthy foods would go down.

Similar to the Intervention group, the Physical Activity category showed a statistically significant difference between pre-test and post-test in the Control group (Diamond Elementary) ($p < .01$). The category has a positive difference of 2.8, with the individual questions of days of 60 minutes showing a positive gain of 1.14 and days of 30 minutes with a gain of 2.14. Teachers at this school have been trained using the CATCH PE program and is implemented five days a week. In addition, the Healthy Foods & Beverages category also showed a statistically significant ($p < .01$) positive gain of 2.11. The pre-test post-test difference in consumption of milk, fruit, and water were all positive and statistically significant at the $p < .01$ level or better as well. The only other statistically significant difference is the perception of how often parents eat vegetables, which was a positive increase (+.37).

In summary, the Control group had more statistically significant differences among the categories and their individual questions between pre-test and post-test then the Intervention group. The only positive gain overall in the Intervention group is in the category of Physical Activity, whereas the Control group has positive gains in Physical Activity and Healthy Foods & Beverages. In addition, we find there is a negative gain in the consumption of cookies, cakes, other sweets in the Intervention group, but none in the Control group.

b. Description of how evaluation results will be used:

Results will be used to focus on areas of concern, specifically results which had a negative difference. For example, we see a negative gain (+.14) in the consumption of cookies, cakes and other sweets. We are interpreting these results in such a way that additional nutrition education, needs to occur at the school site, specifically in regards to parents and staff. We do not believe students are receiving these items during the school day as our District Wellness policy prohibits these items. Principals and Network's Site Nutrition Education Liaisons will be able to take the lead on this. Even though we have a District Wellness policy in place, it's obvious that additional follow up is needed. Parent and staff education will need to be made in terms of healthy and unhealthy food choices, as well as focusing on our districts District Wellness Policy and particularly classroom parties so that all aspects are covered.

We are pleased to see a statistical significance between the pre and the post in relation to physical activity. We are also extremely pleased to see a statistical significance of physical activity within the control school.

Healthy Food and Beverages category also showed a statistically significant ($p<.01$) positive gain of 2.11. We can attribute this to the Harvest of the Month program as well as our collaboration with the Fresh Fruit and Vegetable Grant, which provides full servings fruits or vegetables 4 days a week and Network staff providing and supporting the Rethink Your Drink campaign.

Overall, we see positive gain in both the control and the intervention schools with physical activity. We attribute this to school staff which have been trained with the CATCH PE curriculum, the intervention schools have the Harvest of the Month program and all schools currently receive the Fresh Fruit and Vegetable grant.

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. Did you use the Network Youth Survey and Network High School Survey

Yes

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

0

Control Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	7.93	10.04	2.11	0.008
3. Milk	1.10	1.51	0.41	0.001
4. Yogurt or cheese	0.64	0.74	0.10	0.511
5. Cereal	0.89	0.98	0.09	0.911
7. Vegetables	1.36	1.51	0.15	0.316
8. Fruit	1.68	2.27	0.60	0.009
10. Juice	1.33	1.55	0.22	0.209
11. Water	2.53	3.51	0.97	0.000
Total: fruit & vegetable (no juice)	2.50	3.13	0.63	0.062
Total: fruit, vegetable, juice	3.61	4.41	0.80	0.074
Unhealthy Foods	3.51	2.95	-0.57	0.128
6. French fries or chips	0.99	0.96	-0.03	0.758
9. Punch, sports drinks, fruit-flavored drinks	1.19	1.15	-0.04	0.858
12. Soda or soft drinks	0.85	0.60	-0.25	0.308
13. Cookies, cakes, other sweets	1.16	0.89	-0.27	0.152
Physical Activity	4.59	7.40	2.80	0.000
14. Days of 60 minutes moderate/vigorous	2.92	4.06	1.14	0.000
15. Days of 30 minutes outdoor play	2.62	4.76	2.14	0.000
Other				
16. Breakfast	0.15	0.15	0.00	0.567
17. Trying New Foods	0.87	0.84	-0.03	0.321
Perceived Parental Consumption	3.18	3.60	0.42	0.335
18. How often parents eat fruit	2.10	2.33	0.23	0.184
19. How often parents eat vegetables	2.02	2.39	0.37	0.005
Access	2.77	2.93	0.16	0.430
20. Fruits to eat at home	1.65	1.78	0.14	0.051
21. Vegetables to eat at home	1.60	1.71	0.11	0.135

Demographics

Average Age	8.4
Gender	
Males	#VALUE!
Females	#VALUE!

Intervention Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.10	11.94	0.85	0.103
3. Milk	1.66	1.74	0.08	0.050
4. Yogurt or cheese	0.92	1.14	0.22	0.002
5. Cereal	1.14	1.14	0.00	0.727
7. Vegetables	2.05	2.07	0.02	0.483
8. Fruit	2.32	2.48	0.16	0.180
10. Juice	1.69	1.77	0.08	0.601
11. Water	3.21	3.17	-0.03	1.000
Total: fruit & vegetable (no juice)	3.69	4.01	0.32	0.141
Total: fruit, vegetable, juice	5.11	5.57	0.47	0.112
Unhealthy Foods	3.32	3.68	0.36	0.094
6. French fries or chips	0.87	0.93	0.06	0.306
9. Punch, sports drinks, fruit-flavored drinks	1.26	1.29	0.04	0.444
12. Soda or soft drinks	0.76	0.85	0.09	0.242
13. Cookies, cakes, other sweets	0.93	1.08	0.14	0.012
Physical Activity	5.67	6.74	1.07	0.004
14. Days of 60 minutes moderate/vigorous	3.31	3.67	0.37	0.016
15. Days of 30 minutes outdoor play	3.32	3.97	0.65	0.001
Other				
16. Breakfast	0.07	0.06	-0.01	0.819
17. Trying New Foods	0.85	0.91	0.06	0.180
Perceived Parental Consumption	3.77	4.02	0.25	0.238
18. How often parents eat fruit	2.32	2.30	-0.02	0.811
19. How often parents eat vegetables	2.31	2.21	-0.10	0.154
Access	2.85	3.01	0.17	0.185
20. Fruits to eat at home	1.69	1.76	0.08	0.048
21. Vegetables to eat at home	1.66	1.67	0.01	0.945

Demographics

Average Age	8.4
Gender	
Males	#VALUE!
Females	#VALUE!

San Francisco USD FFY11 Impact and Outcome Evaluation Final Report

Network-funded contractor:	San Francisco USD - 08-85154
Contract number:	08-85154
Information provided by :	Mark Elkin & John Shields
Telephone:	(415) 242-2615 & (415) 252-0402 x610
Date:	7/31/2011
Email:	elkinm@sfusd.edu & johns@etr.org

Section 1

1. Project Description and Goals

Project Name:	Student Impact Lessons
Target Population:	4th and 5th grades

Primary Curriculum Used:	
SFUSD Developed Curriculum	
Secondary Curriculum Used:	
Other	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

The six scripted lessons which comprise the curriculum for the Student Impact include, 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.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

0

In 1-2 paragraphs, please provide a Description of the 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 the 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 the 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.

Impact/Outcome Objective 1:

By Sept 30, 2011, a sample of at least 150 matched pairs of fourth and fifth grade students who participated in Student Impact 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

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?

0

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

a. Intervention:	Convenience Sample
b. Control:	

# of intervention matched pre/post measures collected	190
# 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	0

Where any other surveys used?	SPAN questions on NES; NES (Self-Efficacy); NES (Access); NES (Fruit and Vegetable Preferences)

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	2/8/2011	2/17/2011
Post-test:	3/8/2011	3/24/2011
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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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.

Thirty-four individual questionnaire items were tested for statistically-significant changes between pretest and posttest using non-parametric Wilcoxon signed ranks tests. Five summated scales were also constructed to measure (1) nutrition knowledge, (2) self-efficacy, (3) access to fruits and vegetables, (4) healthy choices, and (5) fruit and vegetable preferences. On the individual item analysis, 19 of the 34 items showed statistically-significant improvements (see tables). On the summated scales, the knowledge scale showed a statistically significant improvement. Fruit and vegetable preferences showed statistically-significant improvements between pretest and week three, and pretest and posttest. These results support the conclusion that the curriculum was effective in promoting knowledge of the benefits of healthy eating and in promoting awareness and enjoyment of sampled fruits and vegetables. Results of the posttest only survey of parents showed positive results related to serving fruits and vegetables to children, but only about half (53%) of parents correctly identified "baked sweet potato" in the food label question item, suggesting the need for additional parent outreach and education.

b. Description of how evaluation results will be used:

Evaluation results will be presented to NEP program managers and staff in August, 2011. Refinements to overall curriculum and evaluation design and individual lesson content will be developed in weekly program meetings to revise and finalize the next impact evaluation curriculum.

7. Point of Contact

Name:	Mark Elkin & John Shields
Phone Number:	(415) 242-2615 & (415) 252-0402 x610
Email Address:	elkinm@sfusd.edu & johns@etr.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

Paired Samples Statistics

Contractor		Mean	N	Std. Deviation	Std. Error Mean
SF USD	FVJ	6.3385	192	3.36209	.24264
	FVJ	6.4271	192	4.02153	.29023
	Veg	2.3333	192	1.55639	.11232
	Veg	2.2969	192	1.68777	.12180
	Fruit	2.3938	193	1.51395	.10898
	Fruit	2.5026	193	1.64926	.11872
	Juice	1.6010	193	1.43665	.10341
	Juice	1.6114	193	1.62637	.11707
	Any Milk	.7333	210	.96113	.06632
	Any Milk	.8524	210	1.07700	.07432
	Fruit at home?	1.3657	216	.82998	.05647
	Fruit at home?	1.4167	216	.79680	.05422
	Veg at home?	1.3102	216	.83029	.05649
	Veg at home?	1.2500	216	.86401	.05879

Contractor		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
SF USD	FVJ	-.08854	3.44097	.24833	-.57836	.40128	-.357	191	.722
	Veg	.03646	1.60944	.11615	-.19265	.26556	.314	191	.754
	Fruit	-.10881	1.68126	.12102	-.34751	.12989	-.899	192	.370
	Juice	-.01036	1.58110	.11381	-.23484	.21412	-.091	192	.928
	Any Milk	-.11905	1.22577	.08459	-.28580	.04770	-1.407	209	.161
	Fruit at home?	-.05093	.94115	.06404	-.17715	.07530	-.795	215	.427
	Veg at home?	.06019	.88454	.06019	-.05844	.17881	1.000	215	.318

Network-funded contractor:	Shasta COE - 10-10059
Contract number:	10-10059
Information provided by :	Jilmarie Bentley
Telephone:	530-225-0182
Date:	7/25/2011
Email:	jseastrunk@shastacoe.org

Section 1

1. Project Description and Goals

Project Name:	Harvest of the Month and PowerPlay! at Boulder Creek Elementary
Target Population:	4-5th graders

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
PowerPlay!	

Description of the Nutrition Education Intervention:

Harvest of the Month (HOTM) was implemented in the classrooms for 9 months Sept-May. The teachers received the tasting trio recipe and ingredients. The students prepared and taste tested the tasting trio recipes which included apples, pumpkin, persimmons, pears, mandarins, sweet potatoes, cabbage, asparagus and avocado. Each student received the HOTM and Power Play workbooks that were utilized each month. On average each classroom completed 5 Power Play lessons. Harvest of the month was highlighted in the cafeteria for the 9 months. Every month the students were given the family HOTM newsletter they also received the tasting trio and Power Play cook books to take home.

Description of the Physical Activity Intervention:

Each class participated in the Nutrition Decathlon. They were all educated on the importance of PA and the recommended amount of exercise they should get each day. The students participated in Instant Recess.

Description of the Standardized Training:

All teachers received an HOTM training at the beginning of the school year. Teachers received the educator newsletter, food for thought brochure, botanical image and posters each month.

Description of the Standard Administration of Data

I read the instructions of the pre and post-tests to each class out load and we did each question together.

Description of the Standardization Across All Classrooms

Harvest of the Month tasting trio ingredients and recipe, HOTM Tasting Trio and Power Play recipe

books, HOTM and Power Play student workbooks, Parent and Educator HOTM newsletters, read out loud book, "I tasted" stickers, botanical image were given to every class during the 9 months.

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 150 4/5th graders grade students who participated in Harvest of the Month and PowerPlay! At 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.

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?

classrooms

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

a.	Intervention:	Convenience Sample
b.	Control:	N/A

# of intervention matched pre/post measures collected	178
# 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

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	9/1/2010	9/30/2010
Post-test:	5/11/2011	5/24/2011
Follow-up:	NA	NA

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?	14

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	NA	

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.

In the healthy foods and beverages group we had a positive outcome on the vegetable and fruit consumption. On the pretest we had 1.66 for veggies and on the post-test we had 2.08 with a significant P-value. The fruit started out with 1.61 and on the post test was at 2.41, a difference of 0.80 with another significant P-value. I would contribute the fruit and veggies being the highest increase of all healthy foods to the Harvest of the Month tasting trios program. Water consumption was already high to begin with in the pretest so it didn't have much room for improvement. In the unhealthy foods category, the French fries and or chips decreased and so did the soda and soft drinks, both with significant P-values. The cookies, cakes and other sweets increased. Two classes that took this post-test on a certain day just so happened to go on a field trip with a pre-determined lunch from the cafeteria which had a cookie in it, so they all were given the cookie the day before which might have contributed to the results increasing. PA went up but that could also be due to the weather. This year we had a lot of rain and the students were not able to play outdoors much when the pretests were given. The majority of students were already consuming breakfast, so there was not much room for improvement. Trying new foods increased by .10 which could be due to the tasting trio recipes introduced new foods. The Perceived Parental Consumption went up on the fruits and veggies with a significant P-value for fruit. I think that is

also due to the HOTM program and the students telling their families what they had tried in the classroom and the newsletters going home. Access to fruits/vegetable both increased. See detailed results tables at end of report. See results tables at end of report.

b. Description of how evaluation results will be used:

We will increase the amount of physical activity intervention and bring additional HOTM and Power Play resources and training to the after school staff.

7. Point of Contact

Name:	Jilmarie Bentley
Phone Number:	530-225-0182
Email Address:	jseastrunk@shastacoe.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!*

Power Play!

Foerster, S., J. Gregson, et al. (1998). "The California Children's 5 a Day-Power Play! Campaign: Evaluation of a large-scale social marketing initiative." Family and Community Health 21(1): 46-64.

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

Yes

Network Youth Survey and *Network* High School Survey

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.039	12.472	1.433	0.001
3. Milk	1.478	1.427	-0.051	0.577
4. Yogurt or cheese	0.876	0.983	0.107	0.198
5. Cereal	0.730	0.685	-0.045	0.443
7. Vegetables	1.663	2.084	0.421	0.000
8. Fruit	1.607	2.410	0.803	0.000
10. Juice	1.034	1.185	0.152	0.187
11. Water	3.652	3.697	0.045	0.747
Total: fruit & vegetable (no juice)	3.270	4.494	1.225	0.000
Total: fruit, vegetable, juice	4.303	5.680	1.376	0.000
Unhealthy Foods	2.725	2.438	-0.287	0.140
6. French fries or chips	0.646	0.511	-0.135	0.047
9. Punch, sports drinks, fruit-flavored drinks	0.770	0.742	-0.028	0.720
12. Soda or soft drinks	0.590	0.410	-0.180	0.020
13. Cookies, cakes, other sweets	0.719	0.775	0.056	0.506
Physical Activity	7.978	9.444	1.466	0.000
14. Days of 60 minutes moderate/vigorous	3.921	4.949	1.028	0.000
15. Days of 30 minutes outdoor play	4.056	4.494	0.438	0.051
Other				
16. Breakfast	0.938	0.916	-0.022	0.395
17. Trying New Foods	1.208	1.309	0.101	0.029
Perceived Parental Consumption	4.605	4.860	0.254	0.058
18. How often parents eat fruit	2.221	2.393	0.172	0.036
19. How often parents eat vegetables	2.292	2.416	0.124	0.071
Access	3.488	3.604	0.116	0.064
20. Fruits to eat at home	1.747	1.825	0.078	0.042
21. Vegetables to eat at home	1.728	1.769	0.041	0.264

Demographics

Average Age	9.31
Gender	
Males	99.00
Females	79.00

Network-funded contractor:	Shasta County, Public Health Branch - 08-85182
Contract number:	08-85182
Information provided by :	Melissa Puckett
Telephone:	530-229-8465
Date:	7/27/2011
Email:	mpuckett@co.shasta.ca.us

Section 1

1. Project Description and Goals

Project Name:	0
Target Population:	8-10, 4th and 5th grades

Primary Curriculum Used:	
Eat Well and Keep Moving	
Secondary Curriculum Used:	
Harvest of the Month	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

`CPH Eat Well and Keep Moving curriculum along with Harvest of the Month incorporates in class activities, fruit and vegetable tastes tests, Rethink Your Drink nutrition education, physical activity with nutrition messages, family and educator newsletters, and a Screen Time Reduction challenge.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

Students participated in fruit and vegetable relay races and Instant Recess.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Three teachers received training on Eat Well and Keep Moving and Harvest of the Month curriculum at the beginning of the school year. Informal meetings were held throughout the school year to update teachers on such things as fruit and vegetable challenge and screen time reduction challenge.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

Pre test and post tests were performed independently of any nutrition education interventions and students received the same instructions for filling out the surveys.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

All lessons were the same for fourth grade and fifth grade. The only change was that fifth grade did not participate in the Screen Time Reduction challenge due to Star Testing and Spring Break.

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 4th and 5th grade students who participated in Impact Evaluation using Eat Well and Keep Moving 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?

Classrooms

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

a. Intervention:	Convenience Sample
b. Control:	

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

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	9/21/2010	9/24/2010
Post-test:	5/24/2011	5/27/2011
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?	6

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

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 Foods and Beverages: The intervention did not affect the students' total score for consumption of the healthy foods and beverages that were measured in the evaluation (Table 1). The average healthy food and beverage total score increased slightly (by 0.32 points) after the intervention, but this was a non-significant change. There was no effect on the individual scores for milk, yogurt or cheese, cereal, vegetables, fruit, juice, or water. The average total score for fruit and vegetable (no juice) consumption increased by 0.24 points, and the average total score for fruit, vegetable, and juice consumption increased by 0.11 points after the intervention, but both were non-significant changes. Unhealthy foods: The intervention did not affect the students' total score for consumption of the unhealthy foods and beverages that were measured in the evaluation (Table 2). The average unhealthy food total score decreased (by 0.41 points) after the intervention, but this was a non-significant change. There was no effect on the score for French fries or chips, soda or soft drinks, or cookies, cakes or other sweets. However, the intervention was successful in decreasing the students' total score for consumption of punch, sports drinks, or other fruit-flavored drinks. The score for fruit flavored drink consumption decreased by 0.24 points after the intervention, a significant change. Physical Activity: The intervention did not affect the students' total score for physical activity (Table 3). The average physical activity total score increased (by 0.91 points) after the intervention, but this was a non-significant change. There was also 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 0.8 days, a significant change. Other (Breakfast and Trying New Foods): After the intervention, students were less likely to have report having eaten breakfast the previous day. The average score for eating breakfast decreased by 0.10 points after the intervention, a significant change. There was no effect after the intervention on students' reported interest in trying new foods. After the intervention, the average score for interest in trying new foods increased by 0.02 points, a non-significant change. Perceived Parental Consumption: The intervention did not affect the students' perception of how often their parents eat fruits or vegetables. After the intervention, the average score for perceived parental consumption increased by 0.17 points, a non-significant change. The average scores for perceived consumption of fruits and consumption of vegetables by the students' parents also showed no change. Access: The intervention did not affect the students' perception of their access to fruits and vegetables at home. After the intervention, the average score for perceived access to fruits and vegetables increased by 0.07 points, a non-significant change. Additionally, the average score for access to fruits and vegetables increased by 0.01 and 0.06 points, respectively. Both of those changes were non-significant.

Table 1: Healthy Foods & Beverages

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Total Score	*12.33*	*12.66*	*0.32*	*0.579*
Milk	1.82	1.74	-0.07	0.569
Yogurt or cheese	0.59	0.78	0.18	0.077
Cereal	0.68	0.78	0.10	0.310
Vegetables	2.02	2.08	0.06	0.757
Fruit	1.90	2.07	0.18	0.364
Juice	1.28	1.14	-0.13	0.397
Water	4.12	4.03	-0.09	0.599
Total: fruit & vegetable (no juice)	*3.91*	*4.14*	*0.24*	*0.459*
Total: fruit, vegetable, juice	*5.16*	*5.28*	*0.11*	*0.773*

Table 2: Unhealthy Foods

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Total Score	*3.05*	*2.64*	*-0.41*	*0.149*
French fries or chips	0.53	0.60	0.07	0.480
Punch, sports drinks, fruit-flavored drinks	1.02	0.78	-0.24	0.019
Soda or soft drinks	0.67	0.62	-0.04	0.697
Cookies, cakes, other sweets	0.80	0.59	-0.21	0.075

Table 3: Physical Activity

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Total Score	*7.25*	*8.15*	*0.91*	*0.051*
Days of 60 minutes moderate/vigorous	3.72	3.82	0.10	0.705
Days of 30 minutes outdoor play	3.53	4.33	0.80	0.005

b. Description of how evaluation results will be used:

Knowing that significant change was made in student's physical activity (outdoor play) and consumption of sugar-sweetened beverages, this gives us a model to follow and use in other classrooms. The students showed a lot of interest in the Rethink Your Drink information and challenge. Following the success of Rethink Your Drink, we could use a breakfast challenge to encourage students to consume breakfast. It was surprising that students consumption of breakfast decreased. This information could also be used in conjunction with Food Service to promote breakfast at school. I think the improvement in physical activity (outdoor play) could also be due to the Safe Routes to School (SRTS) 'frequent walker' program. This encouraged students to walk or ride their bikes to school and included engaging nutrition messages. Focus on promotion of eating more fruits and vegetables will continue to be an integral part of our nutrition education. We were very close in improving the perceived parental consumption of vegetables, I think this is due to the new parent component we added. Students took home a newsletter each month with a homework component. Examples were: eating together as a family, picking out a new vegetable or fruit at the market, taking a walk after dinner, etc. I think the nutrition education activities were effective on many levels.

7. Point of Contact

Name:	Melissa Puckett
Phone Number:	530-229-8465
Email Address:	mpuckett@co.shasta.ca.us

8. Relevant Journal References

.. 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 and Network High School Survey

yes

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

0

6. Qualitative Evaluation Results

This is your opportunity to share with us anything that may not have been reflected in your data or elsewhere in this report. Consider the questions below, or offer us other qualitative reports of your successes and challenges over the last year.

What have been the biggest challenges and barriers you have faced while implementing your intervention or evaluation? What have you learned from them?

The biggest challenge this school year was time and coordinating schedules. Due to STAR testing and Spring Break falling back to back, I was not able to offer 5th grade the Freeze Your Screen challenge and they had to skip one lesson as well. In the future, I would coordinate ahead of time with the classroom teacher so all lessons and challenges would be offered. This might mean coming in more often one month and less the next due to testing.

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?

I know that nutrition education has made a difference in the students' lives. The students look forward to their 'nutrition' lesson and shout across campus hello to me. They are were great about trying one bite of a new food and I always praised them for being adventurous! I have had parents approach me in the community and ask me how I prepared asparagus or Chinese cabbage salad because their children would only eat it 'the way Mrs. Puckett makes it'. A kindergarten teacher reported 'my students love the activities, one student asked his Mom to buy the vegetables instead of the potato chips'. A 1st grade teacher said 'my students have learned to make better and healthier choices. We also have had more physical education this year'. A 3rd grade teacher reported 'I believe the program modeled and introduced the idea of healthy eating to a largely socioeconomically disadvantaged population that would not have had the same experience without the exposure to these healthy foods'. A 5th grade teacher reported 'because of Harvest of the Month, I really encourage my students to bring healthy snacks. I have heard several talk about taking the recipes home and sharing them with their families'.

Network-funded contractor:	Southwest LA Workgroup – Includes 3 contractors: ABC USD, Hawthorne SD, and LA Trade Technical College
Contract number:	
Information provided by:	Judith Dunaway, Dipa Shah-Patel, Christine Bou-Sleiman
Telephone:	562-926-5566 x21127
Date:	6/22/11
Email:	judith.dunaway@abcusd.k12.ca.us, dshah@hawthorne.k12.ca.us, christine.elhaj@gmail.com

Section 1

1. Project Description and Goals

Project Name:	Caught Eating Healthy
Target Population:	11-12 yr. olds/ 6th Grade

Primary Curriculum Used:	
Harvest of the Month	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

The Caught Eating Healthy program involved training teachers to provide simple 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 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 the 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 the Standardization Across All Classrooms

HOTM workbooks and incentive charts 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.

Impact/Outcome Objective 1:

By Sept 30, 2011, a sample of 200 6th 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

a. 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
b. Control:	Convenience Sample

# of intervention matched pre/post measures collected	298
# of control matched pre/post measures collected	46

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 surveys used?	N/A

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	9/22/2010	10/14/2010
Post-test:	4/27/2011	5/10/2011
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?	6

c. Describe how the data were collected.

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

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.

Unlike the comparison group, the intervention group demonstrated a significant increase in the consumption of healthy foods. Our results showed the following increased significantly: overall consumption of healthy food (p value= 0.016), consumption of vegetables (p value= 0.014), consumption of fruits (p value = 0.012), total fruit and vegetable consumption (p value= 0.006). Additionally, consumption of fruit during snack time increased significantly (p value= 0.001). No significant findings were observed for consumption of unhealthy foods. An increase in physical activity was observed; a significant increase in number of days students were engaged in moderate to vigorous physical activity (p value= 0.001). In addition, an increase in the number of days that students were engaged in 30 minutes of outdoor play was also observed (p value= 0.037). Unlike the comparison group (p value= 0.090), the intervention group demonstrated an overall significant increase in physical activity (p value= 0.003). Based on these results, the goal of increasing fruit and vegetable consumption was met and exceeded. The overall consumption of healthy food increased during the six months due to nutrition education in the classroom, HOTM taste test and positive reinforcement for eating a fruit or vegetable during snack time. A significant increase in physical activity was an unintentional positive outcome. Results can be explained by teachers creating a healthier school environment.

In ABC Unified, both schools that participated in this impact evaluation also started Farm Stands to help increase access and availability of fruits and vegetables after school. Students were encouraged to eat fruits and vegetables as after-school snacks. At Hawthorne School District, connections were made to first lady Michelle Obama Let's Move Campaign, where students filmed a dance fitness routine and sent the video to Michelle Obama. At Lawndale School District, due to the popularity of the Caught Eating Healthy snack time, 15 additional middle school teachers signed on to participate in the program.

b. Description of how evaluation results will be used:

Results are consistent with previous years' results. During the past three years, sample size has increased, nutrition education activities have been refined, and this has resulted in significant outcomes related to increased consumption of fruits and vegetables. We plan to present this information to school administrators, emphasizing the low cost and ease of implementation.

7. Point of Contact

Name:	Judith Dunaway, Dipa Shah-Patel, Christine Bou Sleiman
Phone Number:	562-926-5566 x21127
Email Address:	judith.dunaway@abcusd.k12.ca.us, dshah@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.

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

Network Youth Survey and *Network* High School Survey

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

Intervention Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods	6.09	6.55	0.46	0.016
3. Milk	1.44	1.46	0.02	0.683
4. Yogurt or cheese	0.60	0.66	0.06	0.258
5. Cereal	0.71	0.69	-0.02	0.720
7. Vegetables	1.47	1.67	0.20	0.014
8. Fruit	1.68	1.90	0.22	0.012
Total: fruit & vegetable	3.33	3.72	0.39	0.006
Snack Time	0.62	0.68	0.05	0.281
7a. Vegetable snack	0.23	0.17	-0.06	0.038
8a. Fruit snack	0.39	0.51	0.11	0.001
Unhealthy Foods	2.77	2.98	0.21	0.112
6. French fries or chips	0.62	0.70	0.09	0.085
9. Punch, sports drinks, fruit-flavored drinks	0.96	1.07	0.11	0.068
11. Soda or soft drinks	0.55	0.57	0.02	0.750
12. Cookies, cakes, other sweets	0.62	0.66	0.04	0.539
Physical Activity	6.12	6.90	0.78	0.003
13. Days of 60 minutes moderate/vigorous	3.09	3.59	0.50	0.001
14. Days of 30 minutes outdoor play	3.00	3.32	0.32	0.037
Other	2.10	2.03	-0.06	0.163
15. Breakfast	0.84	0.79	-0.05	0.029
16. Trying New Foods	1.25	1.23	-0.02	0.633
Perceived Parental Consumption	4.19	4.37	0.18	0.094
17. How often parents eat fruit	2.03	2.12	0.09	0.139
18. How often parents eat vegetables	2.14	2.22	0.08	0.163
Access	3.38	3.39	0.01	0.846
19. Fruits to eat at home	1.69	1.71	0.01	0.663
20. Vegetables to eat at home	1.69	1.68	0.00	0.919

Demographics

Average Age	11.0
Gender	
Males	N/A
Females	N/A

Control Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods	7.25	6.95	-0.30	0.562
3. Milk	2.09	1.63	-0.46	0.011
4. Yogurt or cheese	0.67	0.74	0.07	0.636
5. Cereal	0.74	0.80	0.07	0.652
7. Vegetables	1.73	1.64	-0.09	0.633
8. Fruit	1.98	1.80	-0.18	0.345
Total: fruit & vegetable	3.86	3.89	0.02	0.946
Snack Time	0.74	1.21	0.47	0.008
7a. Vegetable snack	0.26	0.49	0.23	0.024
8a. Fruit snack	0.51	0.71	0.20	0.060
Unhealthy Foods	3.05	2.98	-0.07	0.830
6. French fries or chips	0.89	0.96	0.07	0.617
9. Punch, sports drinks, fruit-flavored drinks	0.91	0.83	-0.09	0.533
11. Soda or soft drinks	0.65	0.67	0.02	0.883
12. Cookies, cakes, other sweets	0.64	0.52	-0.11	0.390
Physical Activity	5.70	6.70	1.00	0.090
13. Days of 60 minutes moderate/vigorous	3.71	4.04	0.33	0.431
14. Days of 30 minutes outdoor play	2.05	2.82	0.77	0.012
Other	2.00	2.02	0.02	0.830
15. Breakfast	0.91	0.89	-0.02	0.743
16. Trying New Foods	1.09	1.14	0.05	0.623
Perceived Parental Consumption	4.24	4.32	0.09	0.747
17. How often parents eat fruit	2.03	2.17	0.14	0.392
18. How often parents eat vegetables	2.25	2.19	-0.06	0.689
Access	3.45	3.55	0.10	0.421
19. Fruits to eat at home	1.63	1.84	0.21	0.005
20. Vegetables to eat at home	1.81	1.71	-0.10	0.253

Demographics

Average Age	11.2
Gender	
Males	N/A
Females	N/A

Network-funded contractor:	Tulare COE - 10-10054
Contract number:	10-10054
Information provided by :	Janet Hettinger
Telephone:	(559) 651-0130 ext 3722
Date:	40675
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:	
None	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

On average, 90 minutes of nutrition education was provided each month. Each teacher received HOTM Teaching Points and the Educator Newsletter for featured produce each month. Teachers had the opportunity to have a "Chef in the Classroom" presentation. Only intervention sites from Woodlake, WK and WP, had this presentation. Both intervention sites had active NAC groups. ---The Woodlake group went into classrooms with HOTM power point presentations and demonstrated HOTM recipes. They dressed up in fruit and veggie costumes for National School Breakfast Week, made posters for various monthly foci which were posted in the cafeteria and were on TV during National Nutrition Month. The Exeter NAC also made posters and read nutrition education material during morning announcements. They were not permitted to do much else during school hours. Both sites received the same HOTM cafeteria poster and menu slick each month. Teachers also received a Tasting Trios produce box with everything needed to prepare the HOTM recipe plus a box of fresh produce. Teachers were encouraged to make this a skill based activity. Students completed LIA developed HOTM workbooks. Teachers were encouraged to have their students enter the TCOE Essay Contest, "Why Eat Harvest of the Month Fruits and Vegetables". Only one intervention group, WK, had students submit essays with one being the grand prize winner. Teachers were encouraged to use Power Play! Dairy Council and Mobile Dairy and MyPyramid material as well as grocery store tours. There is a garden area at the Exeter site but this year the garden was not planted. There are some fruit trees.

Nutrition education content: Essential concepts included by the Woodlake intervention group were: MyPyramid, nutrients, benefits of and including more fruits and vegetables, benefits of and promoting more physical activity. Skill development was taught accessing valid information, decision making, goal setting and health promotion. Nutrition education content or concepts were integrated into Health, Science, Home Economics/Life Skills, English/Language Arts, History/Social Science and Physical Education. Essential concepts included by the Exeter intervention group were: MyPyramid, nutrients, benefits of and including more fruits and vegetables. There was no skill development. Nutrition education content or concepts were integrated into Science and English/Language Arts.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

We integrated physical activity promotion with HOTM activities. Teachers at both sites have been trained in

SPARK. At HOTM assemblies provided by TCOE staff, we had a PA/activity station and speak on the importance of getting enough exercise. NAC students learned yoga, some provided demonstrations in classes.

In 1-2 paragraphs, please provide a Description of the Standardized Training:

Classroom teachers did the nutrition education.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

Intervention surveys were collected by teachers. Control group surveys were collected by Network staff.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

The nutrition education activities were not observed.

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 at least 150 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

a. 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
b.	Control:	Convenience Sample

# of intervention matched pre/post measures collected	159
# of control matched pre/post measures collected	61

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.

	First Administered	Last Administered
Pre-test:	9/1/2010	9/23/2010
Post-test:	5/3/2011	5/20/2011
Follow-up:	N/A	N/A

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?	34

c. Describe how the data were collected.

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

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.

See results tables at end of report.

b. Description of how evaluation results will be used:

Results were stronger for Woodlake. They have a more active NAC group. Woodlake teachers integrated nutrition education into more core subjects. We will use results to show teachers that kids are not eating proper amounts of fruits, vegetables and dairy despite significant results for some measures. Teachers/principals need to make time to include nutrition education into their day! Some teachers do a great job integrating nutrition education with core subjects and some need help. We hope to offer trainings on integrated nutrition education at teacher in-services next year. We will work on this over the summer. The health of our country depends on educating students on the importance of a healthier lifestyle.

7. Point of Contact

Name:	Janet Hettinger
Phone Number:	(559) 651-0130 ext 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 and Network High School Survey

Yes

Network Youth Survey and *Network* High School Survey

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

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

None

Control Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	10.80	11.54	0.73	0.200
3. Milk	1.68	1.59	-0.09	0.520
4. Yogurt or cheese	0.59	0.68	0.09	0.440
5. Cereal	0.77	0.59	-0.18	0.067
7. Vegetables	1.64	1.73	0.09	0.669
8. Fruit	1.68	1.89	0.21	0.289
10. Juice	1.04	1.38	0.34	0.061
11. Water	3.41	3.68	0.27	0.232
Total: fruit & vegetable (no juice)	3.32	3.63	0.30	0.368
Total: fruit, vegetable, juice	4.36	5.00	0.64	0.117
Unhealthy Foods	2.68	2.80	0.13	0.621
6. French fries or chips	0.70	0.63	-0.07	0.551
9. Punch, sports drinks, fruit-flavored drinks	0.86	0.93	0.07	0.642
12. Soda or soft drinks	0.66	0.63	-0.04	0.805
13. Cookies, cakes, other sweets	0.46	0.63	0.16	0.162
Physical Activity	6.73	6.86	0.13	0.866
14. Days of 60 minutes moderate/vigorous	3.48	3.75	0.27	0.508
15. Days of 30 minutes outdoor play	3.25	3.11	-0.14	0.724
Other				
16. Breakfast	0.95	0.89	-0.05	0.322
17. Trying New Foods	1.15	1.16	0.02	0.811
Perceived Parental Consumption	4.17	4.23	0.07	0.821
18. How often parents eat fruit	2.00	2.05	0.05	0.750
19. How often parents eat vegetables	2.10	2.08	-0.02	0.875
Access	3.23	3.26	0.04	0.761
20. Fruits to eat at home	1.59	1.63	0.04	0.568
21. Vegetables to eat at home	1.62	1.60	-0.02	0.811

Demographics

Average Age	9.5
Gender	
Males	29
Females	32

Exeter Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.55	12.93	1.38	0.007
3. Milk	1.67	1.78	0.11	0.250
4. Yogurt or cheese	0.73	0.69	-0.05	0.657
5. Cereal	0.85	0.81	-0.05	0.621
7. Vegetables	1.39	2.11	0.72	0.000
8. Fruit	1.75	2.38	0.63	0.000
10. Juice	1.08	1.34	0.26	0.079
11. Water	3.95	3.72	-0.23	0.096
Total: fruit & vegetable (no juice)	3.16	4.51	1.35	0.000
Total: fruit, vegetable, juice	4.24	5.85	1.61	0.000
Unhealthy Foods	2.98	2.50	-0.49	0.053
6. French fries or chips	0.72	0.67	-0.05	0.621
9. Punch, sports drinks, fruit-flavored drinks	0.93	0.78	-0.15	0.145
12. Soda or soft drinks	0.61	0.59	-0.02	0.846
13. Cookies, cakes, other sweets	0.74	0.42	-0.32	0.004
Physical Activity	7.96	8.56	0.60	0.158
14. Days of 60 minutes moderate/vigorous	4.07	4.26	0.18	0.434
15. Days of 30 minutes outdoor play	3.89	4.30	0.41	0.094
Other				
16. Breakfast	0.85	0.81	-0.05	0.299
17. Trying New Foods	1.42	1.41	-0.01	0.889
Perceived Parental Consumption	4.34	4.62	0.28	0.151
18. How often parents eat fruit	2.04	2.26	0.22	0.050
19. How often parents eat vegetables	2.12	2.23	0.12	0.236
Access	3.21	3.46	0.25	0.010
20. Fruits to eat at home	1.62	1.75	0.13	0.019
21. Vegetables to eat at home	1.57	1.69	0.12	0.064

Demographics

Average Age	9.5
Gender	
Males	59
Females	57

Woodlake Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	11.12	14.65	3.53	0.000
3. Milk	1.51	1.92	0.41	0.020
4. Yogurt or cheese	0.61	1.16	0.55	0.002
5. Cereal	0.73	0.84	0.12	0.459
7. Vegetables	1.47	2.49	1.02	0.000
8. Fruit	1.76	2.61	0.84	0.003
10. Juice	1.51	2.00	0.49	0.039
11. Water	3.53	3.63	0.10	0.648
Total: fruit & vegetable (no juice)	3.24	5.10	1.86	0.000
Total: fruit, vegetable, juice	4.75	7.10	2.35	0.000
Unhealthy Foods	3.73	2.49	-1.24	0.001
6. French fries or chips	0.80	0.57	-0.24	0.129
9. Punch, sports drinks, fruit-flavored drinks	1.24	0.71	-0.53	0.003
12. Soda or soft drinks	0.69	0.45	-0.24	0.070
13. Cookies, cakes, other sweets	1.00	0.76	-0.24	0.110
Physical Activity	5.88	7.59	1.71	0.012
14. Days of 60 minutes moderate/vigorous	2.96	4.00	1.04	0.003
15. Days of 30 minutes outdoor play	2.92	3.59	0.67	0.076
Other				
16. Breakfast	0.94	0.86	-0.08	0.159
17. Trying New Foods	1.12	1.29	0.16	0.118
Perceived Parental Consumption	4.63	4.70	0.07	0.769
18. How often parents eat fruit	2.39	2.32	-0.06	0.662
19. How often parents eat vegetables	2.25	2.28	0.03	0.860
Access	3.28	3.24	-0.04	0.793
20. Fruits to eat at home	1.68	1.70	0.02	0.830
21. Vegetables to eat at home	1.59	1.54	-0.04	0.688

Demographics

Average Age	9.3
Gender	
Males	25
Females	28

Network-funded contractor:	UCCE Alameda County (Child and Youth Nutrition Program) - 08-85165
Contract number:	08-85165
Information provided by :	Elizabeth J. Gong
Telephone:	510-639-1252
Date:	7/29/2011
Email:	ejgong@ucdavis.edu

Section 1

1. Project Description and Goals

Project Name:	Nutrition Education Training Academy (NETA)
Target Population:	18+
Intervention Target	Adults

Primary Curriculum Used:
Tips for Parents of Preschool Children
Secondary Curriculum Used:

Description of Nutrition Education Intervention:

The NETA Parent Nutrition classes used the "Tips for Parents of Preschool Children," for the corresponding month. "Tips for Parents" is NETA's educational tool that aligns with Harvest of the Month and complements the "Tips for Busy Early Childhood Professionals," delivered monthly in the classroom. The content of parent classes include: General Nutrition and Nutrition Facts, Produce Tips (selection, buying, storing), Taste Test and Recipe featuring the Fruit/Vegetable of the Month, What Should Parents Know, and Family Physical Activity.

Description of Physical Activity Intervention:

Each class included a physical activity tip and demonstration that parents could do with their preschool children, outlined in the month's "Tips." Examples are: animal play (hop like a rabbit, jump like a kangaroo), "Duck, Duck, Goose," "Freeze Dance," dancing to your favorite music, and movements to develop motor skills. We also used Network's "Shape of Yoga."

Description of Standardized Training:

NETA Staff Program Representatives facilitated the nutrition education. Training of the content in "Tips for Parents," was given in January 2011. Also included in the training were basic nutrition, produce tips, child development, physical activity, and learner-centered (dialogue-based) approach to facilitation. The Research Associate or Program Coordinator attended classes in the beginning to assess evaluation and nutrition education implementation. Regular staff meetings were held to discuss past lessons and prepare for future ones.

Description of Standard Administration of Data

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.

Description of Standardization across all classrooms

Staff training and regular staff meetings throughout intervention and evaluation. Research Associate or Program Coordinator assisted in pre- and post-testing sessions.

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 50 Parents 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

a. 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?

Other (Specify in next field) Specify Other: early childhood development centers

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

a. Intervention:	Convenience Sample	
b. Control:	0	

Intervention surveys collected: 51
Control surveys 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	Fruit and Vegetable Checklist (cups)	

Where any other surveys used?	0

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	2/9/2011	5/16/2011
Post-test:	5/4/2011	6/16/2011
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?	0

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.

A total of 130 pre-tests and 63 post-tests, using the "Fruit and Vegetable Checklist," were administered for the Impact Outcome Evaluation. Fifty-one matching pre- and post-tests from participants who completed all 5 lessons were analyzed. Of the 51 completed, 30 participants completed all the 5 lessons in the regularly scheduled classes. The other 21 had 2 or 3 lesson make-ups. Make-up lessons were done either individually or in groups.

Intervention Process

- Parent groups met at 7 sites (3 sites had both AM and PM classes). Originally, the groups were scheduled to meet once a month. Delivery dates had to be changed due to issues with the child development centers, educators, or parent absentees.
- Frequency of meetings. Some class groups met two or three times a month, while others met once a month at the regular, scheduled time. Another site met over the course of 2 weeks. The challenge of reaching and retaining parents, as well as working within a school calendar, required flexibility in scheduling classes.
- We used "Tips for Parents of Preschool Children" for the delivery of the lessons.
- Make up lessons were provided, either individually and/or as a group.
- 21 participants had 2 or 3 lesson make-ups.

Participants

- All of the 51 parents in the evaluation were adults, 18 to 59 years of age.
- Gender: 50 females, 1 male.
- Ethnicity: 48 were Hispanic/Latino, 3 were non-Hispanic.
- Race demographics were 16 White/Caucasian, 4 Black/African American, and 1 Asian; however, many of the participants who reported to be Hispanic did not designate a race (30 of the 48 Hispanics, or 63%).

Results

Analysis of all 51 participants (Total Group) showed a statistically significant ($p<0.05$) increase in mean score of having citrus fruit or citrus juice during the past week (Question 2 on the "Fruit and Vegetable Checklist"). Results from the other six questions on the checklist were not significant (Results Table – Total). However, because of the small sample size, it may have been difficult to measure significant changes.
Analysis of the 3 questions related to fruit consumption (Checklist question numbers 2, 3, and 4, combined) showed a statistically significant ($p<0.05$) increase in mean score.

When parents with 2 or 3 lesson make-ups were separated from those who attended 5 "regular" classes, none of the questions showed significant difference between pre- and post-tests. There were only 30 parents in Regular Classes (5 "regularly scheduled" classes) and 21 in Make-Ups (with 2 or 3 make-up lessons), making it difficult to draw conclusions from the analysis.

The mean amounts of fruit eaten per day by all 51 parents in the evaluation were below the USDA MyPyramid recommended amounts of 2 cups/day for a 2000 calorie diet (mean pre-test = 1.47 cups; mean post-test = 1.52 cups). Mean vegetable consumption was also below the USDA MyPyramid recommendations of 2½ cups/day (pre-test = 1.31 cups; post-test = 1.38 cups). When comparing reported intake to MyPyramid recommendations, these parents were low in daily fruit consumption by about ½ cup and low in daily vegetable consumption by approximately 1 cup. As a group, the parents we evaluated are only consuming about 75% of the recommended fruit per day; and only about 54% of the recommended vegetables per day. Our data using the "Fruit and Vegetable Checklist" show that 51 parents participating in our 5 Parent "Tips" Days reported only one significant behavior change in fruit and vegetable consumption, of the 7 measured: citrus fruit or juice in the past week. Fruit-related behaviors (combining the 3 fruit-related questions) also showed a significant change between pre- and post-tests. Because of the small sample size significant changes are difficult to measure.

Please see tables in "Results Table" tabs: 1. Results Table – Total (Includes data for all 51 parents with 5 lessons and matching pre- and post-tests); 2. Results Table – Regular Classes (Includes data from 30 of the 51 parents who attended 5 regularly scheduled classes); 3. Results Table – Make Ups (Includes data from 21 of the 51 parents who had 2 or 3 make-up classes/lessons).

b. Description of how evaluation results will be used:

From the outreach and recruitment aspect, a total of 176 parents were recruited and participated in Parent classes. We still have problems with retention and frequency of attendance. Parents are interested in participating, but the frequency of 5 lessons or more seems to be a problem.

Only 29% of the 176 parents completed all the 5 lessons, with pre- and post-test. This is not a large enough sample size to measure the effectiveness of the intervention. It is important to highlight that the delivery content of our classes was changed from the previous year. Instead of the UCCE EFNEP curriculum, we used "Tips for Parents" connected to the monthly "Tips" for the classroom. "Tips" is a preschool version of Harvest of the Month. 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.

Some of the lessons we have learned:

1. Taste testing, a major component of the "Tips," is very important in the delivery of the "Tips" (Harvest of Month), however it does not allow the learner to get very involved in the "participatory learning" process. Participatory learning allows the participant to use the new information and apply it. We will add more participatory learning into the delivery of our "Tips" next year. Adding some of these hands-on activities may help reinforce the messages we are teaching.
2. Retention and consistency are big issues with low-income families. There is no problem keeping families for 1 to 2 lessons. Parents are eager and enthusiastic to participate, but their time is limited. We have partnered with Oakland Unified School District (OUSD) Produce Markets to demonstrate some cooking lessons using the produce at the markets. We hope that connecting every month will give us an edge to get more parents committed to a series of lessons, linked to the Produce Markets and the school gardens. Both the School Produce Markets and gardens may also improve access and availability of fresh vegetables and fruits to these families. Thus, families will have a greater opportunity to use fresh produce in the preparation of the recipes we are promoting with "Tips."
3. Community Nutrition Education Assistants (parents who were trained to deliver Nutrition classes) were layed off due to budget constraints and uncertainties with OUSD early childhood education program. Instead, our regular Program Representatives were responsible for the delivery of the classes. We think it is more effective to have other parents delivering and modeling the "Tips" to other parents. Every effort will be done to get parents involved in the delivery of the classes.

7. Point of Contact

Name:	Elizabeth J. Gong
Phone Number:	510-639-1252
Email Address:	ejgong@ucdavis.edu

8. Relevant Journal References

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

"From Preschool Classrooms to Homes: Building Communities for the Future," June 29, 2011, 6th Biennial Childhood Obesity Conference, San Diego, CA

c. Did you use the Food Behavior Checklist?	No
Did you use theFruit and Vegetable Checklist	Yes
Did you use the Fruit and Vegetable Inventory?	No

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

0

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?

The participation results of 51 is not reflective of the parent participation, level of interest and their perceived benefit to them. Anecdotal notes and observations show that parents are interested and willing to learn more about how to improve their children's health. Feedback from parents has been very positive.

Some of the comments include:

- "Thank you for helping us eat better."
- "I am glad it [nutrition education] is starting early. How long will it last? Will it go through high school?"
- "I have cooked all the recipes we've made."
- "I love your spinach recipe. I have made it twice for my family."
- "I am using the "Tips" and started a garden."
- "Are you coming back next year?"

From the staff perspective, our educators have observed that linking classroom, garden, and home has a greater impact on the child's knowledge and tasting of the monthly harvest.

"When kids learn where and how they grow, they are excited about trying new vegetables and fruits. The kids are more aware of different types of vegetables and fruits and many kids have begun to take ownership of their garden." ~NETA Program Representative 01

"It has been very rewarding to get positive feedback from parents—that they tried the recipe or served the vegetable they tasted last month. And then when the preschoolers get excited about what they tasted during Harvest of the Month, or what they grew in the gardens, it makes me feel good." ~NETA Program Representative 02

"I enjoy feeling like I make a difference. At one school, the entrance is on the playground, so when I visit, the children run up to me and say, 'Miss L,. I ate all my broccoli. I ate my peas. We had pears for lunch.' It seems as if they are getting the message to eat more fruits and vegetables." ~NETA Program Representative 03

Total Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	3.18	3.02	-0.16	0.132
Q2. Citrus fruit or juice past week (0=N; 1=Y)	0.88	0.98	0.10	0.024
Q3. Fruit eaten per day (0-3)	1.47	1.52	0.05	0.609
Q4. Different kinds of fruit daily (1-4)	2.86	2.96	0.10	0.440
Q5. Different kinds of vegetable daily (1-4)	2.80	2.92	0.12	0.371
Q6. Vegetables eaten per day (0-3)	1.31	1.38	0.07	0.473
Q7. 2 or more vegetables at main meal (1-4)	2.63	2.75	0.12	0.348

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruits (Q2, Q3, Q4) (Range 0-3)	1.99	2.14	0.15	0.041
Veggies (Q5, Q6, Q7) (Range 0-3)	1.58	1.68	0.10	0.264
Fruits & Veggies (all) (Range 0-7)	4.30	4.50	0.20	0.189

Demographics

Hispanic	
yes	48
no	3
Race	
American Indian or Alaskan Native	0
Asian	1
Black or African American	4
Native Hawaiian or Other Pacific Islander	0
White	16

Average Age	n/a
Gender	
Males	1
Females	50

Regular Class Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	3.30	3.03	-0.27	0.073
Q2. Citrus fruit or juice past week (0=N; 1=Y)	0.87	0.97	0.10	0.083
Q3. Fruit eaten per day (0-3)	1.48	1.53	0.05	0.693
Q4. Different kinds of fruit daily (1-4)	2.90	2.90	0.00	1.000
Q5. Different kinds of vegetable daily (1-4)	2.80	2.87	0.07	0.677
Q6. Vegetables eaten per day (0-3)	1.35	1.43	0.08	0.484
Q7. 2 or more vegetables at main meal (1-4)	2.57	2.83	0.27	0.088

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruits (Q2, Q3, Q4) (Range 0-3)	1.99	2.11	0.12	0.200
Veggies (Q5, Q6, Q7) (Range 0-3)	1.57	1.71	0.14	0.224
Fruits & Veggies (all) (Range 0-7)	4.33	4.50	0.17	0.405

Demographics

Hispanic			
yes	28	**Average Age**	#DIV/0!
no	2	**Gender**	
Race		Males	1
American Indian or Alaskan Native	0	Females	29
Asian	1		
Black or African American	2		
Native Hawaiian or Other Pacific Islander	0		
White	9		

Make up Class Results

Individual Questions (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Q1. Eat F&V as snacks (1-4)	3.00	3.00	0.00	1.000
Q2. Citrus fruit or juice past week (0=N; 1=Y)	0.90	1.00	0.10	0.162
Q3. Fruit eaten per day (0-3)	1.45	1.50	0.05	0.754
Q4. Different kinds of fruit daily (1-4)	2.81	3.05	0.24	0.261
Q5. Different kinds of vegetable daily (1-4)	2.81	3.00	0.19	0.407
Q6. Vegetables eaten per day (0-3)	1.26	1.31	0.05	0.771
Q7. 2 or more vegetables at main meal (1-4)	2.71	2.62	-0.10	0.649

Fruit & Vegetable Consumption (Range)	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Fruits (Q2, Q3, Q4) (Range 0-3)	1.99	2.18	0.19	0.115
Veggies (Q5, Q6, Q7) (Range 0-3)	1.60	1.64	0.05	0.755
Fruits & Veggies (all) (Range 0-7)	4.25	4.49	0.24	0.305

Demographics

Hispanic	
yes	20
no	1
Race	
American Indian or Alaskan Native	0
Asian	0
Black or African American	2
Native Hawaiian or Other Pacific Islander	0
White	7

Average Age	#DIV/0!
Gender	
Males	0
Females	21

Network-funded contractor:	Ukiah USD - 10-10115
Contract number:	10-10115
Information provided by :	Terry Nieves
Telephone:	707 262-2561
Date:	6/30/2011
Email:	tnieves@uusd.net

Section 1

1. Project Description and Goals

Project Name:	Growing Healthy Kids from the Ground Up
Target Population:	9-11 years old

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
PowerPlay!	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

The students and I used the Harvest of the Month/Power Play workbooks throughout the year they were a great tool. Each month I would teach the Harvest of the Month lessons for each produce item, we would do lots of hands on taste tests, and have a great time working in the work books. The work books have a nutrition glossary in the back and I used this regularly so that the kids really learned and retained what for example vitamin K is, what it does, why we need it and what foods we get it from. They really took to this and it helped as we worked in the work books for example when we were doing the page on cabbage some of the students who didn't like the cabbage we taste tested realized why vitamin C was important, so they turned back in the work book to mandarins and concluded that they would get their vitamin C from citrus. Once the kids understood more about nutrients and why they needed them they became more engaged in learning more about the different foods and how they could get what they needed.

The intervention program used at Eagle Peak and Yokayo was a bit different. Our Garden-Enhanced Nutrition Program has 4 major elements. The first, in a classroom setting, gives students (1) basic nutrition knowledge, i.e. where our food comes from, caloric balance, the benefits and sources of vitamins and minerals, proteins, fats, complex carbohydrates, and fiber, (2) the importance of breakfast, (3) the harmful effects of sugar, (4) interpreting food labels, and (5) preparation of healthy snacks. The second major element is Harvest of the Month activities, which includes taste testing and food preparation. Gardening comprises the third element. Students become, via planting and harvesting, familiar with common fruits and vegetables. The fourth element of Garden-Enhanced Nutrition is influencing school cafeteria choices, that is, an incentive program for consuming fruits and vegetables at lunch.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

The activity questions on the pre survey prompted me to focus more on helping the kids get physically active. I took the activity chart for the food pyramid and glued pictures of my dog at the different activity levels on the chart. Most of the kids know my dog and they loved it which got them engaged. We went over the chart and information on the different levels of being active and used the information in their work books and every class that we could as part of a reward for good behavior we went outside and moved lots of different ways. As a group we decided what activity levels we were at. When the kids did their Physical Activity Journal in their work books most of them not only recorded the minutes they were active they also included their activity levels.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

Identical assessment surveys are administered in all classrooms. Survey administrators collaborate with themselves and with CDPH in determining survey instructions and in procedures for digitalizing the collected data.

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 4th-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

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?

Classrooms

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

a. Intervention:	Convenience Sample At Eagle Peak and Yokayo, entire population of grades 4 and 5 sampled
b. Control:	N/A

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

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	9/1/2010	Sept. 30, 2010
Post-test:	5/2/2011	5/24/2011
Follow-up:		

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?	0

c. Describe how the data were collected.

Intervention:	Paper and pencil survey	
Comparison/control:	0	

How were the surveys administered?

...read aloud to classroom;
at Eagle Peak and Yokayo:
...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.

Our impact evaluation is based upon self-administered pre- and post-stimulus matched surveys of 323 students in grades 4, 5, and (about 10%) in grade 6. Their average age was 9.6 years and they were evenly divided between boys and girls. Statistically significant increases in milk, fruit, and vegetable consumption were reported by the students, but with little change in yogurt/cheese, water, and fruit juice intake. "Unhealthy" food consumption (fries and chips, cookies/cakes, sugary beverages) reportedly declined on the average of 0.7 times per day per student--a statistically significant amount. The number of reported breakfasts increased slightly (though significantly, statistically speaking) from 81 breakfasts per 100 students consumed the previous day to 89 per 100.. Reported physical activity in the previous 7 days jumped from an average of 2.37 days per week in the late summer to 3.74 days the following spring. Reported willingness to try new foods was largely unchanged. Perceived parental consumption of fruits and vegetables as well as student access to fruit and vegetables at home showed small but statistically significant improvement.

b. Description of how evaluation results will be used:

Evaluation results will be used to improve the program. We will be discussing what worked best at the sites whose results were the best. These best practices will be adopted by all network funded employees working with students in schools in Mendocino County Schools.

7. Point of Contact

Name:	Terry Nieves
Phone Number:	707 262-2561
Email Address:	tnieves@uusd.net

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!*

Foerster, S., J. Gregson, et al. (1998). "The California Children's 5 a Day-Power Play! Campaign: Evaluation of a large-scale social marketing initiative." Family and Community Health 21(1): 46-64.

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

Yes

Thiagarajah K, Fly AD, Hoelscher DM, Bai Y, Lo K, Leone A, Shertzer JA. Validating the food behavior questions from the elementary school SPAN questionnaire. J Nutr Ed Behav. 2006; 38/ 4; S55

Penkilo M, George G, Hoelscher DM. Reproducibility of the School Based Nutrition Monitoring Questionnaire among Fourth Grade Students in Texas. J Nutr Ed Behav. 2008: 40/1; 20-27

Hoelscher,D.M., Day, R.S., Kelder, S.H. & Ward, J.L. (2003) Reproducibility and validity of the secondary level School-Based Nutrition Monitoring student questionnaire. Journal of American Dietetic Association, 103(2),186-94.

Vereecken AC, Damme WV, Maes L. Measuring Attitudes, Self-Efficacy, and Social and Environmental Influences on Fruit and Vegetable Consumption of 11- and 12-Year-Old Children: Reliability and Validity. J. Am Dietetic Association. 2005; 105(2) 257-261.

Hearn DH, Baranowski T, Baranowski J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental Influences on Dietary Behavior Among Children: Availability and Accessibility of Fruits and Vegetables Enable Consumption. Journal of Health Education 1998; 29(1): 26-32.

Centers for Disease Control and Prevention. 2002. Behavior Risk Factor Surveillance System Core Section 4: Fruits and Vegetables. [Online] Available: http://www.cdc.gov/brfss/questionnaires/pdf-ques/2002brfss.pdf.

Results

	Pre-Test Mean	Post-Test Mean	Difference	P-Value
Healthy Foods & Beverages	10.48	12.10	1.62	0.000
3. Milk	1.35	1.49	0.14	0.034
4. Yogurt or cheese	0.68	0.65	-0.03	0.624
5. Cereal	0.76	0.84	0.07	0.161
7. Vegetables	1.54	2.11	0.57	0.000
8. Fruit	1.67	2.28	0.61	0.000
10. Juice	1.27	1.36	0.09	0.361
11. Water	3.21	3.38	0.17	0.130
Total: fruit & vegetable (no juice)	3.21	4.39	1.18	0.000
Total: fruit, vegetable, juice	4.48	5.75	1.27	0.000
Unhealthy Foods	3.35	2.65	-0.70	0.000
6. French fries or chips	0.71	0.59	-0.12	0.028
9. Punch, sports drinks, fruit-flavored drinks	1.02	0.85	-0.17	0.010
12. Soda or soft drinks	0.79	0.59	-0.20	0.004
13. Cookies, cakes, other sweets	0.82	0.62	-0.20	0.001
Physical Activity	5.11	7.57	2.47	0.000
14. Days of 60 minutes moderate/vigorous	2.37	3.74	1.37	0.000
15. Days of 30 minutes outdoor play	2.74	3.83	1.09	0.000
Other				
16. Breakfast	0.81	0.89	0.07	0.032
17. Trying New Foods	1.12	1.19	0.07	0.161
Perceived Parental Consumption	4.10	4.59	0.49	0.000
18. How often parents eat fruit	2.03	2.17	0.14	0.048
19. How often parents eat vegetables	2.09	2.35	0.26	0.000
Access	3.20	3.49	0.29	0.000
20. Fruits to eat at home	1.63	1.80	0.17	0.000
21. Vegetables to eat at home	1.55	1.67	0.11	0.007

Demographics

Average Age	9.6
Gender	
Males	160
Females	163

Network-funded contractor:	Ventura USD vol - 08-85167
Contract number:	08-85167
Information provided by :	Anne Thille
Telephone:	(805) 641-5000x1309
Date:	6/21/2011
Email:	anne.thille@venturausd.org

Section 1

1. Project Description and Goals

Project Name:	DeAnza Middle School Nutrition Education
Target Population:	13-14

Primary Curriculum Used:	
Harvest of the Month	
Secondary Curriculum Used:	
Netwrok Approved Contractor Developed Lessons	

In 1-2 paragraphs, please provide the Description of the Nutrition Education Intervention:

Students will receive monthly nutrition lessons from September-May. Lesson topics include: MyPyramid, Label Reading, Portion Size, Re-Think Your Drink, Calcium, Whole Grains, Fruits and Vegetables, Nutrients, and Harvest of the Month taste testing each month.

In 1-2 paragraphs, please provide a Description of the Physical Activity Intervention:

n/a

In 1-2 paragraphs, please provide a Description of the Standardized Training:

The monthly intervention classes are lead by one of our Nutrition Educators. Each month, the previous lesson is quickly reviewed before beginning the new lesson. A poster is kept throughout the year that highlights the monthly lesson.

In 1-2 paragraphs, please provide a Description of the Standard Administration of Data

The standard administration of data collection is the pre and post survey. There is also discussions at the beginning and ending of each of the monthly lessons with the Nutrition Educator and students to check for comprehension and understanding.

In 1-2 paragraphs, please provide a Description of the Standardization Across All Classrooms

The Nutrition Educator used Network approved lessons and materials to deliver the lessons to the students.

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

b. Describe the points at which data were collected.

	First Administered	Last Administered
Pre-test:	10/14/2010	10/14/210
Post-test:	5/1/2011	5/11/2011
Follow-up:		

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?	9

c. Describe how the data were collected.

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

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.

Background:

To assess the impact of the VUSD Nutrition Network program, 6th grade students at two schools in VUSD were surveyed in October and May of the 20010/11 school year. Schools included in the study were DeAnza Academy of Technology and Arts (DATA) Middle School, which participated in the Nutrition Network program, and Anacapa Middle School, which did not participate in the Nutrition Network program and therefore served as the control group. DATA has long had the highest percentage of low income students of all VUSD middle schools. Within the past two years, it has been converted to a magnet school, with the intent of attracting a more diverse group of students. As of this writing, though, DATA continues to have a high percentage of low income and minority students.

Each area of study will be discussed separately. For most statistical analyses, paired-samples t-tests were conducted, as requested by Nutrition Network, although the categorical nature of most of the data would point toward the use of non-parametric tests. Because of the high number of t-tests conducted, it is important to keep in mind that some positive results were likely acquired by chance.

Access to Fruits and Vegetables at Home and School

At both pre- and post-test, students were asked separate questions about access to fruits and vegetables at home, on a four point scale with response options of never, sometimes, always, and I don't know (responses were scored with a 1 for "never," 2 for "sometimes", 3 for "always" and 0 for "I don't know). Responses to questions about fruits and vegetables were combined to provide a total home access score. Data were analyzed using the SPSS Paired Samples t-test procedure.

At both schools, no significant change was seen in students' report of access to fruits and vegetables in the home (Anacapa: $t = -1.8$, $df = 60$, $p = .09$; DATA: $t = -.48$, $df = 62$, $p = .64$; the negative t scores at both schools indicate that there was an increase in post-test reported availability in the home). While neither school showed significant change in this variable, a trend towards a significant increase in home availability was reported among the control group students. A similar finding was noted last year. The reasons for this remain unclear. Notably, though, DATA did not have the reported decrease in home availability that was seen in the 2009/10 school year. It is likely that home outreach efforts have had at least some impact on parents' likelihood of keeping fruits and vegetables in the home.

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 control group students of Anacapa Middle School, significant increases from pre- to post-test were seen in the consumption of cereal ($t = 2.17$, $df = 62$, $p = .03$) and sports drinks/punch ($t = 2.17$, $df = 62$, $p = .03$). A significant decrease as seen in the consumption of water ($t = 2.20$, $df = 62$, $p = .03$). With respect to beverage choices, these findings indicate that, over the course of the sixth grade school year, control group students drank less water and more of sugary punches/sports drinks. No change in soda consumption was noticed.

DATA students, on the other hand, showed only one significant change from pre- to post-test in the surveyed areas: from pre- to post-test, a decrease in soda consumption was seen among this group of students ($t = -2.56$, $df = 64$, $p = .013$). This is an important and noteworthy finding, given the high sugar and caloric content of soda and the easy availability of soda, especially in lower income areas. These findings suggest that beverage consumption is a major area of nutrition that changes over the course of the sixth grade year, generally not in healthy ways. For students participating in Nutrition Network, though, increases in consumption of sugary non-soda beverages was not seen, nor was there a decrease in water consumption. These findings point to an important way Nutrition Network may be impacting students' nutrition.

Exercise and Physical Activity

Students were asked the following two questions related to physical activity:

(1) Thinking about the last week, fill in the bubble for the days you exercised or took part in physical activity for at least 60 minutes that made you sweat and breathe hard.

(2) Thinking about the last week, fill in the bubble for the days you played outdoors for at least 30 minutes.

For each question, students were given one point for each day they engaged in the specified level of activity and then the scores were combined for each scale. Students could have a score from 0 to 7 for each question. Analysis consisted of the paired-samples t-test in SPSS.

At the control group school (Anacapa), students showed no significant change from pre- to post-test in the degree to which they engaged in physical activity for 60 minutes. The mean number of days of exercise at pre-test was 4.1; the mean number of days exercised at post-test was 3.9. This difference was not significant ($t = .429$, $df = 62$, $p = .670$), suggesting no meaningful change in the degree to which Anacapa students engaged in physical activity over the course of the year. However, it is important to note that the pre-test days exercised was much higher than that seen in Anacapa sixth graders in the 2009/10 school year (2009/10: 2.6 days; 2010/11: 4.1). Comparison of the 2009/10 and 2010/11 exercise rates for Anacapa sixth graders confirms that pre-test exercise rates among these students were significantly higher in 2010/11 than in 2009/10 ($F = 11.98$, $df = 1,112$, $p = .001$). This pre-test increase may be related to the major effort VUSD has put into increasing physical education activities in all of their school.

A similar lack of increase in outdoor play over the course of the 2010/11 school year was seen among Anacapa students. At pre-test, students reported an average of 4.0 days of outdoor play in the previous week; at post-test, the mean days of outdoor play was 3.7. This difference was not statistically significant, $t = 1.07$, $df = 62$, $p = .288$.

The findings for students participating in Nutrition Network (DATA students) were very similar, although DATA students had far higher levels of physical activity at pre-test than Anacapa students. At pre-test, DATA students reported 4.7 days of exercise in the past week; at post-test, this increased slightly to 4.9. This change was not statistically significant though, $t = -.85$, $df = 64$, $p = .399$. In the same vein, a slight increase in outdoor play was seen among DATA students, from an average of 3.8 at pre-test to an average of 4.2 at post-test. Again, though, this difference was not significant, $t = -1.2$, $df = 64$, $p = .229$.

While doing these analyses, it was noted that DATA students reported a higher level of physical activity at both pre- and post-test than Anacapa students. Analysis of Variance indicated that the differences between the two schools at pre-test were not statistically significant in either area. That is, at pre-test, DATA students reported levels of exercise and outdoor play that were similar to those of Anacapa students. However, at post-test, a significant difference was noted between DATA and Anacapa students in the degree to which they participated in outdoor play ($F - 7.0$, $df = 1, 126$, $p = .009$). A one day difference in average days of outdoor play at post-test was found between the two schools (Anacapa: 3.9; DATA: 4.9), showing that students at the Nutrition Network school had significantly higher levels of outdoor play at post-test than non-Nutrition Network students.

Taste Preferences

At both pre- and post-test, students were asked about taste preferences for ten fruits and ten vegetables. Of the twenty total fruits/vegetables, ten (four fruits, six vegetables) were included in Harvest of the Month (HOM) activities at DATA Middle School. For each fruit/vegetables, 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. Additional analyses included calculation of the number of fruits/vegetables liked (including "like a lot" and "like a little"), disliked, or unrecognized at pre-test and post-test by each students. The pre- and post-test counts for each preference status (like, dislike, unknown) were compared using one way Analysis of Variance.

At Anacapa Middle School (no participation in Harvest of the Month), two vegetables showed significant change in taste preferences from start to finish. Of the twenty fruits and vegetables surveyed, the only significant changes in preferences among Anacapa students were for lettuce ($t = 2.01$, $df = 60$, $p = .049$) and spinach ($t = 2.18$, $df = 60$, $p = .033$). Taste preference for lettuce went from an average score at pre-test of 3.5 (midway between "I like this a little" and "I like this a lot") to 3.7 (close to "I like this a lot") at post-test. Spinach went from 2.7 at pre-test to 2.9 at post-test.

Taste preferences at DATA remained remarkably similar from pre-test to post-test for all fruits and vegetables, with the exception of avocado, which saw a gain in taste preference from 2.8 at pre-test to 3.0 at post-test ($t = 2.27$, $df = 61$, $p = .027$). Avocado was one of the Harvest of the Month vegetables, although one vegetable alone is not sufficient to indicate that Harvest of the Month activities specifically impacted taste preference. Similar increases were not seen when looking at the other Harvest of the Month fruits and vegetables.

While the hoped for gains in taste preferences were not seen among DATA students, it is important to note that all significant changes in preferences for last year's (2009/10) sixth grade DATA students were negative; that is, 2009/10 DATA students showed a decrease in taste preferences over the course of the school year. In comparison, the 2010/11 sixth grade students at DATA did not show any significant decreases in taste preferences.

Further observation of changes in taste preferences among DATA sixth grade students in 2009/10 versus 2010/11, specifically in the number of fruits and vegetables students reported "liking" ("a little" or "a lot"), indicated that there was in fact a significant difference between the students in the two years ($F = 9.5$, $df = 1, 150$, $p = .002$). For the 2009/10 DATA students, the average change in the number of fruits/vegetables liked was -.76; in other words, the

2009/10 students on average liked almost one fruit/vegetable less at post-test than at pre-test. However, among the 2010/11 students, there was an almost identical increase in number of fruits/vegetables liked (mean = .72) from pre- to post-test. This seems to provide evidence that, in comparison to 2009/10, this year's Nutrition Network program was more effective in reaching students and increasing the number of fruits and vegetables they reported liking.

b. Description of how evaluation results will be used:

VUSD has shown progress in the degree to which its Nutrition Network program has impacted students. The changes for the worse that were seen for NN participants in 2009/10 were not seen among 2010/11 participants. Specifically, the 2010/11 sixth grade NN students did not show the decreases for taste preferences in fruits and vegetables that were seen among 2009/10 students. While significant numbers of gains were also not seen, there is some evidence that things are moving in the right direction. In 2011/12, VUSD will continue to strengthen and its NN activities in a way that will build upon 2010/11 activities and hopefully create higher levels of positive change. Further emphasis will be placed on engaging students in taste-testing and soliciting input on ways in which to reach students more effectively.

7. Point of Contact

Name:	Anne Thille
Phone Number:	(805) 641-5000x1309
Email Address:	anne.thille@venturausd.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 and Network High School Survey

Yes

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

0

Ventura Results

T-Test

			Mean	N
Ventura	Pair 1	Milk	1.4922	128
		Milk	1.4531	128
	Pair 2	Yogurt, Cottage Cheese, String Cheese, Yogurt Drink	.6641	128
		Yogurt, Cottage Cheese, String Cheese, Yogurt Drink	.7891	128
	Pair 3	Cereal	.6406	128
		Cereal	.8438	128
	Pair 4	French Fries, Potato Chips, Tortilla Chips, Corn Chips	.7578	128
		French Fries, Potato Chips, Tortilla Chips, Corn Chips	.7734	128
	Pair 5	Punch, Sports Drinks, Other Fruit-Flavored Drinks, No Juice	.8281	128
		Punch, Sports Drinks, Other Fruit-Flavored Drinks, No Juice	.969	128
	Pair 6	Water	2.5469	128
		Water	2.4531	128
	Pair 7	Soda	.7266	128
		Soda	.5625	128
	Pair 8	Sweet Rolls, Doughnuts, Cookies, Brownies, Pie, Cake	.5703	128
		Sweet Rolls, Doughnuts, Cookies, Brownies, Pie, Cake	.6406	128
	Pair 9	Number of days PA for at least 60 min	4.3750	128
		Number of days PA for at least 60 min	4.4531	128
	Pair 10	Number of days play outdoors at least 30 min, not at school	3.8906	128
		Number of days play outdoors at least 30 min, not at school	3.9297	128
	Pair 11	Ate breakfast yesterday?	1.2188	128
		Ate breakfast yesterday?	1.2031	128
	Pair 12	Like to try new foods?	1.8594	128
		Like to try new foods?	1.8359	128
	Pair 13	How often do parents eat fruit?	2.5669	127
		How often do parents eat fruit?	2.6142	127
	Pair 14	How often do parents eat veg?	2.5591	127
		How often do parents eat veg?	2.4961	127
	Pair 15	Fruit at home?	2.6960	125
		Fruit at home?	2.7360	125
	Pair 16	Veg at home?	2.5242	124
		Veg at home?	2.6290	124
	Pair 17	FVJ_Pre	3.4375	128
		FVJ_Post	3.6406	128
	Pair 18	Veg	1.2031	128
		Veg	1.1719	128
	Pair 19	Fruit	1.2813	128
		Fruit	1.4766	128
	Pair 20	Juice	.9531	128
		Juice	.9922	128

a. The correlation and t cannot be computed because there are no valid pairs.
b. The correlation and t cannot be computed because the standard error of the difference is 0.

Paired Samples Test

Contractor			Paired Differences Mean	Paired Differences Std. Deviation	Sig. (2-tailed)
Ventura	Pair 1	Milk	.03906	1.06040	.678
	Pair 2	Yogurt, Cottage Cheese, String Cheese, Yogurt Drink	-.12500	1.07220	.190
	Pair 3	Cereal	-.20313	.88165	.010
	Pair 4	French Fries, Potato Chips, Tortilla Chips, Corn Chips	-.01563	1.00381	.860
	Pair 5	Punch, Sports Drinks, Other Fruit-Flavored Drinks, No Juice	-.14063	1.14145	.166
	Pair 7	Soda	.16406	1.04072	.077
	Pair 8	#13 #16 Sweet Rolls, Doughnuts, Cookies, Brownies, Pie, Cake - #13 #16 Sweet Rolls, Doughnuts, Cookies, Brownies, Pie, Cake	-.07031	.95722	.408
	Pair 9	#14 #17 Number of days PA for at least 60 min - #14 #17 Number of days PA for at least 60 min	-.07813	2.28176	.699
	Pair 10	#15 #18 Number of days play outdoors at least 30 min, not at school - #15 #18 Number of days play outdoors at least 30 min, not at school	-.03906	2.58220	.864
	Pair 11	Ate breakfast yesterday?	.01563	.45219	.697
	Pair 12	Like to try new foods?	.02344	.60789	.663
	Pair 13	How often do parents eat fruit?	-.04724	1.64683	.747
	Pair 14	How often do parents eat veg?	.06299	1.67497	.672
	Pair 15	Fruit at home?	-.04000	.54477	.413
	Pair 16	Veg at home?	-.10484	.67256	.085
	Pair 17	FVJ	-.20313	2.20007	.298
	Pair 18	Veg	.03125	1.15655	.760
	Pair 19	Fruit	-.19531	1.12284	.051
	Pair 20	Juice	-.03906	1.13916	.699
	Pair 6	Water	.09375	.90002	.241