



FINAL REPORT, FFY 2014
October 1, 2013 – September 30, 2014
For
Supplemental Nutrition Assistance Program—
Education

In Cooperation with
California Department of
Social Services, CalFresh and
California Department of Public Health,
Network for a Healthy California

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Sacramento, California



1. SNAP-Ed Program Overview: Executive Summary

- **Progress in achieving overarching goal(s):**

Overarching Goal: The *Nutrition Education and Obesity Prevention Branch (NEOPB)* aims to increase fruit and vegetable (FV) consumption and physical activity (PA) and reduce consumption of sugar-sweetened beverages (SSB) by establishing a multi-level infrastructure of diverse partner organizations that provide targeted education, social marketing, and other support to California's SNAP-Ed qualified parents and children.

Statewide Outcomes: Our statewide survey found no further increase in obesity among adults, although "overweight" in some populations increased in several subgroups. Teens as a whole showed a non-significant decrease in FV consumption from 4.4 to 4.2 mean servings/day, however SNAP participants increased significantly from 4.0 to 4.8 servings. Overweight and obesity did not increase in the total population or most subgroups of teens.

A four-year evaluation study including interviews with mothers, teens, and children from California SNAP households produced the following baseline findings: 41.7% of mothers, 17.9% of teens, and 34.8% of children were obese; 65.4% of mothers, 18.9% of teens, and 58.7% of children reported meeting physical activity recommendations. About 45% of children and teens were consuming one or more glasses of sugary beverages daily, while about 58% of mothers were doing so. Reported fruit consumption is much higher than vegetable consumption: 41.3% of mothers, 28.2% of teens, and 84.7% of children reported eating fruit two or more times/day while only 22.4% of mothers, 10.0% of teens and 9.4% of children reported meeting the goal of three or more times/day of vegetables.

Impact of Local Interventions: In FFY 14, 33 local health departments conducted outcome evaluations. Of the 9,875 SNAP-Ed participants (N=6,815 children, 1,178 teens, and 1,882 adults), aggregate analysis by age group revealed the following significant findings:

- 13.6 percent increase in vegetable consumption by children (LT2),
- 29.5 percent increase in vegetable consumption by adults (LT2),
- 15.4 percent increase in fruit consumption by children (LT2),
- 23.9 percent increase in fruit consumption by adults (LT2),
- 5.6 percent more adults ate more than two servings of fruit (LT2),
- 4.5 percent increase in water consumption by children (LT5),
- 14.3 percent decrease in sugary drink consumption (soda and other sugary beverages) by teens (LT5),
- 35.8 percent decrease in sugary drink consumption by adults (LT5),

- 15.3 percent increase in the number of days/week children were physically active at least 60 minutes (LT7),
- 67.1% increase in the percent of adults using nutrition labels when food shopping (ST2),
- 9.34% decrease in the percent of participants who ran out of food before the end of the month (LT6).

Community Locations: EARS demographics were reported for 4,729 NEOPB sites that are delivering Direct Education.

Number of new projects implemented during the reporting year by primary approach (Direct, Indirect, Social Marketing, Policy, Systems, or Environmental Change):

Direct Education: 22 local projects

Indirect: 21 local projects

Social Marketing: 0

Policy, Systems, or Environmental Change: 46 local health departments

Note: Many projects reported both direct and indirect data.

Number of ongoing projects that were operational during the reporting year by primary approach (Direct, Indirect, Social Marketing, Policy, Systems, or Environmental Change):

Direct Education: 78 local projects

Indirect: 77 local projects

Social Marketing: 1

Policy, Systems, or Environmental Change: 0

Major achievements (not already addressed):

- Online ATF fully operational and used to collect all EARS data for FFY 14; system enables user to generate reports
- Local Health Departments trained in Policy/Systems/Environmental (PSE) Change implementation and RE-AIM evaluation and reporting
- Microsoft Access database for PSE RE-AIM reporting coordinated with Western Region SNAP-Ed Evaluation Framework developed and implemented for FFY documentation
- LHD Project Directors' Meetings in FFY 2014 included a meeting of LHD SNAP-Ed program directors in November, a Forum of all State and Local Implementing

Agencies in February, plus multiple webinars and conference call during which SIA's assisted LIAs to prepare integrated work plans for FFY 2015;

- Local Integrated Work Plans were submitted to USDA for FFY 2015 which included coordinated goals and activities for all SNAP-Ed-funded entities in each local jurisdiction;
- The first Champion Providers Conference in San Francisco trained 48 (?) medical and dental care providers in strategies for exercising their influence in their communities to educate others about issues related to obesity;
- NEOPB submitted and gained approval from the State Legislature for 40 civil positions to replace the long-standing contract for personal services which was determined not to be permitted to be renewed
- CDPH was the focus of a USDA WRO Management Evaluation in May 2014 which included on-site visits to Riverside, Los Angeles and Kern Counties.
- The three-year competitively funded Local Food and Nutrition Education projects were completed in FFY 2014. Each of the ten projects prepared a retrospective case study summarizing their accomplishments, challenges, lessons learned and sustainability plan. The projects provided direct education contacts to 17,000 individuals in a variety of settings including playgroups, Asian Health clinic, Latino Health Clinics, low income housing complex, and several non-profits with hunger/food security focus.

- **Major setbacks, if any:**

No major set-backs occurred and CDPH was able to achieve all of its objectives for the year and in addition, addressed the following challenges not in the State Plan:

- Closed out a contractual relationship of almost twenty years standing, including transferring over 1,016 pallets of materials from one warehouse to another;
- Developed and gained approval to execute a Non-Competitively Bid (NCB) contract to allow the contractor an additional year to complete the transfer of materials and knowledge to civil service staff;
- Gained Legislative approval for civil service positions;
- Responded to Legislative inquiries stemming from a letter of concern from USDA to CDPH; and
- Coordinated preparation, site visits and responses to the ME from USDA which was unfortunately coincident with both preparing the new integrated work plan and during the Legislative approval process for the new civil service positions

Overall assessment:

The *NEOPB's* analyses of the combined databases contractors implementing local interventions in FFY14 revealed improvements across all three targeted behaviors. Significant effort was required to both adapt to the new integrated work plan and to implement planned changes in staffing for FFY 15; however, the effort for both of those changes will yield significant improvements for program development, growth, and sustainability in FFY 15.

2. SNAP-Ed Administrative Expenditures

Directions- To help FNS better understand State SNAP-Ed administrative expenditures, provide the percent and dollar value of administrative expenses used for each Implementing Agency (IA) in the State for each of the following categories. To estimate the percentage of total administrative expenditures, use the data you compiled for question 10 on the EARS report. In the example below, administrative expenditures for X State University = \$550,000.

Type of Administrative Expense:	Percent of Total Administrative Expenditures for each Implementing Agency by Type of Expense					
	Name of IA:		Name of IA:		Name of IA:	
	Example: X State U		CA Department of Public Health			
	% values	\$ values	% values	\$ values	% values	\$ values
Administrative Salary	40%	\$220,000	69.83%	5,994,465.40		
Administrative Training Functions	15%	\$82,500	.05%	4,250.40		
Reporting Costs (identify % related to EARS, if possible)	3%	\$16,500	3.3%	283,223.14		
Equipment/ Office Supplies	10%	\$55,000	.20%	16,840.31		
Operating Costs (TRAVEL ONLY)	10%	\$55,000	.82%	70,874.95		
Indirect Costs	12%	\$66,000	7.75%	665,627.25		
Overhead Charges (space, HR services, etc.)	10%	\$55,000	18.05%	1,549,415.20		
TOTAL			100%	8,584,696.65		

3a. SNAP-Ed Evaluation Reports completed for this Reporting Year

Using the chart below, identify the type(s) of SNAP-Ed evaluations (by project) that resulted in a written evaluation report of methods, findings, and conclusions. Use the definitions of each type of evaluation that are provided below. Include a copy of each evaluation report that was produced in the appendix to this report. Impact evaluation reports should include the components described on the following page. Each evaluation report should identify clearly the associated project name(s) on the cover or first page.

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, 2014, collect data needed to report standardized, mandated Network population and activity elements to USDA.	USDA		✘		
Nutrition Education and Obesity Prevention Branch SNAP-Ed PSE Evaluation Project (Statewide Aggregated Data)	By September 30, of each year, each local health department will initiate one or more policy, systems, and /or environmental change intervention and report using the RE-AIM database one or more positive changes.	USDA			✘	

<p>Examining the Relationships between Levels of Reach of a Supplemental Nutrition Assistance Program-Education (SNAP-Ed) Interventions and Nutrition and Physical Activity-Related Outcomes using Data from the California Health Interview Survey (CHIS)</p>	<p>By September 30, 2014, examine associations between levels of intervention reach and fruit and vegetable consumption, consumption of fast food and sugar-sweetened beverages, and physical activity using CHIS data from census tracts that had and had not received exposure to SNAP-Ed activities.</p>	<p>A random sample of participants in the 2011 California Health Interview Survey (adults, teens, and children from households <185% FPL), the intervention group selected from census tracts where SNAP-Ed was delivered (N=3,851) and a non-intervention group selected from CTs where no SNAP-Ed was delivered (N=2,076)</p>				<p>×</p>
<p>Obesity in California 2000-2012</p>	<p>Characterize obesity statistics in California during the 2000-20012 time period: prevalence and trends; racial/ethnic, gender, and geographic disparities; risk factors and indicators; health consequences and costs.</p>	<p>California public health professionals, policy-makers, other stakeholders</p>			<p>×</p>	

<p>Evaluation of the 2013 Champions for Change Media Campaign</p>	<p>Determine if “definite” exposure to the 2013 Champions for Change Media Campaign had a measureable effect in self-reported dietary or physical activity behavior, either initially or over a three-month time period.</p>	<p>A random sample of 1,143 mothers age 18-54 from CalFresh households 456 white, 386 African American, and 299 Latino</p>			<p>×</p>	
<p>2013 Highlights from the Nutrition Education and Obesity Prevention Branch’s 2013 Children’s Healthy Eating and Exercise Practices Survey</p>	<p>Characterize dietary practices, physical activity, sedentary behavior, obesity, and related social norms and environmental factors among California children living in households receiving CalFresh</p>	<p>A random sample of 651 6- to 11-yearold children from California households receiving CalFresh</p>			<p>×</p>	

<p>2013 California Dietary Practices Survey Highlights from the Nutrition Education and Obesity Prevention Branch's 2013 California Dietary Practices Survey</p>	<p>Characterize dietary practices, physical activity, sedentary behavior, obesity, and food insecurity among California adults and examine differences between low and higher income Californians, SNAP participants and non-SNAP low-income participants.</p>	<p>A random sample of 1,505 California adults, 889 CalFresh recipients, 164 household income < 130% FPL not CalFresh;, 311 with household income > 185% FPL</p>			<p>×</p>	
<p>2010 Highlights from the California Teen Eating, Exercise and Nutrition Survey</p>	<p>Characterize dietary practices, physical activity, sedentary behavior, obesity, and the school food and physical activity environment among California adolescents and examine differences between low and higher income California teens.</p>	<p>A random sample of 1,220 California teen, age 12-17, 463 CalFresh participants, 380 household income < 130% FPL not CalFresh; 312 with household income > 185% FPL</p>			<p>×</p>	

<p>2012 Highlights from the California Teen Eating, Exercise and Nutrition Survey</p>	<p>Characterize dietary practices, physical activity, sedentary behavior, obesity, and the school food and physical activity environment among California adolescents and examine differences between low and higher income California teens.</p>	<p>A random sample of 1,143 California teen, age 12-17, 481 CalFresh participants, 304 household income < 130% FPL not CalFresh; 252 with household income > 185% FPL</p>			<p>×</p>	
<p>California Adolescents Are More Physically Active When They Have Greater Opportunities for Physical Activity in Their School and Community</p>	<p>Identify the community and school opportunities that predict how much physical activity California adolescents get and differences in predictors for teen boys and girls that may help explain the marked gender disparities that currently exist in teen physical activity</p>	<p>A random sample of 1,143 California teen, age 12-17, 481 CalFresh participants, 304 household income < 130% FPL not CalFresh; 252 with household income > 185% FPL</p>			<p>×</p>	

<p>Key Facts about California Teens, 2010: Creating Change with Youth Voice. Healthy California</p>	<p>Characterize dietary practices, physical activity, sedentary behavior, and obesity among California adolescents and identify positive findings that are opportunities for change.</p>	<p>A random sample of 1,143 California teen, age 12-17, 481 CalFresh participants, 304 household income < 130% FPL not CalFresh; 252 with household income > 185% FPL</p>			<p>×</p>	
<p>Supporting a Healthy Lifestyle among Low-Income Children: Key Findings from the 2011 California Children's Healthy Eating and Exercise Practices Survey.</p>	<p>Examine the differences between low-income 9-111 year old children with positive dietary and physical activity habits and healthy weight vs. those who don't to see what home and school environmental factors are associated with healthy habits.</p>	<p>A random sample of 334 9- to 11-year-old children from California households receiving CalFresh</p>			<p>×</p>	

* FE = Formative Evaluation PE = Process Evaluation
OE = Outcomes Evaluation IE = Impact Evaluation

3b. Impact Evaluation:

a. Project title

Impact Outcome Evaluation Project: Statewide Local Health Department Project
 Aggregated Data

Table 1. Statewide Local Health Department Project Aggregated Data for 33 Projects	
Health Department	Site
Alameda County Health Care Services Agency	Schools, Adult Education & Job Training, Churches, Adult Rehabilitation Centers, Community Centers, Individual Homes, Elderly Service Centers, Head Start Programs, Libraries, Shelters
Butte County Public Health Department	Schools
City and County of San Francisco Department of Public Health	Schools, Adult Rehabilitation Centers, Emergency Food Assistance Sites, Public/Community Health Centers
City of Long Beach Department of Health and Human Services	Schools
City of Pasadena Public Health Department	Schools, Community Centers, Head Start Programs, Libraries, Public/Community Health Centers, WIC Programs
Contra Costa Health Services	Schools
County of Fresno	Schools, Other Youth Education Sites, Public Housing
County of Riverside, Department of Public Health	Schools
County of Sacramento Department of Health and Human Services	Adult Rehabilitation Centers, Head Start Programs, Job Corps
County of San Bernardino Department of Public Health	School
County of San Diego	Schools, Other Youth Education Sites
County of Sonoma, Department of Health Services	School
Humboldt County Health Department	Schools
Imperial County Public Health Department	Schools
Kern County Public Health Department	School
Kings Community Action Organization, Inc.	Other Summer Youth Programs
Los Angeles County Department of Public Health	Schools, Churches, Community Centers, Emergency Food Assistance Sites, Farmers' Markets, Public/Community Health Centers, Public Housing
Madera County Public Health Department	School

Table 1. Statewide Local Health Department Project Aggregated Data for 33 Projects	
Health Department	Site
Marin County Health and Human Services	Schools
Monterey County Health Department	Schools
Orange County Health Care Agency	Community Centers, Emergency Food Assistance Sites, Libraries, Public Housing, Shelters
San Joaquin County Public Health Services	Schools
San Luis Obispo County Public Health Department	Schools
San Mateo County Health Systems	Schools
Santa Barbara County Public Health Department	Schools, Community Centers
Santa Clara County Public Health Department	School, Family Resource Center
Santa Cruz County Health Services Agency	Schools
Shasta County Health and Human Services Agency	Schools
Solano County Health and Social Services	Schools
Stanislaus County Health Services Agency	TANF Job Readiness
Tulare County Health and Human Services Agency	Schools
Ventura County Public Health Department	Schools, Adult Education & Job Training, Public Housing, Rainbow Connection Family Resource Centers, Project Access Family Resource Center
Yolo County Department of Health Services	Adult Education & Job Training, Extension Offices, Centers for Families

b. Project Goals (specifically those evaluated)

- To increase consumption of healthy foods, especially fruit and vegetables
- To decrease consumption of sugar sweetened beverages
- To increase consumption of healthy beverages, especially water
- To increase physical activity among low-income California adults, teens, and children participating in NEOPB’s SNAP-Ed with a long-term goal of reducing obesity and food insecurity among the population

c. Evaluation Design: Describe the unit of assignment to intervention and control or comparison groups. Describe how assignment to these groups was carried out. Be explicit about whether or not this assignment was random. Describe how many units (and individuals if they were not the unit of assignment) were in the intervention and control comparison groups at the start and end of the study.

Five of the 39 impact/outcome local evaluations used a comparison group. In each case both the intervention and comparison groups were convenience samples.

A total of 9,875 individuals participated in the 39 evaluations. Of these, 9,006 received the local health department-specific intervention and 869 were in a control group selected by the LHD.

Table 2 shows the individuals by age group.

- Intervention: 9,006 (91.2%)
- Control: 869 (8.8%)

Age Category	Intervention Group Participants	Control Group Participants	Total
Youth, 8-13 years	6,106	709	6,815
High School, 14-17 years	1,178	0	1,178
Adult 18+ years	1,722	160	1,882
Total	9,006	869	9,875

d. Impact Measures:

d1. Describe the measure(s) associated with each intervention goal.

Table 3 shows the tools used to measure the change in FV, SSB, and water consumption, the number of local projects that used the tool, and the number that showed a statistically significant change in the desired direction.

Table 3. Measures of Fruit and Vegetable and Sugar-Sweetened Beverage Consumption for Adults, Teens, and Youth	
Measures of Fruit and Vegetable and Sugar-Sweetened Beverage Consumption¹	Number of Local Projects Using the Tool (Number with Significant Results for Fruits, Vegetables, Both Combined, and/or Sugar-Sweetened Beverages and/or Water)
• <i>Food Behavior Checklist (FBC)</i> ^{1,2,3}	11 (10)
• <i>Fruit and Vegetable Checklist (FVC)</i> ⁴	1 (1)
• <i>Network High School Survey (i.e. Youth Risk Behavior Survey (YRBS))</i> ^{6,7,8,9,10}	4 (1)
• <i>Network Youth Survey (i.e. SPAN, but coded differently)</i> ^{5,6,7,8,9}	20 (14)

d2. Describe the points at which data were collected and how. If there were any differences in measures for the intervention and control or comparison groups, describe them.

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

e. Findings: Describe the measurement results for intervention and control or comparison groups at each point data were collected.

e1. Quantitative Findings

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

¹ The number of local projects in Table 3 does not add to 39 because some local projects pool resources and perform one combined evaluation, while others conduct evaluations with multiple age groups.

Tests of significance were conducted with paired T-tests for continuous outcomes and McNemar tests for dichotomous outcomes.

Fruit and Vegetable Consumption-Adults

The *Food Behavior Checklist (FBC)* and *Fruit and Vegetable Checklist (FVC)* were used to measure adult consumption of FV for 12 LHD projects. Both the FBC and the FVC use identical questions to measure FV-related behaviors. These surveys were validated with low-income populations in California making them a fitting measure of consumption for this evaluation. Local projects provided data using the *FBC* and *FVC* from 1,634 individuals from intervention groups and 129 from comparison groups. Results showed that 1,634 individuals receiving an intervention reported an increase of 0.93 cups of total FV (Table 4). Fruit alone and vegetables alone increased by just under one-third and just over one-third of a cup, respectively. The increase in each fruit and vegetables alone, and total consumption of FV combined were statistically significant ($p < 0.001$). Intervention participants also demonstrated increased variety in FV intake, with a 54.3% increase in eating more than one kind of fruit a day and a 47.5% increase in eating more than one kind of vegetable a day “often” or “every day” rather than “sometimes” or “no” ($p < 0.001$). Control participants show no statistically significant improvements in FV consumption or variety.

Table 4. Pre- and Post-Test Results for Fruit and Vegetable Consumption and Variety - Adults

	N	Pre-test	Post-test	% Change	P-value
Intervention Adult					
Total Fruit & Vegetables, Cups (Mean)	1,606	2.14	3.07	43.16	<0.001
Fruit, Cups (Mean)	1,634	1.21	1.50	23.89	<0.001
Vegetables, Cups (Mean)	1,612	1.20	1.55	29.54	<0.001
Eat >1 Kind of Fruit Each Day (%)	1,622	38.30	59.10	54.31	<0.001
Eat >1 Kind of Vegetable Each Day (%)	1,610	42.50	62.70	47.53	<0.001

	N	Pre-test	Post-test	% Change	P-value
Control Adult					
Total Fruit & Vegetables, Cups (Mean)	129	2.84	2.89	1.78	0.580
Fruit, Cups (Mean)	129	1.40	1.44	2.49	0.517
Vegetables, Cups (Mean)	129	1.43	1.45	1.12	0.764
Eat >1 Kind of Fruit Each Day (%)	129	54.30	52.70	-2.95	0.864
Eat >1 Kind of Vegetable Each Day (%)	128	50.80	55.50	9.25	0.345

A total of 20 local projects collected FV consumption data from 5,206 youth receiving an intervention and 555 youth from a control group using the *Network Youth Survey*. Three local projects collected FV consumption data using the *Network High School Survey* from 1,047 teens receiving an intervention, but were unable to field any comparison respondents.

Results from the *Network Youth Survey* show that youth receiving an intervention had a 0.49 increase in times per day they ate FV ($p < 0.001$) (Table 5). Increases in fruit alone went up nearly .3 time/day and vegetables alone increased .2/day ($p < 0.001$). They showed a 17.07% increase in consumption of fruit two or more times/day and a 28.21% increase in consumption of vegetables three or more times/day. Results for youth in the control group showed no change in FV consumption.

Table 5. Pre- and Post-Test Results for Fruit and Vegetable Consumption - Youth					
	N	Pre-test	Post-test	% Change	P-value
Intervention- Youth					
Total Fruit & Vegetables Times/Day (Mean)	5,195	3.38	3.87	14.57	<.001
Fruit, Times/Day (Mean)	5,206	1.81	2.09	15.40	<.001
Vegetables, Times/Day (Mean)	5,200	1.57	1.78	13.59	<.001
Fruit ≥ 2 Times/Day (%)	5,206	49.20	57.60	17.07	<.001
Vegetables ≥ 3 Times/Day (%)	5,200	23.40	30.00	28.21	<.001

	N	Pre-test	Post-test	% Change	P-value
Control- Youth					
Total Fruit & Vegetables Times/Day (Mean)	554	3.04	3.15	3.50	.253
Fruit, Times/Day (Mean)	554	1.55	1.59	2.44	.507
Vegetables, Times/Day (Mean)	555	1.49	1.55	4.48	.296
Fruit ≥ 2 Times/Day (%)	554	44.00	45.10	2.50	.695
Vegetables ≥ 3 Times/Day (%)	555	19.80	22.90	15.66	.152

The *Network High School Survey* utilizes six FV consumption questions from the *Youth Risk Behavior Survey (YRBS)*. Only five questions were used for these analyses because one question asks about 100% juice consumption. With an increasing emphasis on healthy beverage consumption, in FFY 12, it was deemed no longer appropriate to include juice in the FV analyses. In FFY 14 there were no significant changes for fruit or vegetables among high school students (Table 6).

Table 6. Pre- and Post-Test Results for Fruit and Vegetable Consumption - Teen					
	N	Pre-test	Post-test	% Change	P-value
Intervention- High School					
Total Fruit & Vegetables Times/Day (Mean)	1,037	2.36	2.40	1.59	.583
Fruit, Times/Day (Mean)	1,047	0.94	0.93	-1.28	.717
Vegetables, Times/Day (Mean)	1,041	1.42	1.48	4.13	.263
Fruit ≥ 2 Times/Day (%)	1,047	20.80	19.70	-5.29	.450
Vegetables ≥ 3 Times/Day (%)	1,041	11.60	11.60	0.00	1.000

In FFY 13, in addition to the long-standing goal of increasing FV consumption, *NEOPB* formally adopted a new goal of lowering consumption of SSBs so this is the second year of its efforts in this direction. Two of the three age groups showed success in this area.

Only the single local project using the *FVC*, a subset of questions from the *FBC*, did not evaluate changes in SSBs for adults. The *FBC* uses two questions to capture SSB consumption, one about (non-100% juice) fruit drinks, sports drinks, and punch, and the other about non-diet soda. For each, the question is worded “Do you drink...?” and the answer choices are “no, yes sometimes, yes often, and yes every day”. For scoring purposes, a positive answer of “yes, often” or “yes, every day” to either or both questions categorized a respondent as “drinks sugar sweetened beverages.” Data from intervention adults showed a significant decrease in SSB consumption while the control group did not ($p < .001$) (Table 7).

Table 7. Pre- and Post-Test Results for Sugar Sweetened Beverage Consumption - Adult					
	N	Pre-test	Post-test	% Change	P-value
Intervention Adult					
Sugary Drinks (%)	1,507	29.60	19.00	-35.81	<0.001

	N	Pre-test	Post-test	% Change	P-value
Control - Adult					
Sugary Drinks (%)	128	17.20	21.10	22.67	0.648

Sugar-Sweetened Beverage and Water Consumption-Youth & High School

In FFY 14, consumption of SSB did not decrease significantly among youth, however, that of water increased ($p < 0.001$). For control subjects, consumption of both remained unchanged (Table 8).

Table 8. Pre- and Post-Test Results for Sugar Sweetened Beverage and Water Consumption - Youth					
	N	Pre-test	Post-test	% Change	P-value
Intervention- Youth					
Sugary Drinks (Mean)	5,096	1.34	1.30	-2.53	.154
Water, Times/Day (Mean)	5,417	3.41	3.56	4.50	<.001

	N	Pre-test	Post-test	% Change	P-value
Control- Youth					
Sugary Drinks (Mean)	534	1.74	1.80	3.77	0.317
Water, Times/Day (Mean)	547	3.18	3.22	1.15	0.565

Among high school students receiving the intervention, decreased SSB consumption was their only area of success in terms of large scale aggregated data ($p < 0.001$) (Table 9). Water consumption was unchanged.

Table 9. Pre- and Post-Test Results for Sugar Sweetened Beverage and Water Consumption -Teens					
	N	Pre-test	Post-test	% Change	P-value
Intervention- High School					
Sugary Drinks, Times/Day (Mean)	982	1.42	1.22	-14.33	<0.001
Water, Times/Day (Mean)	1,004	3.38	3.29	-2.68	0.121

Shopping Habits and Food Security - Adults

One goal of nutrition education is to improve the quality of the diet of SNAP participants. A second, is to reduce the chances that the SNAP participant will not have sufficient resources to provide food for self and family throughout the month. The *FBC* measures dietary practices other than consumption of food. Adults receiving an intervention showed improvement in two key areas that suggest the interventions NEOPB’s SNAP-Ed participants have been receiving may be helping them meet these goals. Two-thirds more intervention participants reported becoming nutrition label readers while shopping post intervention, and 9.34% fewer intervention participants reported having run out of food by the end of the month ($p < 0.001$, $p, 0.05$). Control participants did not demonstrate the same effects (Table 10).

Table 10. Pre- and Post-Test Results for Shopping Habits and Food Security - Adults					
	N	Pre-test	Post-test	% Change	P-value
Intervention					
Use Food Labels (%)	1,494	31.90	53.30	67.08	<0.001
Run Out of Food by End of Month (%)	1486	28.90	26.20	-9.34	<0.05
Control					
Use Food Labels (%)	124	49.20	49.20	0.00	1.000
Run Out of Food by End of Month (%)	125	25.60	25.60	0.00	1.000

Physical Activity

One of the items on the *Network Youth Survey* and *Network High School Survey* asked: ‘Check the days you exercised or took part in physical activity that made your heart beat fast and made you breathe hard for at least 60 minutes.’ Response categories ranged from 0-7. At pre-test, intervention youth respondents receiving interventions reported being physically active for 60 minutes 3.34 days this past week, and 3.86 days at post-test (p<0.001). This is the only area in which control youth participants also showed improvement at post-test, increasing from 3.41 to 3.68 days. It is possible that there is some seasonality effect since many of the youth interventions are tied to the school year and spring may bring more activity. There was no change pre- to post-intervention among high school age participants (Table 11).

Table 11. Pre- and Post-Test Results for Physical Activity – Youth and Teens					
	N	Pre-test	Post-test	% Change	P-value
Intervention- Youth					
Days Physically Active for ≥ 60 Min (Mean)	5,021	3.34	3.86	15.37	<.001
Control- Youth					
Days Physically Active for ≥ 60 Min (Mean)	546	3.41	3.68	7.84	<.01
Intervention- High School					
Days Physically Active for ≥ 60 Min (Mean)	977	3.58	3.59	0.34	0.885

See Appendix for Qualitative Findings by Local Contractor

f. Description of how evaluation results will be used:

The primary purpose of the individual LHD IOEs is to provide guidance to the LHD regarding project improvement. NEOPB Research and Evaluation staff meet with LHD staff at the end of each contract year to review findings to see they can suggest improvement for the upcoming year's intervention. Often they indicate the LHD is on the right track, so the goal may be only to increase rigor of the intervention. Other times findings may suggest that strengthening the intervention may lead to better results, employing additional or different strategies to the same general intervention that other practitioners, either within NEOP or from other SNAP-Ed programs, have used. Sometimes, however, findings may indicate that a particular intervention does not seem appropriate for the target population so Research and Evaluation staff will work closely with the LHD to investigate other possible evidence-based interventions that may be preferable.

g. Point of Contact:

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3b. Impact Evaluation: Appendix

Qualitative Findings: Local Health Department Outstanding Accomplishments and Challenges

*Nutrition Education and Obesity Prevention Branch
Statewide Aggregated Data, FFY 2014 12/1/14*

Alameda County Health Care Services, Nutrition Services

Community Health Champions Peer Educator Program

Outstanding accomplishment:

One of the outstanding moments of the intervention is seeing program participants share the importance of healthy living with their communities. For example, several mothers who participated in the program have started a walking group in their community. This suggests peer educators have engaged and connected with participants on a deep level: participants have not only made healthier changes in their lives, they are inspired to help others do the same.

Challenge:

One of the major challenges to implementing this program was retention of both participants and peer educators. Peer educators are required to have at least 20 of their 60 participants attend at least 5 of the 6 nutrition lessons. Finding participants who can attend at least 5 sessions has been challenging. Similarly, attrition is a problem for some of the peer educators. This year 12 peer educators were hired and trained, but 3 of these 12 did not finish the program. One factor that led to peer educator frustration was the delay in getting started due to the lengthy process for obtaining state and federal approval for nutrition education sites. Peer educators had identified groups and chose locations, wanted to get started, and did not understand why it took almost three months for approval to work at the sites. In our model, the peers select the sites so they are unknown to us at the time of plan submittal in June.

Alameda County Health Care Services, Nutrition Services

Cooking for Health Academy

Outstanding accomplishment:

At the Kingdom Church series, more community members are becoming engaged in learning and sharing nutrition information with peers, who in turn are becoming interested in sharing healthy eating information. The pastor of the church is committed to partnering with our program to continue offering the “series” to not only his congregation, but also to the community in which the church serves. We will be conducting a series in Chinese and a series in Spanish to meet the needs of the community. The church has embraced health and wellness as a goal.

At the LightHouse Elementary School series, more community members are becoming engaged in learning and sharing nutrition information to peers, who in turn are becoming interested in sharing healthy eating information. The school staff is committed to partnering with our program to continue offering the “series”. Some of the student’s quotes were: *“I love the recipes, and I’ve started cooking them at my home”*; *“My family enjoyed the recipes, and I’m going to cook more often”*; *“I’m now more motivated to make healthy eating changes”*; *We want you to come back every year, and teach us more about nutrition”*; *“I’ve started separating foods into plastic bags while shopping, and I don’t leave foods outside at room temperature for more than two hours”*.

Overall participants enjoy the classes, stating they learned new information about health and nutrition, how to prepare healthy recipes, and plan to continue to use the recipes.

Challenge:

The Cooking for Health Academy was piloted during the FFY 2012-2013. The program was revised based on evaluation results and rolled out in October 2013. One challenge we had is that newly assigned staff began teaching in 2013-2014 and there was a learning curve we had to adjust to in the first couple of series.

Other challenges were faced at specific site locations:

At LightHouse Elementary School, the biggest challenge faced in implementing the program was that the instructors didn’t have an easy access to kitchen facilities while implementing the course, which ended up constraining the series in terms of time.

Our first session at the YMCA was met with a police stake out. While staff arrived early to set up, participants were not allowed to enter the building due to police action in the neighborhood. This caused our first session to be cancelled with potential loss of participation at future sessions. We had recruited over 30 people, but only seven people

attended the series. On a positive note, however, this challenge indirectly enabled those participating to build rapport with each other and have a higher quality experience.

The Civicorp series had several challenges.

1. The Civicorp organization—a job skills development program—requested our series upon very short notice. Because of the structure of the Civicorp programming, we needed to attend when they could fit us into the schedule of activities, and had to “patch together” staff schedules to make the classes happen, meaning there was a different pair of instructors at each class. This was not ideal for consistency in teaching styles or building relationships with participants.
2. As planning progressed Civicorp cut back on the time originally allotted for our classes, requiring us to condense the curriculum to fit it into a shorter time frame. There was also a two-week break in our succession of classes—the first four classes were provided, a two-week break occurred, and then classes 5/6 were conducted. This was not ideal as it broke the consistency of the series.
3. Retention of participants was difficult, as participants had other activity options provided at the Civicorp center at the same time as our classes.
4. On a practical note, a limited number of electrical circuits in the classroom made it difficult to use multiple skillets—the circuit breaker was overloaded, so we needed to pair up the participants and not everyone had hands-on experience.

The Kingdom Builders Church series was held in the evening to accommodate participant schedules. The church is located in an unsafe neighborhood, and amount of daylight may have limited attendance by those who tend to not go out in the evening.

The series that was held at an individual’s house in the community was well received. The main challenge at an individual’s home is not having sufficient access to electrical outlets. If classes are held at an individual’s house in the future we will need to alter how we teach the two classes that require use of electricity, or change the recipe.

In regards to program evaluation, the biggest challenge was allowing sufficient time for completion of the two pre/post surveys (Food Behavior Checklist, and Cooking Attitude & Self Efficacy Survey). Time spent completing the surveys cuts down on lesson time. It also requires educators to be meticulous on checking the completeness of each survey. Since educators didn’t have much time to do so, some participants didn’t completely fill out the surveys. When this was discussed, midway through the intervention, the survey protocol was reviewed with staff to improve the accuracy of the data collected at future series.

Neither the Food Behavior Checklist, nor the Cooking Attitudes and Self Efficacy Survey are ideal for this intervention, which is why we decided to try using both surveys. This proved very time consuming, so the Cooking for Health Academy team will discuss how best to evaluate future interventions.

Alameda County Health Care Services, Nutrition Services

Alameda County Office of Education

Outstanding accomplishment:

The results are affirming that intake of fruits and vegetables and water increased as a result of the intervention. Our student interns from our Get Fresh Stay Healthy program provided Rethink Your Drink activities at participating school events and were a big hit. It built their confidence about becoming nutrition educators and built awareness throughout the community around unhealthy and healthy ways to hydrate. It's a great fit that we will continue in the 2014-2015 school year.

We are constantly reinforcing messages around eating fruits and vegetables with our elementary school youth and this has a lasting impact. The consumption of fruits and vegetables is visible in every school cafeteria. Any teacher who participates in the program upon entering our cafeterias will have their students approach them gleefully showing them that they're eating a vegetable in their lunch that day. Fruits and vegetables are highly revered and a source of pride.

Here are a few quotes from students/teachers:

Harvest of the Month at Monroe Elementary –

“Students began to get produce in March with snap peas. Many students were surprised to find out that they liked the taste. They were equally excited to get to try spinach in April. Ms. Bender's kindergarten students combined strawberries and math when they created a bar graph based on their taste findings. We loved getting produce and are hoping it will continue next year!” Submitted by Lynette Watkins HOTM Liaison at Monroe Elementary

“We're doing more than tasting at Jefferson Elementary ... we're thinking, learning, singing, dancing, reading, writing, and reciting poems about fresh fruits and vegetables. In the classroom, Jefferson Jaguars thought deeply about fresh fruits and vegetables as they used their five senses to write descriptions about peas; located where spinach is grown in state, country, and world maps; and read poems about strawberries.”

New Buzz in the Hallways at Wilson Elementary School in San Leandro May 28, 2014 by Project EAT Staff, *“This is our first year adopting the Harvest of the Month program at Wilson Elementary School in San Leandro, and both teachers and students are so excited about trying each month’s harvest! The kids are saying: -“I love spinach!” -“It’s bitter, but it’s sooooo good!” -“Can I have more?”*

Challenge:

This was the first year our program used the subcontractor model, removing staff from having a direct line of contact and follow through with teachers at ACOE schools, especially those participating in the IOE. Additionally, we have not worked in Hayward, San Lorenzo, or San Leandro school districts prior to this year. Our main point of contact was the coordinator. That coordinator had the primary responsibility to train Wellness Liaisons at each school. The Wellness Liaison at each school then trained fellow teachers how to use the materials and conduct the IOE. This new model may take a few years to streamline.

Starting the subcontract so late in the federal fiscal year was definitely one of the biggest challenges. We had negotiated for all pre-surveys to be conducted in October, and to launch the first HOTM taste test in November, but the delay at USDA in approving subcontracts dragged out our ability to start the first month’s intervention on time. Our school-based subcontractor could not start work until after November 20th and the delay cut our subcontractor’s intervention duration greatly.

The surveys were administered by Wellness Liaisons over a six week period which proved to be a challenge for data collection. Not all pre/post surveys were received by Wellness Liaisons within the requested time frame. We did not receive Pre-tests from four teachers and Post-tests from eighteen teachers.

Other challenges included difficulty in matching Pre and Post-tests for two reasons: for seven classes, youth put their ID number on the Pre-test, but their name on the Post-test; or vice versa. This required obtaining school listings to identify and match surveys, which took considerable time, and resulted in many surveys being unidentifiable. In five classes there was no identifier provided (no ID number or name)?

Lack of evaluation staff contributed to a reduction in surveys received. We anticipated close to 1,500 pre/post surveys, but in the end, received 1,370 Pre-tests, 946 Post-tests, and only had 650 matched surveys. Matching surveys was difficult because of the discrepancy in identifier provided by the students between the Pre-test and the Post-test. The identifier issue will need to be remedied in future evaluations to maximize matching potential.

Getting teachers to attend professional developments after the school day and on the weekends was a challenge. There was ample communication, but little attendance. We recommend that the teachers who attend professional development trainings receive a stipend for participating and for the time spent sharing their knowledge with their colleagues at their sites. We also think that videos on our website should be used as a means of transmitting information to teachers with busy schedules.

Alameda County Health Care Services, Nutrition Services

Nutrition Education in Schools through Oakland Unified School District

Outstanding accomplishment:

As a result of our nutrition education in schools through OUSD intervention more classrooms and schools are taking steps towards a healthier environment, making our work more sustainable. The Wellness Champions have engaged at several levels at the school to encourage healthier eating and more physical activity with results that show for it. More students are engaging in physical activity indoors and outdoors than before.

Harvest of the Month has had a big impact with introducing new produce. One teacher commented, "There was some left over broccoli from my classroom taste test. I found the After School Program students fighting over the last bits of broccoli from my classroom taste test." Other teacher comments included: "Students enjoyed the spinach with the raisins, and parents kept asking what the students had because [parents] were being asked to buy them more"; "I asked students to make posters to hand around the school. I told them that their poster needs to communicate why water/100% juice are better than sugary beverages. These students are SO creative.

My highlight is seeing how they think and communicate to each other. Way more effective than if I made posters myself!”

Wellness Champions observed that students “loved being introduced to healthy produce and trying new things.” On a policy, systems, and environmental level, at one school there has been the implementation of a salad bar, increasing the availability of fruits and vegetables to students, and reducing usage of outside vendors. Additionally, whole school events are now providing healthy food.

The RTYD intervention also had a really positive impact at the school level. Wellness Champions noted that more students were drinking water. And one teacher stated, “Using the [RTYD] materials helped [students] make connections and understand better the food policies we’ve been talking to them about this year.” Hopefully, this class of students can have a role in any PSE changes at that school.

Challenge:

This was the first year our program used the subcontractor model, removing staff from having a direct line of contact and follow through with teachers at OUSD schools, especially those participating in the IOE. Prior to this year we had direct contact with each teacher, to educate, model, and follow up. We could put priority on the evaluation process, ensuring that teachers conduct the pre/post surveys in a timely manner and were collected. This year we had one main point of contact with the coordinator. That coordinator had the primary responsibility to train Wellness Champions at each school. The Wellness Champion at each school then trained fellow teachers how to use the materials and conduct the IOE. This new model may take a few years to streamline.

Starting the subcontract so late in the federal fiscal year was definitely one of the biggest challenges. We had negotiated for all pre-surveys to be conducted in October, and to launch the first HOTM taste test in November, but the delay at USDA in approving subcontracts dragged out our ability to start the first month’s intervention on time. Our school-based subcontractor could not officially start work until after November 20th and the delay cut our subcontractor’s intervention duration.

The surveys were administered by Wellness Champions over a three week window which proved to be a challenge for data collection. Not all pre/post surveys were received by Wellness Champions within the requested time frame, during the year some Wellness Champions had left their position, so we were not able to obtain surveys from some schools, and some Post-tests were completed prior to the end date of the intervention, which may have skewed our final results.

Other challenges included difficulty in matching Pre and Post-tests for two reasons: for eight classes, youth put their ID number on the Pre-test, but their name on the Post-test; or vice versa. This required obtaining school listings to identify and match surveys, which took considerable time, and resulted in many surveys being unidentifiable. In four classes there was no identifier provided (no ID number or name).

Challenges faced during the HOTM intervention, again were primarily related to working out the logistics connected with our new subcontractor model, and included: teachers not having the HOTM work books and newsletters on time, there were first timers who had not done a taste test before with their class and did not feel prepared, ensuring monthly HOTM tastings are received by teachers in time for their classroom intervention, not having enough written materials, teachers finding time during the day to fit in the HOTM teaching materials, poor role modeling by teachers (i.e., some teachers who personally do not care for the HOTM item being tested did not show enthusiasm with the students; hence, more students were resistant to trying it), reminding teachers to distribute the taste test item, confusion on the delivery of HOTM, and getting some students to try the taste test. In the coming school year these challenges will need to be addressed for optimal outcomes.

Two primary challenges faced when conducting the Rethink Your Drink (RTYD) intervention were that teachers found it difficult to fit the intervention into their instruction time, as it was held in spring, when teachers are busy fitting in assessments and conducting testing, and some felt inexperienced at conducting the curriculum. We may consider conducting the RTYD earlier in the school year and improving the training of the curriculum.

Outstanding accomplishment:

Thank you notes were received from two of the classes. The presentations resulted in deeper discussions about food and family traditions and an increased awareness of local seasonal foods. The students displayed increased receptiveness to tasting new foods and were greatly impacted by the taste comparison between locally grown and “store bought” foods.

Challenge:

One challenge was obtaining a pre and post-test from every student. Due to absences, there were some pre-tests with no post-test and some post-tests with no pre-test. The second challenge was classroom management. Some teachers left the classroom, had substitutes, or were not engaged in the subject matter being presented. This made it difficult for our instructor to maintain control and keep the attention of the students. Some classrooms were combined and there was an overabundance of students. Some locations were challenging, such as the gymnasium. Moving students to a different location was helpful. Integrating into a PE class was also challenging because the students missed out on their scheduled PE time. Furthermore, the NEOP templated survey did not capture/measure some of the concepts that the Nourish curriculum focused on.

Contra Costa Health Services

Mt Diablo Collaborative for Academics, Recreation & Enrichment for Students (CARES)

Outstanding accomplishment:

The observation and survey results were presented to the after school program managers in June. They felt good about the improvements in consumption of healthy foods and sweetened (non-soda) beverages and were interested in trying to extend the changes in healthy beverage consumption to soda and water. To accomplish this, the decision was made to implement an intervention with this population in 2014-15 focused on activities from the Rethink Your Drink curriculum. The intervention for next year will also occur over a shorter time frame (2-3 months), which the program staff felt would help increase the number of matched tests we can collect because they anticipate less attrition compared to the 7-month intervention implemented in 2013-14. The shorter program, with only one simple food prep activity, should also be easier for site staff to

deliver with fidelity. A CCHS Nutrition Program Manager will train site staff to deliver the curriculum and several observations per site will be conducted to help ensure fidelity to the plan. Next year's plan is designed to address the opportunities and challenges identified this past year. (See challenges section.)

Challenge:

A key challenge with program implementation, which surfaced during the observations conducted by CCHS Nutrition Program staff, was some lack of consistency in implementation – particularly with the food prep/cooking activities. Observations were conducted by Contra Costa Health Services (CCHS) Nutrition Program staff on Feb 24-26, 2014 at the 3 sites to assess whether the program was being implemented as planned. The lesson plan for the week included the following: CATCH “Fast Food Snack” nutrition education activities (veggie-cheese kabob snack recipe, fast food tip sheet, and strategies for eating out activity), HOTM monthly grapefruit lesson activities (delivered throughout the month of February) and an avocado grapefruit salad food prep/cooking activity. These activities were intended to last 60 minutes total: nutrition education (30 min) and food prep/cooking (30 min). Key findings were as follows: Two of the three schools completed all of the planned activities. These schools spent more time overall on the planned nutrition education and food prep activities: Total (70 & 80 minutes); nutrition education (40 and 55 minutes); food prep (30 and 25 minutes). The third school completed two of the three planned nutrition education activities, and as a result spent only 20 minutes on the planned nutrition education content. This school delivered the food prep activity for 30 minutes, as intended; overall this school implemented the planned curriculum for 50 minutes total. There were also several differences between the sites with respect to implementation of the food prep activity. At the first 2 sites, all students participated in food prep; at one of these sites there were lively discussions about flavors, healthy alternatives etc. and the teacher answered questions one-on-one from students. At the 3rd site, only some students participated in the food prep activity. Other differences were as follows: one school used mango versus papaya in the salad due to lack of papaya availability from the local vendor, and some items were pre-cut for students at some sites but not others. In prior years, the afterschool program employed staff focused on cooking. These staff were better equipped and more engaged in delivering food prep activities than the recreation leaders who were charged with implementing this content for the 2013-14 school year. A key challenge specific to the evaluation was the limited number of matched tests collected as a result of program attrition over the 7-month intervention period.

Outstanding accomplishment:

Sanger Family Resource Center IOE Participant Success Story: Sanger Family Resource Center (SFRC) IOE participants were eager to learn, and excited to continue learning and applying their new found skills after the 5 classes had ended. Participants were ecstatic to hear the program director wanted to start a walking group after the IOE series ended for them to continue their efforts. Many of the ladies, including the program director, lost between 5 to 30 pounds since the start of the classes. The Educator continued as tech support and walking partner in their walking group. Additionally the Educator, in partnership with NEOP subcontractor, facilitated a 4 week, Monday morning informational segment with various topics the participants were interested in. NEOP offered additional approved nutrition and physical activity information, including an "Ask the RD" session. Participants asked the NEOP Nutrition Education Coordinator questions regarding the health of their children and how they could help them choose a healthy option rather than buying junk food at their nearby convenience store. The outcome for this IOE series was very successful: weight loss, increase in fruit and vegetable consumption and an increase in physical activity for the whole family. The whole family would attend the walking group and all members of the family made changes because of the commitment of their mothers to make the family healthy. Through their participation in the IOE Series, which led to a walking group and additional nutrition education and physical activity sessions, the ladies were interested in being community champions for the NEOP Program. The Educator continued efforts by linking the participants to another NEOP subcontractor to participate in a peer-led training. Sanger Family Resource Center participants are not only Champion moms; the whole SFRC CYS Program is a Champion organization for supporting their participants and going the extra mile for them.

Parlier Participants IOE Success Story: The Parlier Housing Authority group of mothers and grandmothers made the IOE 5-class series a great learning experience for all participants. Participants continually shared how to change up recipes to make them healthy by including more fruits and vegetables and joining their local Zumba classes. One of our participating mothers attended Zumba classes for increased physical activities and invited the other participating mothers in the class to attend. After the series ended, a few of the mothers created a Zumba support group in which they would support each other to attend Zumba regularly. The most vocal participant, who is a grandmother, shared many tips with the class on how to include more fruits and vegetables to their meals. During one class session, she shared that if she has any vegetables like tomatoes or small squash, she adds it to her rice recipe. She stated she

is not one to waste food so she is always innovative with her recipes and often includes many veggies to most of her meals. She was a great participant in the series and shared many personal stories and ideas with the group. She definitely made some healthy changes and is a champion mom and grandmother. She will continue to help her community make healthy changes through participation in the NEOP Peer-led training program led by one of the NEOP subcontractors.

Challenge:

The biggest challenges faced by our staff were 1) delay in implementation of IOE due to change in intervention strategy and revision of the IOE plan that was submitted for FFY 14, 2) difficulties in recruitment, 3) retention of participants to attend every class within the series; 3) follow up with participants by some of the community partners to maintain consistent recruitment and retention of participants; 4) canceling of series due to lack of recruitment by host agency, 5) being down one educator and 6) food insecurity and participants expecting to receive incentives for attending the series (i.e. raffle items, community service hours, etc.).

Humboldt County Local Health Department

Humboldt County Office of Education

Outstanding accomplishment:

The Arcata High School teachers were very pleased to have “experts” come in and teach about nutrition. They have already stated they would like us to come back next school year. Hoopa Valley High teachers were also very willing and eager to have us teach these lessons, as they see the importance of addressing sugary beverages with their students.

Challenge:

The biggest challenge faced may have been getting matched surveys due to absenteeism at one of the high schools. There were challenges inherent in being a guest speaker teaching to 9th grade high schoolers. In addition, there was a challenge of working cross-culturally with the native community at Hoopa Valley High School, on the Hoopa reservation. A couple of the days were particularly challenging and much of the classroom time was spent on classroom management. An additional challenge was the person who implemented all but two of the 18 lessons left midway through the year and was not available to provide details for this report.

It has been suggested we avoid offering the lessons on consecutive days as this does not allow time for students to integrate the information and make desired behavior changes. The possible difficulty with offering the lessons nonconsecutively is that the teachers cover a topic as a module then move on. It was not possible to deliver every lesson in the full High School RYD curriculum, as there are more lessons than the 6 consecutive days would allow.

Imperial County Public Health Department

Imperial Valley Food Bank

Outstanding accomplishment:

Students seemed very engaged in the sessions that were presented. One student shared that his sister makes smoothies at home with fruits and vegetables and that his favorite was spinach. This comment made other students want to ask him if it was tasty. During the session that a Mango Smoothie was prepared for the students to sample, students seemed reluctant to try it because non-fat milk was used to prepare it; but once they tried it they came back for seconds and even thirds! During the Open House, NEOPB staff positioned a resource table in the school gymnasium. Approximately 35 parents, 50 students and 5 school staff visited the booth. One student who visited the resource table was able to teach her parents nutrition concepts based on what she learned in the previous IOE sessions, using the exhibit boards and resources that were on display.

Challenge:

A few of the challenges that were faced are as follows: a) there was a mismatch between some of the students and the survey. There were some students who were monolingual Spanish-speaking, however the survey was administered in English only (school policy?). It was noted that some of the students copied other students' answers because they were unable to complete the survey on their own. A second challenge that was encountered was that some of the sessions were large groups of students (60-70 students). At times, it was difficult to keep the students' attention focused and on task. A third challenge that was noted is that classes following lunch were the most challenging to teach. Lastly, mandatory testing was scheduled the same day as the post-test. This was an unexpected event, administrators did not notice that they had scheduled our last session with their testing. The session was conducted the following day.

Kern County Public Health Department

Lamont School District

Outstanding accomplishment:

It was great to hear students who were hesitant to try a new fruit or vegetable say they now liked the item and wanted to eat it again. Students were excited to learn about Rethink Your Drink and intrigued by flavored waters as a healthy option. On a broader level, parents have expressed that their students are now asking them to buy fruit and vegetables they do not normally purchase. This has encouraged parents to take a greater interest in the nutrition program.

Challenge:

The biggest challenge was coordinating with after school activities. Students often exit their classrooms to participate in other activities. We worked closely with after school staff to schedule nutrition interventions.

Kings Community Action Organization, Inc.

Outstanding accomplishment:

Site leads informed our staff that many youth often asked if they were going to see the nutrition educators this week, and seemed disappointed when the educator informed the youth at last session that there will not be another session for a while. Site leads told educators that even the “cool” older kids would show up to listen and participate when it wasn’t required. Educators were impressed at how much youth knew about specific fruits and/or vegetables. It was also encouraging to the educators when youth did not want to try an unfamiliar fruit and/or vegetable at first, but with a little “push” from an educator, decided to give it a try; in some cases, the youth were pleasantly surprised that they liked them.

One of the challenges faced was the short implementation time. All four of the implementation sites were held during the summer youth programs, which only ran during a month or two over the summer. Since the programs were optional for the participants, we also faced high attrition with some youths attending only the first couple of sessions. New participants also enrolled in the summer youth programs after the first session, so they did not have a pre-survey score to match with their post-survey. While evaluating the outcomes, we also noted some limitations. Albeit participants showed interest and willingness to try new fruits and vegetables—a significant finding—many youth at this age, between 4th-7th grades, may not have the control in terms of what foods to purchase, which may have attributed to the results related to healthy dietary behaviors (at home). Recalling what foods they ate the day before (recall bias) may also be a challenge for individuals.

City of Long Beach Department of Health and Human Services

Long Beach Unified School District

Outstanding accomplishment:

Outstanding moments continue to occur throughout the year as we hear from teachers, parents, and students about what they were learning. Teachers and parents share what they are doing to help their students choose healthy foods and increase physical activity. Feedback on the Harvest of the Month program was truly exciting; comments from teachers via SurveyMonkey gave us positive feedback on program materials, collaboration with the cafeteria staff, and impact on student behaviors, and provide suggestions for consideration on the next year's implementation. These moments are extremely meaningful to us and guide us in program improvements.

Challenge:

Nutrition education in the Long Beach USD is multi-dimensional. The most challenging aspect of the comprehensive program is ensuring that all eligible sites, classrooms, and teachers are aware of the program components and are able to take advantage of them. As much time as is spent in communications, we still find teachers that do not know about the variety of opportunities in which they can participate to enhance what they already provide related to nutrition education. In regards to the evaluation of

Harvest of the Month, one component of the district's program, the greatest challenge seems to be in ensuring good data collection and consistent program implementation. We have reviewed all the activities of the year, the feedback from teachers, the results of the Impact Evaluation and will continue to make additional enhancements to our program. We will be working even more closely with Nutrition Education Site Coordinators to enhance communication; we will continue to email all teachers at eligible school sites. We will continue to email all teachers involved in the HOTM with monthly implementation tips. We will continue to have LBUSD staff administer the Youth Survey in selected classrooms. LBUSD staff will work more closely with participating Impact Evaluation teachers to better document the implementation of nutrition education throughout the year. We hope that increased communication and enhanced standardization of selected program components will strengthen our efforts.

Los Angeles County Public Health

Adult IOE (Faith and Peer-to-Peer Channels)

Outstanding accomplishment:

The educators noted increased interest and improvement in knowledge and awareness as the class evolved. They received a number of comments from participants stating they were practicing some of the healthy eating principles taught in class. For instance, participants began experimenting with different fruits to make their own spa water after the Rethink Your Drink demonstration. Additionally, all of the participants at one particular setting enjoyed the cookbook recipes and have expressed a desire to have healthy food and beverages available after Sunday mass. As a result, the participants supported the Food and Beverage standard PSE in the church setting. Another site had a healthy potluck after the completion of the nutrition series where the participants cooked recipes from the cookbooks. The potluck celebration helped participants practice what they had learned in class and after cooking the dishes they realized small changes were very easy to make.

There was a sense of unity between the participants and educators. In addition to the IOE lessons, participants and educators discussed where to purchase cheap fruits and vegetables in their community, how to modify recipes to make them healthier, how to increase their children's vegetable and fruit consumption, and ideas for safe and

affordable physical activity. Additionally, participants and educators discussed nutrition related issues within their community and solutions for these issues.

Many of the participants in the IOE series expressed their joy at having had the opportunity to participate in such an informative and interactive process. Several have committed to participate in future classes at the site. Ultimately, the classes brought together neighbors and families to learn about healthy eating and for this reason participants felt that their community became united through this process.

Quotes

“I was glad to hear about the positive comments and feedback I received about the class and how they learned new healthy ways to cook, how to read labels, about calcium, sugar and fat but what most made me happy was that they were actually taking action and using to practice what they had learned which was great.” –Peer educator

“People are so thirsty for the information; they want more and more nutrition classes. Some of them shared that they are making changes at home and buying healthier foods.”—Peer educator

“ReThink Your Drink is my favorite, because people see how much sugar is in different drinks they consume and the expression on their face is of shock. People can’t believe how much sugar is in some of the common beverages people drink all the time.” –Peer Educator

“Some of the older participants shared that they eat purslane, which some people consider as weeds. But, when I researched it, I found that it has omega 3 in it. These type of sharing become an enriching experience. We are not only teaching them, but are learning from the people we are presenting the nutrition information to.” –Peer educator

“Your nutrition class has helped me find ways to cook these healthy foods in a way that my WHOLE family likes!” –participant

“The recipe cookbook such as the one given to us has made me able to cook tofu in many new ways for my family!” – Participant (referring to Flavors of My Kitchen Cookbook)

Retention and outreach: Encouraging participants to attend and complete 5 classes was a challenge for many agencies. Allowable incentives were limited and were not desirable enough to encourage ongoing participation.

Curriculum: The Orange County 5 Class Nutrition series was extremely dense for the agencies, containing too much information for the suggested time breakdown. In addition, the curriculum was beyond the education level of some of the peer educators, and with a short training timeframe this posed a challenge. Furthermore, several of the referenced handouts were not provided or available and had to be located using an exhaustive search of internet resources with many not being found. Lack of materials and other visual equipment resulted in difficulty executing specific lesson plans.

Administering surveys: One of the biggest challenges reported was administering the surveys which were both lengthy and time consuming. For one agency it took an average of one hour for all of their participants to complete the surveys. Many of the participants were not able to read or write and for this reason extra staff was needed to provide one-on-one instruction. In addition, many of the control subjects refused to complete the post survey reporting it was too long and time consuming. The Food Behavior Checklist was by far easier for the participants, mostly because of the length and the pictures.

Low literacy and education levels: Many of the participants had very low literacy and education levels. Several participants struggled when a lesson involved basic arithmetic such as dividing in Rethink Your Drink. This also had an impact on accurately completing the pre and post-surveys.

Los Angeles County Public Health

Los Angeles County Office of Education and Los Angeles Unified School District

Outstanding accomplishment:

Many of our subcontracted agencies mentioned that students were fully engaged in the Harvest of the Month lessons. Students would ask about upcoming produce and were eager for the hands-on experience. At one site, the NEOP-funded staff worked closely with the School Nutrition Services to feature Harvest of the Month Produce on the school menu to increase exposure and consumption of fruits and vegetables. Teachers also shared enthusiasm about participating in next year's Harvest of the Month program.

Furthermore, schools have observed great collaborative work and strong partnerships form as a result of the interventions. In many schools, changes have been made in regards to the school and classroom environment with the adoption of healthier classroom parties and school fundraisers.

Quotes from students:

“I need 60 minutes of physical activity a day. I try to get my family to do things outside on the weekends.”

“I told my friends and parents that soda have a lot of sugar in them and that we should drink water.”

“Playing sports is good for me.”

Quotes from educators:

“The taste test and lesson is going wonderful so far today as well. It seems to interest the students with the knowledge that they are going to try the food. I’ve made connections to the food with performance in activity for our PE classes also. Having fun!”

“My students are creating a Harvest of the Month fact file. I am really excited because I am also using some of their projects for the GATE showcase!”

A teacher reported that after she conducted the taste test demonstrations and nutrition education lessons with her students that the cafeteria served dried fruit for breakfast the next day and that her students were really excited to have them for breakfast after having been exposed to them just the day before. This is what she shared, “They really liked the samples and it carried over to them being excited about that being served for breakfast. That is a great thing!”

Challenge:

Time: One of the biggest challenges for the youth subcontracted agencies was the short time period for the intervention which restricted relationship building with school partners, created scheduling conflicts, and didn’t appropriately allow the recruitment and training of participating teachers.

Youth Nutrition and Physical Activity Survey: Another commonly mentioned barrier was the Youth Nutrition and Physical Activity Survey tool. For many of the students, the questions in the survey have limited cultural relevance and the students are not able to

connect what's listed on the survey to their cultural food choices. For example, not many of the Hispanic students eat pie or the other items listed in the question about sweets, leaving them unable to adequately respond even if they consume pan dulce or churros. In addition, a huge portion of the target audience speaks English as a second language, which restricts their comprehension of the questions and answers.

Furthermore, many 5th graders have great difficulty filling out the Physical Activity/Food Log and then translating the results accurately to the survey. Even though the logs are meant to improve accuracy, they still leave room for error.

Madera County Public Health Department

Outstanding accomplishment:

There were two students, one in fourth grade and one in fifth grade that stated they looked forward to the presentations and that they have been eating more fruits and vegetables at home and on the weekends. On a broader scale, Sierra Vista will be the location of a much larger intervention aimed at improving fruit and vegetable consumption, health related knowledge and increasing physical activity. These interventions will not only focus on students, but parents as well.

Challenge:

By far the biggest challenge was making sure the students filled out the code correctly on both the pre-test and the post-test. This proved to be way more difficult than previously expected. For example, in the 4th grade class, more than 20% of the class did not know the month or the day they were born. Several 4th grade students did not know how to correctly spell their last names. Equally, at least 20 minutes, in both pre and post-test, were spent assisting the students on correctly filling the code out. This barrier proved to be more detrimental than expected, with only 110 matches obtained out of 247 pre-test surveys. This was a frustrating find because we actually collected 246 post-test surveys, however, we could only match 110, which is a 54% loss. In light of this the IOE team is meeting to discuss strategies to remove or overcome this barrier. Another challenge was attempting to successfully engage the students during the presentations. The majority of the students did not seem the least bit interested in the nutrition education presentations. Sierra Vista is a very rowdy school and the educators spent a great deal of time disciplining the students. Towards the end of the school year the students would actually groan when the educators came to teach the lesson and really only seemed interested in eating the food (to note the students seemed to groan about everything they had to do towards the end of the year). Attempting to keep the students engaged was by far the biggest barrier to overcome and in my opinion we

were not successful in discovering a method to accomplish that. At this point the educators are discussing what possible methods could be employed to improve engagement. Some ideas are: different curriculum, more interactive power point, student participation in making the food demos, shorter presentation, and incentivizing.

Marin County HHS

Sausalito Marin City School District (SMCSD)

Outstanding accomplishment:

A surprise was how open and enthusiastically the kids ate all the healthy offerings; they enjoyed it.

Challenge:

Our biggest challenge is population size. The schools we serve are small, therefore ensuring matching tests and a critical mass is a challenge. In addition, there were several changes that happened this school year. Two schools merged and in the new school structure grades 6-8 were in a combined setting. This made it impossible for us to provide the pre/post surveys and nutrition classes planned for the 6th graders at Bayside/MLK school which in turn lowered our intervention size.

Monterey County Health Department

Outstanding accomplishment:

Being involved in a few different school districts can be difficult, however at times it can be beneficial (IE is in 3 different school districts). Network staff continues to provide education, technical assistance and training to food service workers, encouraging and supporting them in their efforts to provide more fruits/veggies in the school. We have partnered with the food service staff to provide taste testings in the cafeteria, provide nutrition education posters to further enhance healthy choices and encourage the kids at monthly HOTM education and tastings to try new fruits/veggies in the cafeteria at the salad bar. Network staff has also worked with the Food Service Directors to place HOTM produce on the salad bar 2-3 times a month so that the students are exposed more often. One of the teachers has continued to provide spa water during the year in her classroom.

Challenge:

One of our biggest challenges is time with the students in the classroom. School days are very prescribed and teachers have obligations to complete standards, follow time restrictions for core standards and work with students collectively. This next year we are planning to provide a detailed letter to teachers and principals participating in the IOE on what is required as part of the interventions.

Orange County Health Care Agency

Orange County 5 Class Nutrition Series

Outstanding accomplishment:

One woman residing in a shelter prepared recipes from the cookbook provided during class and posted the meals on Instagram. She also expressed interest in organizing a potluck using recipes from the cookbook with the other residents. Another woman and her adult daughter stated they had “revamped” their eating behaviors and were consuming more vegetables and whole grains, drinking more water and less soda, reading food labels and planning weekly meals and as a result they felt better and had more energy. At another shelter, one of the women used the information she learned in the planning meals and shopping on a budget classes to eat healthier and stated she was saving more money when shopping for food. One shelter that provides meals on site continues to prepare and serve items from the NEOP cookbooks. After presenting the class series at two different shelter locations, NEOP staff was approached by site counselors requesting the lessons be provided to their transitional living facilities. They were impressed by the quality of the information and felt the material was exactly what their residents needed. Classes were conducted at one site and classes will begin at the second site in the fall of FFY15.

Challenge:

As in the past, time and inconsistent attendance continue to be a challenge at many of the sites. Staff usually have one hour to administer the FBC as well as conduct one to two lessons and a food demonstration. At a few of the sites, participants were consistently late, cutting into class time. Multiple languages were spoken at two sites which made it difficult to conduct the class efficiently. Nutrition misinformation also continued to be a challenge. Many of the shelter participants get nutrition information from the internet, their friends and other sources that may not be reliable. Examples of the topics addressed during class include needing expensive supplements to be

healthy, drinking “pH-balanced” water and thinking all carbohydrates or grain foods are “bad”. Many participants have little experience in meal planning and food preparation and it can be challenging to teach these topics.

Orange County Health Care Agency

Huntington Beach Union High School District

Outstanding accomplishment:

The truly outstanding moments, as a result of our IOE intervention, are all related directly to the high school students and the stories we hear from them about the changes they’re making due to this intervention. After the first lesson we provided the “What’s on your Plate” handout and encouraged our students to take the information home and share it with their family. One of the main changes we hear about is that the students are trying to convince their families to change from higher fat milk to the lower fat or non-fat milk. As the series progressed, many of them reported their families had changed to lower fat or non-fat milk. In addition, after the series we received thank you notes from several of the classes. One student states, *“I am switching from white bread to whole wheat bread and cutting down on junk food”*. Another says, *“I tried to go on choosemyplate.gov and learn how to maintain my calories and I loved it”*. The students seemed engaged in the lessons but the cooking was their favorite part. Here’s a couple comments regarding the cooking: *“I’m really happy that you can eat healthy and eat good food at the same time”*; another student states, *“I learned how to make new foods, thank you so much!”* As we always encourage the students to take the information home and share it with their families, one student wrote, *“My family has benefitted from the information you’ve provided by drinking less soda, trying out the new recipes and by looking at our portion sizes”*. These quotes demonstrate that the students are not only learning the information but are actually making specific changes. The true goal of nutrition education is to see behavior change. It’s rewarding to hear the students talk about the changes they have made and to see them get excited about nutritious foods!

Challenge:

One of the biggest challenges in implementing the intervention was time. In the past our schools have been on a block schedule where the class times are almost 2 hours; this year they have gone back to a traditional schedule where the classes were about an hour. Getting all the information along with a cooking activity into one hour was challenging. Another challenge was convincing the students why this information should be important to them. We decided to start the first lesson by discussing the 6 leading causes of death in this country and explaining that 4 of them are diet related.

We explain to the students that this means we can reduce our risk of getting these diseases by making healthy lifestyle choices. Following this discussion we ask the students if they feel the lifestyle choices they make now will make a difference in their health later. The majority of the students agree that they do.

City of Pasadena Public Health Department (PPHD)

Pasadena Unified School District (PUSD)

Outstanding accomplishment:

The following is a story shared by a PUSD NEOP team member:

“Why Guadalupe became a Champion Parent”

Guadalupe participated in previous nutrition classes at Madison Elementary School and learned valuable information about nutrition. As a result, she began to eat healthier, exercise regularly and successfully lost weight. This personal achievement is a milestone that she is very proud of. Since she was a young girl, she always struggled to maintain a healthy weight. Family and friends constantly compared her to her slimmer sister, which affected her self-esteem. She stated that by attending nutrition classes through NEOP, it has strengthened her knowledge on nutrition and her overall personal confidence. She is grateful to have access to these classes and the opportunity to make change in her life to help prevent illness. These classes provide her with the tools to sustain her journey of a healthy life for her and her family. Guadalupe recognizes that there are serious health issues affecting many families, friends, and community members and wants to help and make a difference. She expressed a willingness to teach others how to achieve healthier lifestyle. Guadalupe was asked to become a Parent Champion for the Program and she responded excitedly, “Yes, I want to be a Parent Champion!”

Just like Guadalupe, many of our nutrition class attendees have their own story of struggling with their health or that of a loved one. Most recently in our classes, we experienced a young couple where the wife had health issues and was having a difficult time convincing her husband to attend the classes with her. He stated, “Why should I go? I am not the one who is having the problem.” As it turned out, he decided to attend. At the end of the series, he expressed gratitude for being a part of the classes, learning lifelong lessons and moreover for being able to support his wife. Another participant expressed her apprehension for the Physical Activity by stating, “I just do not like to exercise, not even a bit.” At the last class, she stated with contentment that she found a website that provides seven minute exercises on the internet and is now incorporating

them into her daily routine. As a health advocate, it is rewarding to hear feedback from our Program participants on how they now understand and acknowledge the importance of nutrition and physical activity as daily steps towards a healthier life.

Challenge:

As of January 6, 2014, Pasadena NEOP Team were administering IOE education interventions in the NW Pasadena community. This geographic area is limited to a number of qualifying sites to conduct SNAP-Ed interventions and posed a challenge to increase the number of unduplicated participants. As of March 2014, NEOP approved additional PUSD school sites based on 50% or more Free and Reduced Meal eligibility for school sites, from seven to 21 schools. Due to the time factors of: IOE/site assessments, approval process for including additional schools and an early end to the school year, May 31st, 69 of 100 surveys were matched and completed.

The Pasadena NEOP Team met to discuss findings and gathered suggestions on how to improve process for next year in order to reach our numbers. One of the changes will involve enhancements to the Nutrition Curriculum, which are being done with the help of our RD. The new curriculum will include more skills based activities and demos for participants to put their knowledge to practice. In doing this, we believe will help address attrition in classes provided outside of the school sites. We will continue to offer classes at PPHD and reach out to increase the number of qualifying community sites to provide classes.

Placer County via Health Education Council

Tahoe Truckee Unified School District

(Placer County students only had a single lesson exposure so their data were not included in the Quantitative aggregated findings or in the count of intervention participants)

Challenge:

The biggest challenge was the late start in the year, implementing it so close to year end. In addition, teachers reported computer problems logging into the online version of the survey, so they reverted to the paper version.

Outstanding accomplishment:

The student educators really like this project and they want to do it next year. They'd like to take over the entire HOTM program, making it 100% peer-to-peer vs. teachers or parent volunteers as done in the past. Another outstanding experience was in recruiting

a teacher to provide support to the Nutrition Advocates. The Environmental Science teacher volunteered to be the Adult Ally, discovering that her students were much more excited about participating in the Nutrition Advocates Program as an alternative to doing the required final project on their own. A focus group was conducted with student educators and the results are attached.

County of Riverside, Department of Public Health

City of Riverside: Alvord Unified School District, Riverside Unified School District

Outstanding accomplishment:

For AUSD there were several highlights during the intervention. Students at different school sites were actively engaged during IOE intervention, and repeatedly expressed their desire to eat healthier and exercise more. Nearing the end of the intervention students at Terrace Elementary School wrote letters communicating what they enjoyed most about the nutrition classes. Included were pictures of fruits and vegetables. This presentation showcased in detail each student's perspective on nutrition and health. In addition, it proved to be a source of highly effective feedback and reinforced confidence in the quality of this program.

With Riverside Unified School District there were some outstanding moments as well. Teachers from outside of the intervention schools began requesting in-class nutrition education lessons after hearing about the great things that were being done through the afterschool program. In order to meet the demand of the IOE intervention and non-IOE nutrition education requests, partnerships were made and strengthened with the local universities. A contract was signed to establish an internship program between Cal Baptist University (CBU) nutrition students and RUSD Nutrition Services. With this contract in place, students in the CBU nutrition program will be assigned the task of providing nutrition education in RUSD schools. This IOE has opened the door for many unconventional partnerships with the hospitals and non-profits in the area that can be leveraged to further support nutrition education efforts in RUSD schools. The most rewarding experience was hearing the students still talking at the end of the series about taste testings. All around the students thoroughly enjoyed the IOE experience.

Challenge:

AUSD experienced the biggest challenge in the beginning of the program late due to recruitment of the project coordinator. A secondary challenge was not having the opportunity to present the IOE project to the principals of intervention and control schools. As a result, not all facilitators (afterschool coordinators) were on board with the

program which resulted in decreased class time to cover all the material of the SNAP-Ed curriculum. Another challenge was lack of adequate help. Due to starting the IOE project late, lack of adequate time in recruiting interns to assist since most student interns in nearby universities had already enrolled in other programs. Although there was staff on hand at the school sites, they were not qualified as nutrition and dietetics students to assist in answering questions during workbook activities and handling food samples while nutrition education was taking place.

In the case of RUSD schools the biggest challenge was the amount of time that was actually permitted. Every school's afterschool program operated differently and it was difficult to ensure a 60 minute time slot for the lessons. The RUSD Project Coordinator and student interns had to work around each school's schedule and adapt the lessons accordingly. A secondary challenge was the class size. In order to reach target intervention numbers in RUSD, the class sizes ranged anywhere from 25 to 60 students. More student interns were recruited to accommodate the increased size, but lessons had to be adapted to educate all students in a quality manner.

County of Riverside, Department of Public Health

City of Perris, THINK Together afterschool program

Outstanding accomplishment:

We received positive feedback from the THINK Together staff members (particularly the Site Coordinators and Program Leaders), stating that students were eager to attend their education sessions each week and constantly asked when the Chef would be able to come back to teach them more about healthy foods. We also received consistently positive feedback regarding the Chef's ability to engage the students and get the students excited about his teaching of the NEOPB-approved materials. Students asked for more newsletters (as four of the five classes were HOTM) and more copies of other recipes that they would be able to share with their parents to make at home. One outstanding moment that came from the IOE program was at an Open House at Palms Elementary, when a parent had expressed that his children wanted more fruits and vegetables served in lieu of fast food as a result of what they had learned from the nutrition lessons and taste testing with Chef Lee.

Challenge:

The biggest challenge we faced in implementing our intervention was working with the learning curves of this being our first year under the NEOPB funding. We were not completely knowledgeable at the start of the IOE program. We received the training, and in turn trained our subcontractor to deliver the nutrition education; however to some extent, we learned throughout the process each week along with the students. So the

intervention may not have been as strong in the first few weeks as it was in the last couple weeks. This is something that we are able to address going forward, planning for future IOE processes. Another substantial challenge we faced on the evaluation side was the inconsistent attendance of the afterschool program. Attendance varied more so than during the school day, and we also did not have direct access to information regarding school wellness, where the students spend more time relative to the after school program.

County of Sacramento DHHS

Outstanding accomplishment:

Participants who attended the classes showed a strong interest in the topics being discussed. The class sessions had active participation throughout. The adults asked relevant questions and showed genuine interest in learning. The adults at the AOD site recognized that healthy eating and physical activity needed to still be a priority during their recovery. The youth at Job Corps became more aware of their food options after the start of the workshops and voluntarily brought in food packages and labels from the items they were eating to discuss the nutrition label and ingredients list. Some of the women at one Head Start location planned a potluck using recipes from the cookbooks they received and invited friends to join the class as well.

Challenge:

The greatest challenge the LHD staff faced while implementing the Eat Healthy, Be Active Community Workshops was participant retention. LHD staff conducted classes at three different approved means-tested sites and each site presented unique challenges to attendance. The participants at each site had various scheduling conflicts. Parent participants at the Head Start locations reported appointments or family demands that overlapped with class schedules. AOD participants had court appearances or supervised visitations scheduled during the class period because it was the only time the participants were allowed to leave with permission. The young adults at Job Corps reported being tired and hungry after a full day of mandatory classes and work to attend the Eat Healthy, Be Active Community Workshops regularly. Even though participants expressed interest in the workshop series and were provided with nutrition education reinforcement items for attending, personal conflicts still interfered with attendance.

Another challenge the LHD staff faced was finding approved community sites that had both the space and staff time to coordinate, recruit, and host the Eat Healthy, Be Active Community Workshops. When a site was willing to commit to the series, a stronger emphasis should have been made on active promotion and advertising of the classes. Sites that had a non-LHD staff member actively helping to promote the classes seemed to have the best participation and retention.

Based upon the results of participant numbers and completion rate, in order to obtain 100 matched pre- and post-tests, over 300 participants need to be recruited for more than 18 sets of workshops. With the LHD being understaffed, it was not feasible for staff to reach the oversampling goals. Interns from a local university assisted with the workshop series, which alleviated some time restraints, but trained LHD health educators still needed to implement and teach the class sessions.

LHD staff is currently seeking out technical assistance in the areas of participant retention and site selection to improve these areas for the FFY15 IOE intervention implementation.

County of San Bernardino Department of Public Health Nutrition Program

San Bernardino County Superintendent of Schools

Outstanding accomplishment:

Teacher: I enjoy how excited my students are to find out what we are tasting each month. They love these “snacks,” even though they’re healthy! I especially loved how shocked they were to find out, in this month’s lesson, how much sugar is in soda and sports drinks. One of my students even exclaimed, “I’m not drinking soda anymore!”

Challenge:

There were several challenges faced during the implementation of this intervention. The main issue was teacher compliance and fidelity in implementing the lessons as prescribed. Additionally because the teachers do not necessarily have nutrition backgrounds their ability to respond to questions and expound, know what to reinforce to students and to enhance the materials provided may have been limited. Time constraints were another factor influencing HOTM implementation. As a result, in an effort to be efficient, teachers may have used the produce items as the subject matter to

teach other studies (i.e. language arts) instead of using the fruits and vegetables as designed, to teach nutrition education and improve skills (knowledge based vs. skills based).

Another challenge inherent in schools included the unexpected and competing events. For example, as a result of the current preparation to transition from content standards to common core, teachers were pulled from the classrooms to trainings and substitute teachers were left (ill-prepared) to deliver the lessons. And as was already mentioned, a candy fundraiser overlapped with the intervention, sending mixed messages to the youth.

County of San Diego

Family Self-Sufficiency (FSS)

Outstanding accomplishment:

The RD was able to meet with the ASB students and advisor at one high school, to align their competitive fund raising food options with the District Wellness Policy. The students quickly changed their offerings to healthier nutritional choices. At the same school, the RD has been working with the Farm to School Specialist in the school district to potentially change the entrée offerings at the school – after student input - as well as move the school up in the delivery route to allow for fresher meals. At another high school, the PE instructor followed through with taking field trips with his students to an adjacent college cafeteria, to reinforce the lessons and “test” the students’ knowledge of menu assessment. The nutrition educators noted the healthy changes students said they made both at school and at home. According to one educator, “...some students paid attention to the importance of making a healthier choice when selecting their meals. For example, instead of ordering a hamburger and fries they ordered a salad or yogurt. Instead of ordering a soda, they chose to purchase 100% juice.” Another educator mentioned how receptive the students were to the healthy recipes: “I had lots of feedback from students that they loved the recipes. I also heard from one student that she had made a recipe from the cookbook at home and loved it.” The classes not only helped to change the students’ choices and behaviors, but also those of their families. One educator noted, “By the end of the series some students came to me and shared some of the changes they had already started to do: ‘I talked to my mom and we are going to stop eating at fast food restaurants.’ ‘I talked to my parents about sugary drinks and we decided to not buy any more sodas and have more water or ‘aguas frescas’ with fresh fruits.’”

There were several challenges and barriers that emerged during this year's implementation of the 5-class series. Although the NEOPB directive was to avoid conducting IOE classes on Mondays as some of the questions address the previous day's intake, this was not practical in scheduling with some schools and schools on a block schedule. In order to conduct the 5-class series in these schools, some pre-surveys (38%) and post-surveys (23%) had to be administered on Mondays. As a result, the data from these surveys reflected eating habits from the home environment versus the school environment. At a Boys and Girls Club intervention, many of the Arabic speaking students had difficulty understanding the educational workshop. There was no translator and the materials may not have been culturally appropriate for this group. At one school's intervention, all teen participants were selectively called out of the class for health-related screenings at some point throughout the 5-class series thereby missing parts of lessons. Nutrition educators also noted the presence of unhealthy foods available at the school, the attitudes of the students, and the classroom environment as challenges to teaching the classes. As high school teens are target demographics for advertising, social media and peer pressure, these issues and other distractions inhibited class engagement and the learning experience. Although the weekly "homework/extra credit" activities utilized social media, school instructors did not follow through on encouraging this piece of the lessons. Some students took the pre/post surveys lightly, and asked other students for input on their surveys. It was also difficult to administer follow-up surveys as students forgot their ID numbers and fewer students were present at the youth centers.

City and County of San Francisco Department of Public Health

18 Reasons

Outstanding accomplishment:

We experience outstanding moments in Cooking Matters classes nearly every day as we interact with participants. Participants who have never cooked or eaten vegetables find that they actually enjoy cooking, like the taste of vegetables, and feel better overall as a result of the classes. Participants tell us that they have lost weight, changed their family's eating habits, quit drinking soda, reduced their dependence on diabetes medication, and many other impressive outcomes. Here are some sample quotes:

"I read food labels often, which in a way makes shopping a little more difficult but more satisfying."

"I feel more confident feeding my family healthy food. I also feel better personally and my family has enjoyed my cooking. "

Challenge:

The extremely compressed timeline of the evaluation was our biggest challenge. Our contract started on January 1st instead of October 1st, and our evaluation plan wasn't approved until March 3rd. Between January 1st and March 3rd we had 31 adult graduates who could have been included in the evaluation. We managed to collect exactly 100 pre and post-tests in the limited time we had, and are glad that we will have more than twice as much time in the next fiscal year. The second challenge we had is that our existing pre- and post-survey is fairly long and complex, and adding the Fruit and Vegetable Checklist on top of it meant more paperwork and more class time taken up with administration instead of education. As the FVC is short, however, this wasn't a major challenge.

San Joaquin County Public Health Services (SJCPHS)

The Sarah Samuels Center

Outstanding accomplishment:

Some staff quotes include:

"Students were excited to see what they were going to taste and learn more about with each HOTM food(s) item."

"It was absolutely amazing!!"

"The kids loved it!"

"To the majority of the students it was an eye opener to tasting and learning about new fruits and vegetables."

Challenge:

An online survey was administered to the adult staff who administered HOTM (teachers and food service nutrition staff) between May 27 and June 14, 2014. NEOP staff received responses from 96 adult staff. Over half of the responses came from staff for grades 3 through 5 (including a small number of staff whose mixed-grade classrooms encompass those grades).

Staff were asked about their implementation of the curriculum in general and about specific aspects such as the ease of conducting the taste tests, their use of HOTM resources (e.g., the student workbook and family newsletter), and their interest in using the curriculum in subsequent years. Staff who administered the pre- and post-surveys to their students were also asked a set of questions about how that went.

The mean level of satisfaction with the program overall was 4.61 on a scale from 1 to 5, indicating that most of the staff (67%) were very satisfied, and nearly all of the rest (28%) were somewhat satisfied. Overall satisfaction with the selection of produce ran similarly high, with a mean satisfaction of 4.60 on the same 5 point scale. Several staff recommended that fruits and vegetables that are less familiar to the students be used (e.g., most students already know broccoli from home or school), and there were a few comments that the freshness of the produce – in some cases – left something to be desired. About 25 teachers commented that one or more expected foods (e.g., avocados, peas) did not arrive for tasting. For the most part, staff used HOTM as a stand-alone activity, but 23 staff did incorporate the curriculum into lesson plans.

Ninety of the 96 staff would like to use the HOTM program next year, with 20 of the 90 saying that they would prefer to use it with some modifications. About 37 percent of staff believe that the program was very effective in increasing their students' consumption of healthy food and drink, with the remaining staff believing it was somewhat effective (48%), neither effective nor ineffective (13%), or somewhat ineffective (2%). One staff member's comment was positive but cautioned against concluding that the curriculum was adequate, by itself, to effect behavior change: "I think the children were surprised that they enjoyed the fruits/vegetables. They liked new foods. They still brought Takis and Hot Cheetos for snacks at recess."

Regarding the resources that accompanied the curriculum, 80% used the student workbook, 84% used the education newsletter, 76% used the family newsletter, and 39% communicated with public health staff about the curriculum. Sixty percent of the staff who used the student workbook were very satisfied with it; 63% of those who used the educator newsletter were very satisfied with it; 40% of those who used the family newsletter were very satisfied with it, and 80% of those who communicated with Public Health Department staff about the curriculum were very satisfied with that communication. While these percentages are impressive, they also imply areas in which there is room for growth.

A little over one-third (35%) of those responding to the survey incorporated the student pre- and post-survey into HOTM. Of those, most reported that the surveys were very easy to administer. Twenty-two of the 33 that responded to a question about matching

student IDs pre to post said that they were able to do so; the remaining were either not sure (n=9) or had not been able to do so (n=2). While the staff that responded to the survey included several of the staff whose student surveys were analyzed, we do know that among the surveys submitted for analysis, matching IDs pre to post was problematic. The process could be reevaluated for next year in order to minimize the amount of mismatched student data that is not analyzable.

San Luis Obispo County Public Health Department

Del Mar Elementary Harvest of the Month School Based Nutrition Education Intervention

Outstanding accomplishment:

As a result of our intervention, Food Service has observed that students are more likely to take fruits and vegetables and the staff are encouraging students to eat healthier through prompting them in line. 75% of teachers report they are more likely to teach nutrition concepts in their classroom and 50% stated that a parent has told them they are more likely to purchase fruits or vegetable at home.

Teacher comments about the intervention:

“This program was wonderful! I have many students that would not have had the opportunity or inclination to try these foods without support and encouragement from their peers.” “Several students are making the recipes at home.” “I tied whatever we were sampling into whatever we were studying at the time - it was very easy to do!” “We organized an in-depth standards based exercise program to go with each Harvest activity.”

Challenge:

No significant barriers, however, we had to throw out 28 post-tests because they were administered on a day following a school holiday. The results were quite different without those post-tests (significant increase in total healthy foods, trying new fruits and drinking sugary beverages – the holiday was Memorial Day).

San Luis Obispo County Public Health Department

Santa Lucia Middle School Nutrition Education Intervention

Outstanding accomplishment:

Students established a connection with the LHD Health Educators, looking forward to their monthly presence and the Cafeteria tastings featuring different fruits and vegetables. During several of the Cafeteria tastings students would come back over and over to get another sample. During the last class nutrition education presentation where the focus was on physical activity, students were tasked with developing and teaching their classmates their own physical activity in groups. The students were really engaged and excited to teach the class. Finally, during the Rethink Your Drink presentation, students commented on how surprised they were at the amount of sugar in some of their favorite drinks.

Challenge:

The intervention was spread out over the course of the school year so it was difficult to develop a rapport with the students at first. Once they were used to the educators, things went more smoothly and students were able to interact with the educators and the content.

San Mateo County Health System

Outstanding accomplishment:

At the end of the semester each group of students who participated in the classroom series of Teen Health Spa participate in a WOW event. The WOW event is an opportunity for students to showcase what they have learned to other students and parents. Students are eager to share recipes, educate other on the dangers of sugar and have a zest for nutrition that we hadn't previously seen. The following was shared by our sub-contractor Citizen Schools: One afternoon our Citizen Teacher Natalie, a friendly and engaging lawyer with a background in the beauty product industry, was leading our opening ritual of relaxation and yoga. This ritual gets the girls calm and ready to learn about their bodies, minds, and personal goals. As the girls leaned back with cucumber slices on their eyes, quiet music playing in the background as Natalie guided them through a relaxation exercise, one particular student named Serina could not stop smiling. I noticed how excited she was from the moment we walked into the

room, and her excitement continued all through the ritual. Finally, as Natalie brought class to attention to review this week's lesson objectives, Serina's hand shot up.

Natalie called on Serina to share with the class. Serina, a student who typically has a difficult time staying focused in class, was more engaged than we had ever seen her. She exclaimed excitedly, "Miss Natalie! This weekend I took home the recipe packet you gave us, and my mom and I went shopping at the grocery store for some of the healthy ingredients. We made fruit smoothies for breakfast and my mom loved them! I also made an oatmeal banana face mask that we put on together, and I brought it here." In her hand, she was holding a small container of the face mask she had made that weekend with her family from healthy, natural foods. Natalie beamed from ear to ear as she congratulated Serina for her efforts and creativity. For Natalie, this was the moment she had been waiting for when she signed up to teach with Citizen Schools. Though Serina's weekend shopping with her mom may seem like a small, routine event, her excitement telling the story demonstrated that this shopping trip had meant much more. Not only was Serina able to take what she had learned in Teen Health Spa about healthy choices and apply it to her own life, but she was able to teach this information to her family and inspire them to make healthier choices in their household. The impact of Natalie's teaching spread beyond the classroom and into the future of her students and their community.

Cesar Chavez Academy:

Even through the difficulty of some behaviors derailing the lesson sporadically, many of the girls have been very keen on doing their best in the apprenticeship. They understand the objective of THS is to change a daily behavior to become healthier.

One student in particular that is really determined to make a change and has been working towards this goal is Yadira Alcantar. To track behavior changes students fill out a Mini Max plan where they reflect about how well they stuck to their plan. Yadira wants to drink less pop and sugars. She has been truthfully reflecting on her progress, and is honest about the times she has not done her best and given into the sugary temptation. She expressed that she really wants to stick with her plan because she wants to be healthier and pretty inside and out. She also wants to learn to be healthy so she can help her family be healthier. She worries about her mother and her family and wants to be able to help them be healthy.

Challenge:

Due to the after school setting of our interventions, many students do not consistently participate in the program. Consequently, they miss key components of the curriculum which is likely reflected in the pre/post-test. Additionally, the curriculum calls for the purchasing of fruits/vegetables and other perishable goods on a weekly basis. This is

very inconvenient for the teachers and volunteers (many of whom are on food stamps) and cannot afford to be reimbursed.

Santa Barbara County Public Health Department

Outstanding accomplishment:

A Champion Mom shared her story of why she participated in the H4L classes and what has happened since then. She attended the very first collaborative series at Sanchez Elementary and since has joined the CX3 Community of Excellence group in the North West area of Santa Maria. For story purpose we will call her Carmen. Carmen came into the first class of the series accompanied by her three children. She asked for her children to remain with her and not join the children group in another room so that they could also hear the information. It was evident that she had just come in from work and was embarrassed about her muddy shoes. Later we learned that she was an agricultural field worker. As we conducted the first food demonstration and distributed the recipe for tasting, we saw her face light up as she tasted the food. Rapidly she raised her hand and asked about the ingredients and how was it possible to make healthy food taste so good. She attended all six classes accompanied by her daughters and asked more questions than anyone else. Her participation in all activities and role plays was stellar and consistent. At the end of the last class she asked us if she could stay and ask some questions. When the class finally ended she came up to the educators and rather than asking questions, she thanked us for the class. She continued to tell us her motivation and reason for being in the class. She shared that at her last physical exam her older daughter age 11 was diagnosed as obese and lab work showed that her cholesterol levels were very high. This was the reason she attended the classes and why she wanted her daughters to be in the class with her. She also shared that the whole family changed their diet and that now, they included fruit and vegetable in all meals as well as physical activity every day. In the six weeks of the classes they consistently made changes to their lifestyle and proudly stated that they could feel the difference from the healthy changes. The outstanding moment came eight months later when she came into one of the CX3 group meetings and proudly shared that her daughter's doctor had given her the good news that her daughter's cholesterol level had returned to normal levels and that her weight was within the normal range for her age. She stated that all this happened because of the participation in the Healthy for Life classes and the fact that the whole family applied what they learned to their lives.

Challenge:

Outreach to communities that qualify under NEOP guidelines was challenging. The series requires attendance to all classes. This presented a significant challenge to achieve. We spent an important amount of time outreaching to community partners, schools, afterschool programs, Head Start parents, state preschools and WIC program participants. In addition, we incorporated sign up lists that were presented to interested individuals at health fairs and community events. We gathered a significant amount of interested individuals and then we followed up with telephone calls in preparation for each series. We learned that of every 10 individuals contacted via phone follow up, there were 3 that would attend the class. At the same time, we learned that constant attendance was directly related to reminder phone calls made the day before each class of the series.

Implementation of Healthy for Life (H4L) class series required specific logistical preparations that at times became challenging to accommodate. Each series needed a large classroom for the participants and a smaller room for children ages 6+ who were supervised by recreation and parks staff. The rec leaders conducted fun physical activity games with the children while their parents were in the H4L class. We also needed a community kitchen to prepare the healthy recipes for each class. It was challenging to find a facility that could accommodate this due to two main factors: finding a facility in a SNAP-Ed approved site and finding a facility that wasn't already reserved.

Network staff trained Marian Medical Center Promotores to teach the classes. It was a challenge that required continuous teaching, modeling, and process evaluation to ensure consistency of program delivery among all Promotores. This process became very time consuming.

Some of the class participants could not read or write Spanish. This posed a challenge with the written evaluation tool. In order to address this more time was needed during the evaluation to provide group instruction in oral Spanish. The educators would read each evaluation question and answer choices aloud. This took a lot more time and the training agenda needed to be amended to accommodate this.

Outstanding accomplishment:

By combining education with hands on activities and taste tests, participants were able to learn how to apply the information they were taught in the classes. One educator stated that, “at the end of each class when the class was sampling the taste testing items, I could see that they were interested in making those items at home.” In addition to changing participants’ behavior, systems changes were noted by an LHD educators at one of the sites. At the first class, cookies and juice were available, however, by the second class, the cookies were removed and water and healthy snacks were available.

Challenge:

This fiscal year, we had many staffing changes, so our staff needed to spend time getting to know the neighborhoods they were working in prior to implementing our interventions. This delayed the scheduling of classes for our IOE series. It was also very challenging finding intervention sites that would allow us to come in for five class sessions, as well as have the participants at those sites attend all five sessions. An additional challenge for one of the class series was that some participants seemed to be hesitant in filling out the forms correctly at the first class, leading to unmatched pre and post-tests.

Santa Cruz County Health Services Agency

Santa Cruz City Schools

Outstanding accomplishment:

Many students expressed pride in their role in the nutrition education program especially with hands-on cooking projects and expressed an intention to share skills and recipes learned with their families. Students also described enjoying trying new fruits and vegetables for the first time, especially when they helped grow and harvest these items in the garden. Students positively influenced each other’s perceptions regarding fruits and vegetables and often urged their classmates to try new things (i.e. “Try some—we made it together. It’s good”). At afterschool events several parents noted that they were impressed that their “picky” eaters were willing to try new foods. Nutrition educator Kim Gal witnessed a positive outcome in the community when she ran into a student with her family at the grocery store—the student was showing her parents which ingredients to get in order to prepare one of the recipes she had just made in our nutrition education class.

Challenge:

Challenges and barriers to intervention implementation included logistical considerations regarding working in outdoor classroom settings (i.e. weather, limited prep time, visual/auditory distractions etc.). Another barrier was English language comprehension differences among students. Also, holidays and class field trips were a challenge, as we would then need to coordinate make-up lessons with teachers. Coordinating with classroom teachers regarding survey administration also presented a challenge, as some teachers were confused about ID #s and some administered their surveys days or even weeks later than other teachers. One way to increase standardized administration of the data would be to have the nutrition educators (rather than the classroom teachers) implement the survey, which would ensure all surveys were implemented in the same manner and within the same timeframe. As previously noted, there was considerable variability in reading and English language comprehension among students which could have been a barrier to accurate survey data evaluation. **The dates of our intervention differed per group, due to classroom teachers administering surveys at different times. Our intervention began 2/18/14 for most groups. Some groups had yet to take their pre-tests, so their intervention began later. Likewise, our intervention ended at different times for some groups. Some groups completed the series of lessons before others, and therefore took their post-tests while we continued to complete the intervention with other groups. All groups took the pre-test before their intervention began, and took their post-test after their intervention was complete.

Shasta County Health and Human Services Agency-Public Health

Outstanding accomplishment:

The staff feels that it is truly outstanding that the school district values our work enough to allow us to collaborate with the teachers to provide the training, tools and support necessary to successfully use our program. Staff feels that teachers significantly influence decisions and attitudes of the students, and it's so outstanding to see the teachers encourage those healthy behaviors and demonstrate healthy lifestyles.

Challenge:

Sometimes the rigorous academic demands placed barriers on a teacher's time available to deliver lessons. This barrier may be alleviated by the new common core standard's emphasis on a whole child approach. In addition to this barrier, I also had one teacher 'forget' to complete the post-test youth survey. Next year staff will CC' principals in the reminders because they are very supportive of our programs.

Solano County Health and Social Services

Vallejo City Unified School District

Outstanding accomplishment:

- a) Students were very interested in and enjoyed the taste testing. Some of the students had not been introduced to these fruits and or vegetables prior to our intervention. Students loved the cucumber mint water that was provided to them during the classroom interventions and at our Full Service Community School Nights.
- b) It was wonderful to see the student engaging in describing fruits and vegetables they enjoyed while learning the importance of the nutrients in these fruits and vegetables and how important these nutrients are for them. The students were happily surprised to learn that fruits and vegetables can both taste great and be healthy for your body.

Challenge:

School schedule conflicts proved to be a challenge while implementing the intervention with the classrooms. There were times that the school site had to change the day of our classes in order to complete other activities last minute.

County of Sonoma, Department of Health Services

Outstanding accomplishment:

Teachers expressed in the focus groups enthusiasm for the HOTM program and relayed their students' excitement about the deliveries of fresh produce. "Harvest of the Month has been really key in my class – it opened up my mind and awareness about what fruits and produce that they've (the students) never heard of or seen before." A 3rd grade teacher discussed the changes she has seen in her classroom over the course of the school year after focusing on healthy eating and nutrition: "I was just talking to my students about the end-of-the year party. Instead of the normal cupcakes, they asked if

they could do a Sandwich Party! They wanted to know about (preparing healthy food) over summer and so they wanted to have a healthy food cooking party.” Another teacher noted that her students are taking their lessons home: “I’ve seen improvements in that healthier choices are being made – We used to see fast food every day for the kids. Since we’ve been talking about healthy food choices, I’ve seen the kids say “no mom” (we don’t want fast food) ... now we're getting students bringing a lot of Subway, or saying “now I’ve got a home lunch”. Students are making choices on their own and not just to please us (the teachers). They want me to be proud of them, so of course in front of me they’re making those choices, but I think they're making the same choices also behind closed doors.”

Challenge:

Implementation: A key challenge in implementation was establishing consistent programming and dosage across the four participating school sites. For example, classroom teachers in both Roseland Elementary and Sheppard Elementary schools were responsible for implementing the curriculum, but during the focus group and interviews with the program coordinator, it was expressed that most teachers found it very difficult to integrate the lessons into their already impacted schedules which resulted in very few, if any, of the sessions being delivered. There were also some difficulties encountered due to the federal shut-down in the fall of 2013, which limited the amount of support and guidance the Department of Health Services could provide grantees in the implementation of their program activities.

Evaluation: The youth survey was administered at all schools, however Roseland Creek is the only site reporting data due to the variation across interventions. An additional challenge in evaluating the program was that the exact level of intervention (number and length of sessions) is largely unknown. Teachers were asked to complete an online survey to indicate the number of lessons taught in their classroom. However, the majority did not complete the survey. Because SSU students delivered the Yummy Curriculum to Roseland Creek Elementary, the Roseland program coordinator was confident that the school received the minimum dosage of intervention for this evaluation.

Stanislaus County Health Services Agency

Outstanding accomplishment:

TANF staff continue to be very involved in the promotion of the nutrition education and utilize personal anecdotes regarding nutrition behavior during TANF class material. They have been strong advocates for maintaining the relationship between TANF and

NEOP so that TANF participants are exposed to various lifestyle skills, which may support job training skills and job retention rates. Many of the participants have been very excited to share changes they've made in their personal behavior, especially regarding new recipes they have tried or increased use of skills learned, such as nutrition label reading. Although the data does not necessarily support the change, many participants voiced behavior changes, particularly regarding reading nutrition labels while shopping. Many voiced that label reading strategies were helpful skills that could be utilized and made a real difference when shopping, and that the information provided in the classes motivated them to want to use those skills.

Challenge:

Similar to the previous year's intervention, some participants had a difficult time understanding why they were being provided nutrition education within a job readiness program and how that would benefit them economically. Making the connection between productivity, job retention and health was essential to motivating our participants to not only want to improve their health behavior, but also to keep some participants from disrupting the learning environment for other participants. There were still participants who, regardless of the strength of any connection or example made, had no desire to improve any health habits, whether nutrition-, physical activity-, or lifestyle-related, and imposed a negative atmosphere in the class which made it difficult to hold the attention of other participants during those lessons.

Participant retention strategies were inadequate, and have not been improved since the prior year, but are still out of the control of NEOP staff due to the structuring of the classes being part of a curriculum of the larger TANF program; participants were regularly late or absent in random intervals making it difficult to obtain matched surveys. Also, many of the participants may not have attended all 5 sessions, reducing the number of exposures to the messages and therefore reducing the impact of the intervention. It is unclear from the information at hand, but this may present a skewing factor on the overall data because all participants who completed the surveys both before the first lesson and immediately following the last lesson were included as paired surveys, whether they attended all sessions or not, giving varying degrees of intervention strengths among participants.

The short duration of each intervention group (three weeks) may have limited the impact of the lessons on any resulting behavior change; however, this logistical issue is not likely to be overcome unless another sample group is obtained from classes outside of the TANF program. And although the sample size collected was large enough to allow for fairly thorough evaluation, the lack of follow-up leaves much to be determined about the long-term effectiveness of the lessons and the lack of a control makes it difficult to

discern the direct impact of the intervention without controlling for confounding factors in the environment outside of the classroom that may have altered dietary behavior.

Tulare County Health and Human Services Agency

Tulare County Office of Education

Outstanding accomplishment:

Students and teachers alike loved the classes and looked forward to having the Dietitian present lessons in an interactive and meaningful way to the class. One third grade student said, "The small things count and easy changes can be made." Students held teachers and their parents accountable for treats, meals and shopping decisions. "Don't yuck my yum" was a phrase that helped students understand peer influence when trying new foods. By the month of May students in the Impact groups were excited to try new produce items being offered.

Challenge:

Implementing our intervention was simply a matter of coordination with teachers as to convenient days on which to make presentations to their classrooms.

Ventura County Public Health Department

Outstanding accomplishment:

The overall objective of the Nutrition Education and Obesity Prevention (NEOP) Program's Live Well Nutrition Education Class Series is to educate and engage participants in a way that will motivate them to improve their food and beverage consumption, along with other related factors such as becoming more involved in changing the food environment at home and in their community. As a result of this work being done at the local level, and by studying the attached Report of Findings from Food Behavior Checklist, one can see that we are making positive progress in impacting lives and achieving this objective. More recently, a NEOP Program educator reported that a participant in her class-series, who had also participated in a previous NEOP class, has made positive progress toward changing her eating habits and those of her family. The woman proudly reported that she had lost 10 pounds, and eagerly shared that because of what she had learned in the nutrition classes, she has changed the way she does her shopping and what she puts on the table for her and her family on a daily basis. She reports eating more fruits, vegetables and whole grains. She

engages in physical activity with her children more frequently, and she now encourages friends and neighbors to participate in the nutrition classes. In this example, the educator was impressed not only with the progress reported by this participant but also by how she became a champion for the nutrition classes.

Challenge:

One of the biggest challenges/barriers is managing the different cognitive levels and abilities of participants when administering the survey. This can vary greatly within a group of participants, and can require extra time, explanation of items and general support. So, time becomes a factor as well, and staff need to be aware and be prepared to manage time spent conducting this activity.

Yolo County Department of Health Services

Outstanding accomplishment:

The most significant moment of our IOE interventions was the implementation of healthy foods in the classroom. The Adult Education ESL director was motivated to introduce a classroom policy stating that only healthy foods be served in their weekly Friday potluck. To even further encourage healthy foods, she challenged her students to only bring recipes from the “Flavors of My Kitchen” and “Everyday Healthy Meals” cookbooks for the remaining school year. In addition to implementing the classroom healthy food policy, she also decided to take it one step further. She introduced one of the recipes provided in our IOE classes to the ESL staff potluck and got a very positive response and was asked multiple times for the recipe. That encounter motivated other teachers to contact our NEOP program and schedule additional IOE series.

Challenge:

Initially, we started with four sites. After various attempts at trying to conduct IOE classes in two of our sites and being unsuccessful, we decided to focus on the other two sites and attempted to meet our sample size with the reduction to only two sites. However this made it challenging to obtain enrollment numbers that would satisfy our requirement for 100 matched pairs for data analysis. One of the main barriers we came across was the commitment to five classes with our participants, which led to the complicated task of trying to have matched pairs. Many participants dropped out along the way so we did not always get matched pair surveys from all participants who initially enrolled.

Another barrier we had was misinformation from our CDPH NEOPB IOE coordinators with our diverse selection of our adult IOE population. We received conflicting

information as to whether or not we could work in rehabilitation centers, which we did not do. Because of this we were even more limited on the locations we could go to for IOE classes.

Our main barrier in evaluating the data was that our report was due before the completion of our scheduled IOE classes, thus we did not have 100 matched pairs by the 7/31/14 deadline. We will continue to teach IOE classes until 9/29/14, but this data will not be counted towards our IOE report sent to USDA.

A final challenge that we noted only after entering survey data into the spreadsheet was that some participants did not complete the entire survey, thus the data set is not 100% complete.

4. SNAP-Ed Planned Improvements:

Directions- Describe any modifications planned for 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).

1. LHD Model Support:

- **Accessibility and Coordination of Trainings Programs:** CDPH NEOPB plans to expand the accessibility of its training programs to reach Local Implementing Agencies (LIAs) using various approaches. Plans are in motion to enhance the NEOPB SNAP-Ed Training Website to provide Local Health Departments (LHDs), Training and Resource Centers (TRCs) and other LIAs access to: archived training webinars; evidence based training resources for planning and implementing nutrition education and obesity prevention strategies and interventions; information on upcoming State and Regional webinars and in-person trainings; nutrition education certification training programs; SNAP-Ed technical assistance resources; and e-blast notifications. Also, an online orientation training resource for SNAP-Ed State and Local Implementation Agencies will be developed in consultation with other State Implementing Agencies in the coming year to provide foundational information and examples of multi-agency coordination. The Training and Development Section will also be leading a strategic planning process that will primarily focus on training coordination and the development of trainings to facilitate community engagement and support for local level nutrition education and obesity prevention efforts.
- **Annual Project Directors' Meeting (PDM) and SNAP-Ed Forum:** NEOPB plans to hold on annual basis a PDM and collaborate in the planning of the SNAP-Ed Forum to facilitate in-person, interactive learning and information sharing. Both meetings will receive event planning and logistical support from the CSU Sacramento contract. The purpose of a both venues is to share best practices, continue to learn about creating community change through policies, systems, and environmental strategies. The venues also serve as an opportunity to explore and share ideas across jurisdictions about how to achieve effective collective impact, and to discuss how SNAP-Ed services support and fit into broader community health strategies. The main distinction between the PDM and SNAP-Ed Forum is that the PDM's audience is geared toward NEOPB LHDs and TRCs, and SNAP-Ed Forum expands the audience to include all SNAP-Ed Local Implementing Agencies (LIAs) with key emphasis on supporting LIAs to develop and implement the FFY 2016 integrated work plan.
- **Training Resource Centers (TRCs):** NEOPB will continue to provide LHDs with 1) localized training, technical assistance, 2) media/public relations outreach and coordination, and 3) multi-county coalitions for community engagement through

the implementation of service area specific (TRCs). When feasible and appropriate, TRCs will work with LHDs in their Service Areas to invite sister SNAP Ed LIAs to participate in TRC led trainings and multiple-county coalitions to advance shared SNAP-Ed priorities. Additionally, NEOPB plans to assess TRC services provided to LHDs for program planning purposes.

- In addition to TRC services, cross-branch collaboration amongst state staff will take place to create and implement state developed trainings and technical assistance. Trainings will be conducted in person at statewide meetings or via webinar. Project Officers will continue to be the primary point of contact for LHDs seeking technical assistance by responding directly to requests, connecting them with the TRC as appropriate, or connecting them to other NEOPB staff across the different support functions in the Branch. Project officers will also sustain and improve customer service to LHDs by scheduling and conducting at least two (2) site visits per fiscal year to provide technical assistance and learn about local level best practices first hand.

2. SIA Support:

- Materials: CDPH provided a material allocation to each State Implementing Agencies (SIA) including California Department of Social Services “Fresh” Projects, UC CalFresh Nutrition Program, California Department of Aging, along with participating NEOPB Local Health Departments. The total materials distributed to SIAs were 450,000 pieces. Allocations will be approximately double for Federal Fiscal Year (FFY) 2015, since SIAs received their allocations mid-year. A total of 2.5 million materials were distributed in FFY 2014 to funded and non-funded partners working with the SNAP-Ed audience.
- Trainings: NEOPB developed training opportunities designed for LHDs are also made available to all SIAs.
- ATF Enhancements: New security levels and groups were made within the existing NEOPB Activity Tracking Form (ATF). These changes allowed for separate data entry and reporting for all of the SIAs, their county programs and subcontractors. Enhancements were also made to streamline data collection for non-NEOPB Implementing Agencies by removing NEOPB specific data fields. The Integrated Workplan was used to coordinate ATF site lists between SIAs within the same county.

3. Transitional State-Level Contracts:

Public Health Institute Contract

- Background: The California Department of Public Health (CDPH) executed a personal services (PS) contract for select SNAP-Ed services, including staff positions, with the Public Health Institute (PHI) in 1997. Over the succeeding 15 years, the contract was re-bid twice and awarded to PHI each time. The current, five-year PS contract with PHI expires on September 30, 2014.

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- CDPH reviewed the activities required to complete the approved USDA State Plan and determined that the majority of work is in line with activities conducted by state civil service employees including: 1) information and education; 2) training and technical assistance; 3) health promotion and marketing; 4) public relations; 5) consumer empowerment; 6) community and partnership development; and 7) research and evaluation. In order to comply with California's constitution, NEOPB requested, and was granted authority to convert the PS contract positions to state civil service positions.
- Modifications:
NEOPB will continue to be a successful nutrition education program by developing and enhancing state institutional capacity and expertise. In building state capacity, it supports program continuity and streamlines accountability through current organizational policies, procedures, and guidelines. To assist with the transition of select state-level SNAP-Ed services from contracted vendors to the state civil service staff, NEOPB is establishing a non-competitively bid (NCB) contract with PHI for a 12 month period.
- Contract Term: October 1, 2014 through September 30, 2015
- Contract Goal: Ensure a smooth transition and transfer of knowledge from PHI staff to CDPH NEOPB state civil service staff for select services.
- Primary Activities under direction of NEOPB:
 - Mentorship of new CDPH NEOPB staff; and
 - Development of toolkits, guides, manuals, training modules, and webinars.
- The NCB contract will be for services that include knowledge transfer and training to state staff that will support a smooth transition of SNAP-Ed program functions. In addition, PHI will work collaboratively with the NEOPB Research and Evaluation Section to resolve and transition outstanding and ongoing FFY 2014 evaluation projects. Throughout the NCB contract, PHI will also facilitate trainings requested by NEOPB staff to fulfill transitional needs. Trainings, as appropriate, will be made available to all state and local implementing agencies to support a coordinated and more cohesive approach to the delivery of SNAP-Ed programs throughout California.
- Contract Monitoring: The transitional contract with the Public Health Institute will be supervised by the NEOP Branch Chief, with day-to-day support from a designated NEOPB Project Officer and Contract Manager. NEOPB and PHI staff will communicate regularly via email, conference calls, and in-person meetings to discuss contract activities and deliverables. PHI will submit monthly status reports, a mid-year progress report, and an annual report to document progress. PHI staff will participate in monthly, in-person meetings with NEOPB staff to ensure deliverables are submitted timely and fulfil the transitional needs of NEOPB.

4. Media- Communications:

- Champions for Change Campaign was not able to complete the request for proposal (RFP) process for a new media and public relations services until FFY 2015. Runyon, Saltzman & Einhorn were awarded in October 2014 for another three-year contract. The Campaign was able to place a six month media buy from April through September of 2014 in the amount of \$6,411,842 because of an interim stop-gap solicitation. Champions for Change Social Marketing efforts delivered 654 million indirect impressions to the target audience.
- There were no new advertisements created in 2014, as advertising is historically used for a minimum of three years. Federal Fiscal Year 2013 creative including “Join the Movement” (multicultural) , A Mis Hijos No” (Latino Campaign), “Not My Kids”, “Legacy” and “Traditions” (African American) was rotated into the FFY 14 media buy based on population demographics. Standard media targeting was employed to the media buy.
- NEOPB Team created collateral materials “Start Healthier Traditions” available on the Legacy of Health landing page (website portal) and “Fast and Healthy Breakfast Ideas” in both English and Spanish available on the “A Mis Hijos No” and “Not My Kids” landing pages (website portals). These materials were available to provide the visitor with recipes, tips and video testimonial.
- For 2014, there were over 2.5 million materials distributed from the NEOPB warehouse for LHDs, SIAs, and community partners working with the SNAP-Ed audience. The materials in inventory were reduced from 479 to 234 different items. This was accomplished by promoting the materials free to agencies working with the SNAP-Ed target.
- Warehouse Transition – The transition of vendors for warehouse storage, fulfillment and Web Storefront services occurred during the last two quarters of FFY 2014. The transition was required with the end of the five year long Public Health Institute contract and services were transitioned to the Office of State publishing. Online ordering was not available from July 15 – September 30, 2014, but resumed on October 1, 2014. There were two webinars to train LHDs and SIAs on the new Web Storefront process in October 2014. While not all ordering functions were made available on the new OSP Web Storefront that were offered on the old online ordering system, it is as functional as ordering on any retail commercial website. CDPH has requested enhanced functionality to improve the customer service experience and OSP has agreed to explore adding functionality as part of their services.
- Future Materials Reduction - The goal will be to further reduce the item totals stored in the Office of State Publishing warehouse to no more than 150 items by September 30, 2015 utilizing similar methods as implemented in 2014.

5. Policy, Partnership and Program (PPP) Development:

- To safeguard the continued effectiveness of SNAP-Ed projects and to address the final year of transition from contractors to civil service staff, the one-year contract with the Public Health Institute (PHI) is designed to ensure continuity of campaigns, programs and pilot initiatives. To this end, CDPH staff plans to focus the Program Directors' (PD) Meeting in November 2014 almost exclusively on policy, systems and environmental (PSE) change best practices and sharing, as requested by Local Health Department (LHD) PDs. Both the regional Training and Resource Centers (TRCs) and PHI staff will provide numerous webinars, on-site training and mentoring of specific state staff to ensure full knowledge transfer, complete training curriculums, tool kits, and other materials as needed.

Specific state-level projects that will maintain and improve SNAP-Ed services are:

1. Prioritize Promising Pilot Projects in Nutrition Education and Community Change to Support Obesity Prevention—in FFY 15, state staff as well as staff available through the PHI subcontract will review findings and recommend ways to address challenges and expand efforts, if indicated, for the following pilot programs that were implemented through the Master Contract with the PHI in FFY 14: Cuerpo y Alma, Sister Circles, Healthy Diva Salon, 90 Day Body & Soul Challenge, Body & Soul Youth Initiative, Mobile Health Promotion, Communities of Excellence School Neighborhood & Afterschool Tools, Retail Recognition, Farm to Fork, school and preschool, Asian Interventions Pilot, Native American/Alaska Native pilot.
2. Review All Existing Campaigns and Materials—CDPH staff will continue to develop, pilot, and expand promising practices for new avenues and/or messages for nutrition education, create and sustain partnerships to leverage and extend SNAP-Ed resources and message reach, and develop tools and resources, associated trainings, and technical assistance packages to support LHDs to support PSE change efforts for improved access to healthy foods and beverages and physical activity for SNAP-Ed eligible Californians.
3. Explore New Avenues for Public Health Approaches to Obesity Prevention—For priority pilots, CDPH staff, in partnership with PHI, will create implementation plans that include materials revisions (if needed), training, technical assistance and communications elements to support sharing through the TRCs and implementation by LHDs. For those pilots that experienced significant challenges, staff will review and assess next steps.
4. Pursue Grant Funding—As opportunities arise, staff will pursue additional grant funding and/or cross-branch and cross-department collaborations to extend and enhance obesity prevention efforts through SNAP-Ed. Consideration will be given to state-level work with retail chain(s) to promote, as feasible, pricing policies to increase access to fruits and vegetables and healthy beverages, marketing policies that favor healthy food and/or beverage advertising, and efforts to promote the retail grocer as a point of community health and nutrition information.

5. Create/Re-generate and Sustain Partnerships—With PHI and TRCs, staff will implement the FFY 14 NEOPB Partnership Plan in the areas of technical assistance and training around partnership building. These activities will include County Nutrition Action Partnership technical assistance and training to build capacity for collaboration building and strategic planning, state-coordinated outreach to state and regional partners, a SNAP-Ed partnership summit and continued support of the Champion Providers (see below). SNAP-Ed meetings and trainings will include capacity building and showcasing of partnership efforts at the State, regional and local levels.
6. California Department of Education (CDE) and California Department of Food and Agriculture (CDFA)—As an improvement, to eliminate administrative barriers, in FFY 15 NEOPB will contract directly with CDFA, but continue to host programmatic meetings jointly with CDE. Activities for FFY 15 will build on those initiated in FFY 14 and work to expand identification of best practices related to school garden resources and use of student-grown produce in school functions and institutional purchasing such as buying cooperatives and/or food hubs, on-site farm stands and/or farmer's markets, and food distribution models. CDFA will create communication tools, present at local and regional SNAP-Ed meetings conferences and trainings, and update web content with resources to support increased access to fresh, local, fruits and vegetables in schools and afterschool settings. In addition, CDFA will increase its presence at farm to fork and farm to school collaborative efforts, meetings, trainings, and form a strategic planning team to help provide coordination among farm to fork experts in the field.
7. PSE Compendium—Staff will work in coordination with the TRCs and PHI staff to orient LHDs and their subcontractors to the materials and resources to PSE strategies, including those contained in the *SNAP-Ed Strategies and Interventions: An Obesity Prevention Toolkit for States* and the *PSE Compendium* developed by NEOPB in FFY 14 but not yet finalized. Staff will coordinate with TRCs to communicate those changes.
8. Champion Physicians— This project will continue the pilot launched in FFY 2014 that harnesses the influence of health care providers to build healthier communities for low-income families in California. FFY 15 activities will expand the partnership between NEOPB and the University of California at San Francisco to train a new cohort of Champion Providers as well as mentor current ones to foster connections between Champion Providers, LHDs, locally elected officials and their communities.

Additional PPP-Special Project Updates:

- Conducted PSE teleconferences and webinars (24 on 12 topics)
- Completed Partnership Plan and assigned staff accordingly
- First Stakeholder's meeting was conducted on
- Completed the FVPA pilot projects to improve these projects and the results are pending.
- Started strategic planning in FFY 2015.
- Assisted with the PHI NCB contract and transitioning state staff.

6. Research & Evaluation

- EARS: Starting in FFY 2014, Research and Evaluation (RES) staff began training staff from other State Implementing Agencies (SIAs) and their contractors on the online EARS for data entry and generating reports. At the end of FFY 2014, RES modified the online system to include data entry screens specific for the SIAs other than CDPH. Throughout FFY 2015, RES staff will provide additional trainings and technical assistance on the online EARS system.
- CX3: Continuing in FFY 2015 is our discussions with local health departments on potential changes to CX3 procedures and instruments that will make data collection more efficient and produce better means for assessing program effectiveness. We also plan to develop the same process for making potential changes to the Impact Outcome Evaluations.

7. Fiscal and Administrative Integrity

- In FFY 14, NEOPB State staff continued to focus on providing a greater amount of fiscal and administrative training and technical assistance than had been feasible in the past. This coincided nicely with anticipated changes associated with SNAP NEOPB and the conversion to the LHD model. The fiscal and administrative training from *NEOPB* staff for all LHDs concluded in FFY 14. This training consisted of one CCMU staff member and their Contract Manager, when available. The face to face orientation allowed for better communication and better knowledge of the fiscal and administrative requirements of the NEOPB contractors. The orientations are available on the NEOPB website via webinar for anyone who needs a refresher or if anyone needs to access the information. NEOPB will continue fiscal and administrative orientations in FFY 15; however, they will be conducted in a regional format rather than one on one.
- With the reorganization of NEOPB in late FFY 14 the function of the Contract Compliance Monitoring Unit (CCMU) that was established following the NEOPB's administrative review by USDA in 2006 shifted to the Contract Operations Section (COS). The purpose of CCMU 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. This function will continue in a different format and the Contract Managers (CMs) in the COS unit will be responsible to verify that all required documentation, administration and fiscal processes are in order. Starting in FFY 15, CMs will be conducting desk reviews for all Local Health Departments on a quarterly basis.
- During FFY 14, CDPH was making a concerted effort to streamline contract and invoice processes so as to avoid past delays, execute new contracts and contract amendments promptly, and maintain local- and state-level services at current levels without disruption. Additionally, the fiscal and administrative review conducted by USDA in FFY 14, reiterated the need for these improvements.

Already, the COS has implemented new invoice procedures for tracking which shows a tremendous improvement on the timeliness of payments to contractors. In FFY 15, the COS team will continue to make improvements in the timeliness of processing invoices and executing contracts.

5. EARS Feedback:

Directions: For this reporting year, provide FNS feedback on State Implementation of EARS. Include the following as applicable:

A narrative explanation of the data the agency currently is reporting on the EARS form. Identify the section and item number providing explanations.

The California Department of Public Health's (CDPH) Nutrition Education Obesity Prevention Branch (NEOPB) reports direct education, indirect education and social marketing data.

1a. Direct Education: SNAP-Ed PARTICIPANTS by Age and SNAP Status

Direct education demographic data are obtained from participant reported data collection cards, an online reporting tool, an Excel-based form, the California Department of Education's CalPADS database.

1b. Direct Education: SNAP-Ed CONTACTS by Age and SNAP Status

Contacts by age and SNAP status are obtained from NEOPB contractor reported entries into an online reporting tool.

2a. Direct Education: SNAP-Ed PARTICIPANTS by Gender:

Data are obtained from participant reported data collection cards, an online reporting tool and the California Department of Education's CalPADS database

2b. Direct Education: SNAP-Ed CONTACTS by Gender:

Contacts by gender are obtained from NEOPB contractor reported entries into an online reporting tool.

3. Direct Education: Race and Ethnicity:

Data are obtained from participant reported data collection cards, an online reporting tool, and the California Department of Education's CalPADS database.

4. Direct Education: Number of SNAP-Ed Delivery Sites by Type of Setting:

Data are obtained from the sites NEOPB contractor reported conducting direct education in their entries into an online reporting tool.

5. Direct Education Programming Format:

Data are summarized from entries on the NEOPB reporting tool for each direct education entry.

6. Primary Content of Direct Education:

Data are obtained from summarizing the top four Main topics reported via the NEOPB's online reporting tool direct education entries.

7. Description of ALL Social Marketing Campaigns:

Data are obtained from NEOPB's Media Contractor.

8a. Types of Materials Distributed:

Data are obtained from a list of materials used by NEOPB.

8b. Estimated Size of Audiences Reached through Communication and Events:

Data are summarized from entries on the NEOPB online reporting tool for each indirect education entry. Direct education entries without demographics are reported under 'other'.

9. Expenditures by Source of Funding:

NEOPB's Fiscal and Administrative Operations Section reports the total Federal reimbursement.

10. Expenditures by Category of Spending:

NEOPB's Fiscal and Administrative Operations Section reports the allocation of program delivery and administrative costs.

b. Comments regarding any challenges you encountered in gathering and reporting data for EARS and actions taken to resolve or address these challenges: *Identify the section and item number when making comments. For 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.*

Direct Education Questions 1a, 2a, 3:

The collection of participant demographics has been a challenge from the start. Contractors have reported that many participants do not want to provide the sensitive information required (i.e. SNAP status, race/ethnicity). In these instances, the participants are reported as indirect education 'other' thus decreasing the actual count of direct education participants. Additionally, NEOPB contractors have voiced concern about the amount of time it takes to collect the demographic information from the participants, and sort and report the data. When time is limited, demographics are not collected and direct education events are reported as indirect education.

When demographics are collected, there is a discrepancy between Hispanic/Latino participants 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 results 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 2012 American Community Survey, 33 percent of California Hispanics selected "some other race". Many California adult Hispanic or Latino participants do not identify as anything other than Hispanic/Latino. With 38 percent of the California population being 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 are not appropriate for our population. In states with a sizable and increasing Hispanic/Latino population such as California, it is imperative that future reporting more accurately reflect the services provided to this ethnic group.

NEOPB has used careful formatting of our data cards to try to overcome this problem in gathering adult data and rely of the California Department of Education to provide student data.

However, our recommendation is to allow the federal government option of “some other race” or “none selected” but still count the person in direct education if an individual does not choose to categorize her or himself into one of the typical major categories.

Social Marketing Questions – 7. All

NEOPB no longer has a regional staffing structure for reporting social marketing campaigns in a manner that allows cost allocation for answer items 7K and 7L. Consequently, even though the online system can identify whether or not an activity was part of a social marketing campaign, the activity was counted as either direct or indirect education, depending on whether or not its demographic information was available.

c. Rationale for implementing agencies not reporting actual unduplicated data for EARS, if this is the case.

The number of unduplicated participants that NEOPB reaches is too large to report an actual day by day count. However, steps are taken to ensure a close estimate is reported with the use of data collection cards.

d. A narrative description of data that the agency currently is not able to report. This information should be reflective of any new SNAP-Ed programming using public health or environmental approaches, multi-level interventions, partnerships, etc.

NEOPB currently collects data in its online reporting tool that is not reportable in EARS.

The use of partnerships is not reported in EARS. NEOPB collects information such as role of partner, focus of partnership and type of partner on each organization our grantees partner with during each fiscal year, as well as the frequency and type of interventions the partnership is used to produce.

For direct and indirect education events, data that are collected include items that enable us to integrate EARS reach and intensity information with programmatic data. Some of this reflects multi-level interaction; others reflect population-specific targeting and/or links process and outcome evaluation. Examples include identifying if the activity was

- 1) part of an Impact/Outcome Evaluation,
- 2) part of a Policy, Systems, and/or Environmental Change intervention,
- 3) conducted in conjunction with a NEOPB social marketing Campaign/Program,
- 4) part of a NEOPB signature themed event such as Juneteenth,
- 5) utilizing Peer Educators or Youth Engagement groups, and/or

6) part of its community assessment project, CX3, including both activities carried out with SNAP-Ed participants and those conducted with providers.

The online reporting tool enables us to identify what specific NEOPB nutrition education materials were used and which activities were conducted in Spanish.

In addition, NEOPB collects data for activities that do not fit directly into an EARS framework; those activities that are part of our grantees' Scope of Work but that do not directly interact with our target audience. Examples include provider trainings, technical assistance, meetings, speeches/conference presentations and other non-target promotional events.

e. Ideas for new questions that could be added to the EARS form to capture relevant information that the agency is unable to report at this time.

EARS will need modification, going beyond reporting descriptive and process data to capturing results and managing knowledge. EARS should be able to provide the USDA, States, and grantees effectiveness of interventions. Identification of a related set of core data elements should be based on input from various agencies and stakeholders, including the needs and capabilities of the funded grantees. In addition, a revised EARS should respond to requirements communicated in the federal Guidance and regulations. Consideration could be given to using new methods to develop consensus about the most important indicators, 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 reporting systems and evaluation to work with States and their local partners. This should include the development and diffusion of automated data collection and management systems.

Recommendations submitted in previous years remain. There is concern that EARS is not currently structured to collect data relevant to community and public health approaches. This would include partnership activities and accomplishments, leveraged resources, and positive changes in policy, systems and environmental support at the local, regional, or state levels.

As presently designed, EARS is unable to provide NEOPB grantees with useful data to improve the quality of their programs. With SNAP-NEOP, it will be important to establish early what the common objectives are for USDA, Congress, states, implementing agencies, and local grantees. Those EARS elements that do not work well or that do not provide meaningful data should be changed or discarded and replaced with more appropriate measures. Data should be useful at the city, county, regional and statewide levels, as well as nationally.

NEOPB highly recommends that the USDA build upon the work initiated and piloted by the Western Regional Office Evaluation workgroup for documenting program effectiveness appropriate for a wide range of state funding levels.

6. Appendices:

Directions- Attach evaluation reports included under item #3. **Optional-** States may also provide a brief description or information that highlights other SNAP-Ed projects that are not reported under the section above. For example, share information about:

- A. CDPH NEOPB EARS Report FFY14 Final Report
- B. 2010 Highlights from the Nutrition Education and Obesity Prevention Branch's California Teen Eating, Exercise and Nutrition Survey
- C. 2012 Highlights from the Nutrition Education and Obesity Prevention Branch's California Teen Eating, Exercise and Nutrition Survey
- D. 2013 Highlights from the Nutrition Education and Obesity Prevention Branch's California Children's Healthy Eating and Exercise Practices Survey
- E. 2013 Highlights from the Nutrition Education and Obesity Prevention Branch's California Dietary Practices Survey
- F. California Adolescents Are More Physically Active When They Have Greater Opportunities for Physical Activity in Their School and Community
- G. Evaluation of the 2013 Champions for Change Media Campaign
- H. Examining the Relationships Between Levels of Reach of Supplemental Nutrition Assistance Program-Education Interventions and Nutrition and Physical Activity-Related Outcomes using Data from the California Health Interview Survey
- I. Key Facts about California Teens, 2010: Creating Change with Youth Voice
- J. Obesity in California: The Weight of the State, 2000-2012
DRAFT/CONFIDENTIAL

K. PSE Evaluation Project FFY14

L. Supporting a Healthy Lifestyle among Low-Income Children: Key Findings from the 2011 California Children's Healthy Eating and Exercise Practices Survey

**Supplemental Nutrition Assistance Program Education (SNAP-Ed)
EARS Reporting Form**

OMB BURDEN STATEMENT: According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0584-0542. The time to complete this information collection is estimated to average 54 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. OMB #0584-0542 expires 08/31/2013.

State: California

Federal Fiscal Year: 2014

Number of Implementing Agencies*: 1

Name of Each Implementing Agency*

California Dept. of Public Health Nutrition Education and Obesity Prevention Branch

* An implementing agency is defined as an organization that has a contract/formal agreement with the State Supplemental Nutrition Assistance Program (SNAP) to develop and deliver nutrition education activities in the state. Attach additional pages if necessary.

DIRECT EDUCATION:

Items #1-6 ask for information about participants and activities associated with direct SNAP Education (SNAP-Ed). Direct Education is defined as interventions where a participant is actively engaged in the learning process with an educator and/or interactive media. Direct education provides an opportunity to obtain information about individual participants. For an activity to qualify as direct education, information on the number of individuals, SNAP participation status, age, gender, and race/ethnicity must be collected.

Example 1: An implementing agency conducts a series of nutrition sessions designed to increase fruit and vegetable intake. The educators collect enrollment data including name, age, race, ethnic group, SNAP participation and gender.

Example 2: The implementing agency provides nutrition education via kiosks at several locations. Participant using the kiosks provides identifying information including their SNAP status, ethnicity, age and gender by entering this data or by using codes that can be linked to this information by the implementing agency.

Situations that would not count as “direct education” include cases where an individual obtains nutrition education or materials or listens to a session but no demographic information is captured about the individual. This would count as indirect education.

Direct Education: SNAP-Ed Participants and Contacts

1a. Direct Education: SNAP-Ed PARTICIPANTS by Age and SNAP Status

Reporting an unduplicated count of direct education participants means providing the number of different individuals who receive any SNAP-Ed direct education. Each individual counts as one participant, regardless of the number of times he or she has participated in direct education activities. You are encouraged to provide actual unduplicated counts but if you are unable, you should estimate the number of individuals served.

- For Question 1a, indicate below if you are providing actual unduplicated counts or an estimate of SNAP-Ed direct education participants.

Actual Counts of Participants (unduplicated)

Estimated Counts of Participants

		A	B	C	D	E
		Less than 5 Years	5-17 Years Grades K-12	18-59 Years	60 Years or More	All Ages Combined
1	Number of SNAP Recipients in SNAP-Ed	37,680	397,003	34,086	3,329	472,098
2	Number of All Other Participants in SNAP-Ed	11,249	122,788	44,718	12,827	191,582
3	Total Number of SNAP-Ed Participants	48,929	519,791	78,804	16,156	663,680

If you reported an estimate in Question 1a, please describe in 100 words or less the methods used to estimate the number of participants.

The estimate was provided by school demographic data from the California Department of Education and data collection cards which allowed direct education participants to self-report their SNAP status, age, gender, race and ethnicity.

1b. Direct Education: SNAP-Ed CONTACTS by Age and SNAP Status

A “SNAP-Ed contact” is defined as an interaction in which a SNAP-Ed participant participates in a direct education activity. Each SNAP-Ed participant may have one or more SNAP-Ed contacts.

- For Question 1b, indicate below if you are providing actual counts or an estimate of SNAP-Ed direct education contacts.

Actual Counts of Contacts

Estimated Counts of Contacts

		A	B	C	D	E
		Less than 5 Years	5-17 Years Grades K-12	18-59 Years	60 Years or More	All Ages Combined
1	Contacts with SNAP Recipients in SNAP-Ed	99,940	1,773,514	46,232	4,676	1,924,362
2	Contacts with All Other Persons in SNAP-Ed	22,653	439,774	67,361	20,451	550,239
3	Total Contacts of SNAP-Ed Participants	122,593	2,213,288	113,593	25,127	2,474,601

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 using a data collection tool which utilizes data cards, Free and Reduced Price Meal data and census tract data based on the sites where the direct education was implemented.

Instructions for Question 1a and 1b

- Row 1: Enter the **total number of participants (1a) and contacts (1b) who are SNAP recipients** by each age range and for all ages combined (Row 1; Columns A-E).
- Row 2: Enter the **total participants (1a) and contacts (1b) for all other (non- SNAP) persons** by each age range and for all ages combined (Row 2; Columns A-E). This includes persons who are eligible non-participants with respect to the SNAP combined with persons who are not eligible for the SNAP.
- Row 3: Enter the **total participants (1a) and contacts (1b) for SNAP-Ed by age category** (Row 3; Columns A-E). Each number in Row 3 should equal the sum of Rows 1 and 2 in that column.

Special Circumstances

- If necessary, determine SNAP status among children (columns A and B) who receive SNAP-Ed services in school and child care settings by multiplying the number of children participating in SNAP-Ed at each school or child care facility by the percent of students enrolled in the **FREE** school lunch program.

Example: An elementary school program has 100 children participating in SNAP-Ed and the school's free lunch participation rate is 60%. In the "5-17 Years (grade K-12)" column, report 60 students under "Number of SNAP Participants in SNAP-Ed" and 40 students under "Number of All Other Participants in SNAP-Ed" for a total of 100 students.

- Teen-age SNAP-Ed participants should be counted by their age for Question 1 even if they are parents.

Example: If the teen parent is 16 years old, they should be counted under Column B, 5-17 Years (Grades K-12). If the teen is 19 years old, they should be counted under Column C 18-59 Years.

2a. Direct Education: SNAP-Ed PARTICIPANTS by Gender

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

Actual Counts of Participants (unduplicated)

Estimated Counts of Participants

		A	B
		Female	Male
1	Number of SNAP-Ed Participants	353,716	309,964

If you reported an estimate in Question 2a, please describe in 25 words or less the methods used to estimate the number of participants.

The estimate was obtained from the California Department of Education’s database and data collection cards which allow participants to self-report their gender.

2b. Direct Education: SNAP-Ed CONTACTS by Gender

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

Actual Counts of Contacts

Estimated Counts of Contacts

		A	B
		Female	Male
1	Number of SNAP-Ed Contacts	1,318,868	1,155,733

If you reported an estimate in Question 2b, please describe in 25 words or less the methods used to estimate the number of contacts.

The estimate was obtained from the California Department of Education’s database and data collection cards which allow participants to self-report their gender.

Instructions for Question 2a and b

Enter the DIRECT EDUCATION participants (2a) and contacts (2b) by gender in Row 1; Columns A and B of Table 2a and 2b. The total of A and B in Table 2a should equal the total number of SNAP-Ed participants in Question 1a, Row 3, Column E. The total of A and B in Table 2b should equal the total number of SNAP-Ed contacts in Question 1b, Row 3, Column E.

3. Direct Education: Race and Ethnicity

- For Question 3, indicate below if you are providing actual unduplicated counts or an estimate of SNAP-Ed direct education participants.

Actual Counts of Participants (unduplicated)

Estimated Counts of Participants

		A	B	C
		Number of Hispanic or Latino SNAP-Ed Participants by Race	Number of Non-Hispanic/Latino SNAP-Ed Participants by Race	Total by Race
Individuals Reporting ONLY ONE RACE	1. American Indian or Alaska Native	355	3,979	4,334
	2. Asian	441	51,180	51,621
	3. Black or African American	762	45,852	46,614
	4. Native Hawaiian or Other Pacific Islander	136	3,867	4,003
	5. White	459,696	84,793	544,489
Individuals Reporting MULTIPLE RACES	6. American Indian or Alaska Native and White			
	7. Asian and White			
	8. Black or African American and White			
	9. American Indian or Alaska Native and Black or African American			
	10. All Others Reporting More than One Race	2,067	10,552	12,619
	11. TOTAL by ethnicity	463,457	200,223	663,680

Instructions for Question 3

- For purposes of this form, "Hispanic or Latino" is an ethnic group, not a race.
- Column A: Report the number of Hispanic or Latino SNAP-Ed participants for each racial category listed in Rows 1-11. Specifically, in Rows 1-5, report the number of SNAP-Ed participants who are of Hispanic or Latino ethnicity and report only one race. In Rows 6-10, report the number of SNAP-Ed participants who are of Hispanic or Latino ethnicity and report two or more races. Use Row 10 for all SNAP-Ed participants who are of Hispanic or Latino ethnicity and describe themselves with a racial combination not included in Rows 6-9. For Row 11, enter the sum of Rows 1-10 under Column A.

- Column B: Report the number of SNAP-Ed participants who are *not* of Hispanic or Latino ethnicity for each racial category listed in Rows 1-10. Specifically, in Rows 1-5, report the number of SNAP-Ed participants who are not of Hispanic or Latino ethnicity and report only one race. In Rows 6-10, report the number of SNAP-Ed participants who are not of Hispanic or Latino ethnicity and report two or more races. Use Row 10 for all SNAP-Ed participants who are not Hispanic or Latino ethnicity and describe themselves with a racial combination not included in Rows 6-9. In Row 11, enter the sum of Rows 1-10 under Column B.
- Column C: Add the number of SNAP-Ed participants reported in Column A and Column B for each row. For Column C, Row 11, add the numbers reported in Column C.

Example 1: A SNAP-Ed participant who reports they are Hispanic and Black is counted in Column A, Row 3.

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

4. Direct Education: Number of SNAP-Ed Delivery Sites by Type of Setting

Type of Setting	Number of Different Sites/ Locations	Type of Setting	Number of Different Sites/Locations
Adult Education & Job Training Sites	65	Libraries	48
Adult Rehabilitation Centers	16	Churches	183
Worksites	103	Public/Community Health Centers	112
Community Centers	194	Public Schools	2098
Elderly Service Centers	45	Head Start Programs	260
Emergency Food Assistance Sites	387	Other Youth Education Sites (includes Parks and Recreation)	148
Extension Offices	0	Shelters	56
Farmers Markets	37	WIC Programs	99
SNAP Offices	52	Other (Family Resource Center):	54
Food Stores	437	Other (Community Gardens):	8
Public Housing	151	Other (Community Based Organizations):	42
Individual Homes	29	Other (Preschool/Daycare):	178

Instructions for Question 4

For each type of DIRECT EDUCATION setting used, enter the number of different sites/locations used within the State. Record each site only ONCE on this form.

Example 1: SNAP-Ed is provided to residents of a shelter that is located in a local church. Record this site under "Church".

Example 2: SNAP-Ed is provided to participants in Head Start which is operating in the local elementary school which also has SNAP-Ed activities with the elementary school students. Record this site only once under "Public School".

- If you provide interactive multimedia education, please report locations where kiosks/computers are available.

Example 3: SNAP-Ed is provided through interactive multimedia via kiosks in 15 food stores and 10 worksites that have no other SNAP-Ed activities. These kiosks should be added to the numbers of sites reported under the food stores and worksite categories in Question 4.

5. Direct Education Programming Format

	Format	A Number delivered	B Time range per session (in minutes)	C % delivered by interactive multimedia
1	Single session	10,373	15-240	1.89%
2	Series – 2 to 4 sessions	1,847	15-240	5.91%
3	Series – 5 to 9 sessions	4,910	15-240	2.17%
4	Series – 10 or more sessions	1,169	15-240	2.99%

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.

6. Primary Content of Direct Education

CODE: E	CODE: I	CODE: H	CODE: G
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INSTRUCTIONS for Question 6

- Identify up to four educational topic areas of emphasis from the list below. These four topic areas should reflect those areas given most emphasis (e.g. taught most frequently) in your State. Record only one code per box. **DO NOT REPORT SNAP OUTREACH IN THIS TABLE.**

- A. FAT FREE & LOW FAT MILK OR EQUIV (& ALTERNATE CALCIUM SOURCES)
- B. FATS AND OILS
- C. FIBER-RICH FOODS
- D. FOOD SHOPPING/PREPARATION
- E. FRUITS & VEGETABLES
- F. LEAN MEAT AND BEANS
- G. LIMIT ADDED SUGARS OR CALORIC SWEETNERS
- H. MYPYRAMID – HEALTHY EATING PLAN
- I. PHYSICAL ACTIVITY
- J. PROMOTE HEALTHY WEIGHT
- K. SODIUM & POTASSIUM
- L. WHOLE GRAINS
- M. FOOD SAFETY
- N. OTHER (specify): (possible for electronic form)
- O. OTHER (specify): _____
- P. OTHER (specify): _____
- Q. OTHER (specify): _____

SOCIAL MARKETING INITIATIVES:

Item #7 asks for information about SNAP-Ed social marketing initiatives. **Social Marketing** is defined as a consumer-focused, research-based process to plan, implement and evaluate interventions that are designed to influence the voluntary behavior of a large number of people in the target audience (adapted from Alan Andreasen 1995 and Social Marketing Division of Society for Nutrition Education).

For an activity to qualify as a social marketing campaign, the initiative being reported must have included all of the following steps:

- Identified a specific segment of the SNAP/low income population to target
- Identified the specific nutrition needs of the target audience, associated target behavior(s), and the target audience's reasons for and against changing behavior.
- Interacted with the target audience to see if the message, materials, and delivery channel are understood and meaningful (would lead to behavior change).

States that conduct social marketing campaigns that include both direct and indirect education activities may elect to report these under these categories. However, if direct and indirect education activities are reported in the “direct education” section or the “indirect education” section, they should not be reported in the social marketing section because that would result in a duplicate count.

7. Description of ALL Social Marketing Campaigns

Attach an additional form to record data, if there are more than five campaigns.

A. Name of Campaign	B. Current Year of Campaign	C. Major Campaign Activities for Current Year <i>Use Codes</i>	D. Priority Population(s) <i>Use Codes</i>	E. Estimated Number of SNAP Recipients Reached	F. Estimated Number of Other Low Income Persons Reached	G. Total Estimated Reach (Low-Income, SNAP Recipients AND All Others)
Mass Communications	16	I	F,C,E,H	3,570,850	7,055,000	11,390,000

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 priority population (target audience) that this campaign reached during this fiscal year:
 - Ethnicity: F= Hispanic or Latino
G= Not-Hispanic or Latino
 - Race: A= American Indian or Native Alaska
B= Asian
C= Black or African American
D= Native Hawaiian or Other Pacific Islander
E= White
 - Gender: H= Female
I = Male
 - Age: J = All ages
K= Less than 5 years of age
L= 5 to 17 years of age
M= 18 to 59 years of age

N= 60 years of age or older

For Columns E, F and G, enter the number of people reached, as estimated from demographic or marketing data or other sources.

- Column E: Enter the estimated number of SNAP recipients reached this reporting year through this campaign
- Column F: Enter the estimated number of low-income persons (EXCLUDING SNAP recipients) reached through this campaign this reporting year.
- Column G: Enter the total estimated number of people (low-income, SNAP recipients AND all others) reached this reporting year.

Example 1: The radio station that broadcasts social marketing nutrition messages has provided demographic statistics to the implementing partner showing the income range of their listening audience. The data show that roughly 20% of the audience or 400 people would not qualify for SNAP. The estimated count of 400 people should be counted under column G in Item 7 of the form.

Example 2: Nutrition education is conducted at a local grocery store in a low-income neighborhood and 200 people attend. Census track data is examined and shows that 55% of the population served by the store has income below 130% of the poverty level and 30% has income between 130% and 185% of the poverty level with the remaining 15% having income over 185% of the poverty level. In Column E, 110 (55% of 200 participants) should be included, 60 should be included in Column F (30% of 200) and 200 should be reported in Column G.

7. Continued-Description of ALL Social Marketing Campaigns

	H. Primary Intervention Levels Use Codes	I. Key Messages Use Codes	J. Primary Intervention Channels Use Codes	K. Total Expenditure for Social Marketing Campaign for Reporting Year	L Total Federal SNAP-Ed Expenditure for Reporting Year
1	E	E,H,I	A,B,C,D,E,F,G,H,I,J,K,L,M,N,O	\$6,411,842	\$6,411,842

*PowerPlay Campaign O-nutrition education in schools and community youth organizations.

*Worksite Program O-nutrition education in worksites.

Instructions for Question 7

- Column H: Enter **one or more codes** describing each campaign's level(s) of intervention:

- A=Individual
 - B=Interpersonal (groups)
 - C=Institution/Organization
 - D=Community
 - E=All Levels
 - F=Other – please specify
- Column I: Enter **up to three codes** for each campaign's priority education topics/messages. Use the codes listed in the Instructions for Item # 6.
 - Column J: Enter **all of the codes** corresponding to the intervention channels used in each campaign:
 - A=Nutrition Education Radio Public Service Announcement (PSA)
 - B=Nutrition Education TV Public Service Announcement (PSA)
 - C=Nutrition Education articles
 - D=Billboards, bus wraps, or other signage
 - E=Participation in community events/fairs
 - F=Sponsor community events/fairs
 - G=Fact sheets/pamphlets/newsletters
 - H=Posters
 - I=Calendars
 - J=Promotional materials w/nutrition messages (pens, pencils, wallet reference cards, magnets, cups, etc)
 - K=Website
 - L=Electronic (email) materials/info distribution
 - M=Videos/CD-Rom
 - N=Retail/point-of-purchase activities
 - O=Other – please specify
 - Column K: Enter the **total expenditure (include all State and Federal SNAP-Ed and any other sources of funds)** for the campaign this reporting year.
 - Column L: Enter the **Federal SNAP-Ed expenditures** for the campaign this reporting year.

INDIRECT EDUCATION:

Item #8 asks for information about SNAP indirect education. **Indirect Education** is defined as the distribution of information and resources, including any mass communications, public events and materials distribution that DO NOT meet the definitions of Direct Education or Social Marketing Campaigns. Mass communication, public events and material distribution efforts that don't meet the definition of social marketing should be reported here.

8a. Types of Materials Distributed

	Check if applicable
Fact sheets/pamphlets/newsletters	X
Posters	X
Calendars	X
Promotional Materials w/nutrition messages (pens/pencils/wallet reference cards/magnets/cups/etc)	X
Website	X
Electronic (Email) materials/info distribution	X
Videos/CD Rom	X
Other	

Instructions for Question 8a

Check all methods/materials used for indirect education.

8b. Estimated Size of Audiences Reached through Communication and Events

	Estimated No. of target population reached	Source of Data
Nutrition Education Radio PSAs	220,601	1
Nutrition Education TV PSAs	1,355	1
Nutrition Education Articles	910,478	1
Billboard, Bus or Van Wraps, or Other Signage	1,648,855	1
Community Events/Fairs -- in Which Participated	227,583	2
Community Events/Fairs – Only Sponsored	28,464	2
Other	9,548,063	4 (census tracts, FRPM data)

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)

	FFY13 AWARD
1. Public Cash Contributions -- State and Local Tax Revenue only	
2. Public and Private Cash Contributions -- other than State and Local Tax Revenue	
3. Sum of Lines 1 & 2	0
4. Public In-Kind Contributions (non-cash)	
5. Private Cash Contributions to State SNAP Agency only	
6. Indian Tribal Organization Contributions	
7. Sum of Lines 4, 5 & 6	0
8. Federal Reimbursement	\$63,375,145
9. TOTAL SNAP-Ed EXPENDITURES: Sum of Lines 3, 7 & 8	\$63,375,145

Instructions for Question 9

All dollar amounts recorded in item #9 should reflect actual expenditures NOT those initially budgeted.

- Line 1: Enter the dollar value of expenditures paid only with State and local tax revenue designated specifically for SNAP-Ed activities.
- Line 2: Enter the dollar value of expenditures paid with public and private cash contributions. These are contributions that are received by state implementing agencies or their subcontractors other than State and local tax revenues designated specifically for SNAP-Ed activities. These are not from State and local tax revenues.
- Line 3: Enter the sum of lines 1 and 2 in line 3.
- Line 4: Enter the dollar value of expenditures paid with public in-kind (non-cash) contributions. These contributions are defined as goods or services provided by a state or local agency for which no cash funds are transferred and no out-of-pocket cost is incurred by the contributing agency. Typically, in-kind contributions are the value of goods or services provided by volunteers.
- Line 5: Enter the dollar value of expenditures paid with private cash contributions made to the State SNAP Office/Agency. These contributions are funds provided by non-governmental groups. They may include cash provided to the State or outlays made directly by a non-governmental organization to cover approved SNAP-Ed costs.
- Line 6: If applicable, enter the dollar value of expenditures paid with Indian Tribal Organization (ITO) contributions. Although technically ITO contributions are Federal funds, for the purposes of SNAP-Ed reimbursement, they are considered state match.
- Line 7: Enter the sum of lines 4, 5 and 6 in line 7. This may be less than 50% of the Total SNAP-Ed Expenditures in line 9 when there is an ITO contribution because FNS reimburses allowable activities conducted on Indian reservations at the 75% rate.
- Line 8: Enter the total amount of the federal reimbursement for SNAP-Ed; this is the total amount chargeable to FNS. It may be greater than 50% of total outlays when there is an ITO contribution because FNS reimburses for allowable activities conducted on Indian reservations at the 75% rate.

- Line 9: Enter the sum of lines 3, 7 and 8 to record Total (allowable) SNAP-Ed Expenditures. This total should equal Line 3 in Question 10, Expenditures by Category of Spending.

Expenditures by Category of Spending (See Instructions below)

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

	FFY13 AWARD
1. Total Expenditures for SNAP-Ed Program Delivery	\$38,474,744
2. Total Expenditures for Administrative Costs	\$24,900,401
3. TOTAL SNAP-Ed Expenditures (State and Federal) (see footnote)	\$ 63,375,145

Footnote: Total is through Invoice # NEOPB 13-036 dated 11/24/14

Data provided in this table are (check one): actual or estimated based on FTE allocation.

Instructions for Question 10

Costs reported in this table may be calculated based on: 1) the actual expenditures associated with each component described above; or 2) be estimated based on multiplying the percentage of total FTE time spent on nutrition education versus administration to any cost component that is not tracked separately as a delivery or administrative expense.

Example: 45% of FTEs are for administrative functions. Apply this to the total expenditures and you can estimate your Total Expenditures for Administrative Costs, line 2.

Line 1: Count all of the following as Nutrition Education Program Delivery Expenditures:

- Dollar value of salaries and benefits associated with staff time spent providing approved and allowable SNAP-Ed activities.
- Cost of all food demonstration supplies.
- Cost of purchasing and/or developing educational materials (literature/materials/audiovisuals).
- Cost of developing and implementing media campaigns.
- Dollar value of the pro-rated costs of space used to deliver SNAP-Ed.
- Cost of any SNAP-Ed evaluation efforts.
- Cost of traveling to deliver SNAP-Ed services.
- Cost of training for nutrition education providers.
- Indirect costs (must be proportionate to time spent to delivery of SNAP-Ed)
- Other overhead charges (space, HR services, etc).

Line 2: Count all of the following as FSN Administrative Expenditures:

- Dollar value of salaries and benefits associated with staff time spent on SNAP-Ed administration not on nutrition education. (example: State SNAP/IA/Project staff, support staff).
- Cost of training to performing administrative functions like record keeping, accounting, etc.
- Cost of reporting.
- Cost of equipment and office supplies.
- Operating Costs.
- Indirect Costs for those administrative staff not covered above.
- Other overhead charges associated with administrative expenses (space, HR services, etc).

Line 3: Sum of lines 1 and 2. This total should equal the total reported in Line 9 of Question 9, Expenditure by Sources of Funding.

The *California Teen Eating, Exercise and Nutrition Survey (CalTEENS)* is the most extensive dietary and physical activity assessment of adolescents between 12 and 17 in the state of California. *CalTEENS* was designed in 1997 and is administered biennially in even years. *CalTEENS* was designed to monitor dietary trends, especially fruit and vegetable consumption, among California teens for evaluating their progress toward meeting the 2010 Dietary Guidelines for Americans and the Healthy People 2020 Objectives. In 2010, the survey sample (n=1,220) was selected in part through random digit-dial (RDD) and in part through a list of low-income households in the state. This document highlights the most notable findings from the 2010 survey and references the more detailed findings posted to the [Nutrition Education and Obesity Prevention Branch’s website](#).

Key Demographics

Race/Ethnicity

- White
- Hispanic
- African American
- Asian/Pacific Islander

Household SNAP/CalFresh Status, Federal Poverty Level (FPL) %

- Participant
- Likely Eligible, ≤130% FPL
- Ineligible, >185% FPL

Fruits & Vegetables:

- Fruit and vegetable consumption among adolescents was 2.4 cups per day, a full cup below the lowest recommended amount for any teen. The *2010 Dietary Guidelines for Americans* recommends adolescents consume between 3.5 and 6.5 cups of fruits and vegetables each day, depending on gender, age, and activity level. **(Table 1)**
- African American teens are consuming the smallest amount of fruits and vegetables, 1.8 cups per day, compared to 2.4-2.6 cups consumed daily by White, Latino, and Asian teens. **(Table 1)**
- Half of California teens reported not eating any vegetables the day before the survey. **(Table 4)**
- Adolescents who report that fruits, vegetables and juices are generally available to them when they are hungry reported consuming 1.7 more servings of fruits and vegetables on the day before the survey. **(Table 53)** Therefore, when fruits, vegetables and juices are made available to adolescents, this may lead to higher intake and more teens meeting the recommended amounts.
- Almost three-quarters of adolescents reported that they have been taught how to cook healthy food. **(Table 58)** These teens reported consuming over a serving more fruits and vegetables than their peers who have not learned healthy cooking skills. **(Table 53)** Cooking classes in schools and after-school programs provide opportunities to promote healthy eating habits.

Sugar-Sweetened Beverages and High Calorie Foods:

- Since 2000, the percent of adolescents drinking soda and other sugary drinks has decreased by one-third. **(Trend Table 69)**
- Teens from homes participating in CalFresh more often report drinking soda and sugary drinks than teens from likely eligible and ineligible households. **(Table 69)**



- Teens with more money to spend on themselves were more likely to report eating fast food or purchasing high calorie, low nutrient foods or beverages at school the day before the survey. **(Tables 65a and 65b)**

Physical Activity (PA):

- Only four out of ten adolescents reported being physically active for at least 60 minutes, the recommended amount of PA they should get every day. **(Table 36)**
- Teen boys were more likely than teen girls to meet the PA guideline, and also got nearly a half hour more PA more per day, on average. **(Table 36)**
- One-third of adolescents were not able to correctly identify the recommended amount of PA they should get each day. **(Table 38)**
- Adolescents who engage in PA with friends reported more than twice as much total physical activity on the prior day than teens who do not engage in PA with friends. **(Table 60)**
- One-third of students reported walking, biking, or skateboarding to or from school four or more times in a typical week. About half of CalFresh participants reported actively commuting to and from school four or more days per week. **(Table 88)**
- Overall, adolescents are not getting enough PA, and adolescent girls are getting less than boys. Interventions targeting teen girls may be warranted to address this gender gap. Because many teens cannot correctly identify how much PA they should be getting, education in this area may contribute to better outcomes, as well as helping teens to find ways to buddy up with friends.

Overweight and Obesity:

- One of every eight adolescents was obese, based on self-reported height and weight. Rates of obesity were even higher among teens from CalFresh and likely eligible households. **(Table 45)**
- Over a quarter of adolescents were overweight or obese. **(Table 45)**
- Since CalTEENS began tracking adolescent BMI in 1998, obesity prevalence has increased by 54% among all California teens. **(Trend Table 45a)**

School Environment:

- Students who report liking the lunches served at school are less likely to be overweight. **(Table 53)** Providing appealing food choices at school can increase the likelihood that students will eat healthy school meals and may lead to improved long-term health outcomes.
- Access to high calorie, low nutrient foods at school was reported by most California adolescents, from fast food outlets, student stores, or vending machines. **(Table 71)**
- Three out of ten teens reported advertising for name brand foods or beverages on school property, and 18% reported that free samples for name brand foods or beverages had been distributed at school. **(Table 79)**
- More than three-quarters of teens said that they are interested in taking action to improve nutrition in their school and community, while 15% say that they already have. **(Table 117)**

The *California Teen Eating, Exercise and Nutrition Survey (CalTEENS)* is the most extensive dietary and physical activity assessment of adolescents between 12 and 17 years in the state of California. *CalTEENS* was developed in 1997 and is administered biennially in even years. The survey is designed to monitor dietary trends, especially fruit and vegetable consumption, for evaluating California teens’ progress toward meeting the 2010 Dietary Guidelines for Americans and the Healthy People 2020 Objectives. In 2012, the survey sample (n=1,143) was selected in part through random digit-dial (RDD) and in part through a list of low-income households in the state. This document highlights the most notable findings from the 2012 survey and references the more detailed findings posted to the [Nutrition Education and Obesity Prevention Branch’s website](#).

Key Demographics

Race/Ethnicity

- White
- Hispanic
- African American
- Asian/Pacific Islander

Household SNAP/CalFresh Status, Federal Poverty Level (FPL) %

- Participant
- Likely Eligible, ≤130% FPL
- Ineligible, >185% FPL

Fruits & Vegetables:

- Fruit and vegetable consumption among adolescents was 2.3 cups per day, a full cup below the low-end of the range recommended for teens. The *2010 Dietary Guidelines for Americans* recommends that adolescents consume between 3.5 and 6.5 cups of fruits and vegetables each day, depending on gender, age, and activity level. **(Table 1)**
- Half of California teens (49.1%) reported not eating any vegetables or salad the day before the survey. **(Table 4)**
- Over two-thirds of adolescents (68.4%) reported that they have been taught how to cook healthy food. **(Table 58)** These teens reported consuming 1.4 servings more fruits and vegetables than their peers who have not learned healthy cooking skills (4.7 vs, 3.3 servings). **(Table 53)** Cooking classes in schools and after-school programs provide opportunities to promote healthy eating habits.

Milk & Dairy Products:

- Average consumption of milk and dairy products among adolescents was 3.1 servings per day, meeting the recommended 3 or more daily servings. **(Table 16)**
- Only about one-third of adolescents (35.4%) reported that most of the milk they drink was non-fat (skim) or low-fat (1%). **(Table 19)** The *2010 Dietary Guidelines for Americans* recommends consuming non-fat or low-fat milk and other dairy products (cheese, yogurt, etc.).

Sugar-Sweetened Beverages and Dining Out:

- Since 2002, the percent of adolescents drinking soda and other sugary drinks has steadily decreased by one-third, from 69.6% to 46.3%. **(Trend Table 69)**
- Teens from CalFresh participant households (51.7%) and likely eligible homes (57.9%) reported drinking soda and sugary drinks more often than teens from ineligible households (36.6%). **(Table 69)**



- Over a quarter of teens (27.1%) reported eating at a fast food restaurant the prior day (**Table 34**), and on average ate fast food once (0.9 times) per week. (**34d**)

Physical Activity (PA):

- Only half of adolescents (49.3%) reported being physically active for at least 60 minutes a day, which is the recommended level for PA. Teen boys (52.8%) were more likely than teen girls (45.6%) to meet the PA guideline. (**Table 36**)
- Adolescents who engage in PA with friends reported more than twice as much total physical activity on the prior day (72.0 minutes) than teens who do not engage in PA with friends (33.1 minutes). (**Table 60**)
- Over a third of students reported walking, biking, or skateboarding to (34.0%) or from (36.8%) school four or more times in a typical week. About half of CalFresh participants reported actively commuting to (49.9%) and from (52.0%) school four or more days per week. (**Table 88**)
- Overall, adolescents are not getting enough PA, and adolescent girls are getting less than boys. Interventions targeting teen girls may be warranted to address this gender gap. Because many teens cannot correctly identify how much PA they should be getting, education in this area may contribute to better outcomes, as well as helping teens to find ways to buddy up with friends.

Overweight and Obesity:

- One of every nine (11.2%) adolescents was obese, based on self-reported height and weight. Rates of obesity were even higher among teens from CalFresh (14.6%) and likely eligible (13.8%) households. (**Table 45**)
- One-quarter (25.3%) of adolescents were overweight or obese. (**Table 45**)
- Since CalTEENS began tracking adolescent BMI in 1998, obesity prevalence has increased by 40% among California teens, from 8.0% to 11.2%. (**Trend Table 45a**)

School Environment:

- Students who reported usually or sometimes liking the lunches served at school were less likely to be overweight. (**Table 53**) Providing appealing food choices at school may increase the likelihood that students will eat healthy school meals and may lead to improved long-term health outcomes.
- About a quarter of teens (25.8%) reported advertising for name brand foods or beverages on school property, and 18.3% reported that free samples for name brand foods or beverages had been distributed at school. (**Table 79**)
- Almost half of adolescents (46.8%) reported that the nearest fast food restaurant was within a half mile of their school. Six out of ten (62.4%) reported that there was a convenience store within a half mile. (**Table 33**)
- About three-quarters of teens said that they are either somewhat (56.7%) or very (18.9%) interested in taking action to improve nutrition or physical activity in their school and community, while over a quarter (27.4%) said that they already have. (**Table 92**)

Highlights from the Nutrition Education and Obesity Prevention Branch's 2013 California Children's Healthy Eating and Exercise Practices Survey

The *California Children's Healthy Eating and Exercise Practices Survey (CalCHEEPS)* is the most extensive dietary and physical activity assessment of 6- to 11-year-old children in California. The *CalCHEEPS* was first conducted in 1999 and is administered biennially in odd years. The *CalCHEEPS* uses a telephone-based 24-hour dietary recall to monitor dietary trends, especially fruit and vegetable (FV) consumption, among low-income California children to evaluate their progress toward meeting the *2010 Dietary Guidelines for Americans (2010 DGA)*, the *Healthy People 2020 Objectives (HP2020)*, and the *2008 Physical Activity Guidelines for Americans*. In 2013, the survey sample (n=651) was randomly selected from a list of households receiving CalFresh in the state. Data were weighted by age and race/ethnicity to reflect the population of household in California with 6- to 11-year-old children receiving CalFresh and analyzed by demographic, behavioral, and environmental factors. Key findings for California's low-income children are summarized below. Additionally, only significant ($p < 0.05$) findings are discussed. This document highlights the most notable findings from the 2013 survey and references the more detailed findings posted to the Nutrition Education and Obesity Prevention Branch's (NEOPB) website:

Sampling California's Low-Income Children

Low-income is defined as households receiving CalFresh.

<http://www.cdph.ca.gov/programs/cpns/Pages/CaliforniaStatewideSurveys.aspx#1>.

Fruits & Vegetables:

The *2010 DGA* and NEOPB recommend that children consume between 2½-5 cups of FV each day (dependent upon their age, gender, and activity level) to promote healthy growth and development. California's low-income children fall nearly 1 cup below the recommended minimum intake for FV. Examining FV consumption patterns among children helps identify opportunities for NEOPB's nutrition education interventions to support Californians' progress towards meeting this recommendation.

- FV consumption among California's low-income children was 1.7 cups (or 3.5 servings) per day, significantly below the amount recommended. (**Table 1**)
- One-quarter (26.8%) of these children met the *DGA MyPlate* guideline for fruit; while only one in ten (10.1%) reported eating the recommended amount of vegetables. (**Table 5**)
- Among low-income children, vegetables accounted for 0.7 of the 1.7 cups (or 1.5 of the 3.5 servings) of FV reported per day (**Table 1**); fruit intake made up 0.6 of a cup (or 1.2 servings) (**Table 2**). Fruit juices were consumed least often (0.4 cup; 0.8 serving), but still accounted for nearly one-quarter (23.3%) of the total FV reported by children. (**Table 2**)

Sugar-Sweetened Beverages:

Decreasing sugar-sweetened beverage¹ (SSB) consumption among Californians is a more recent priority area of NEOPB. The *2010 DGA* indicated that 46% of added sugar consumed by Americans comes from SSBs. Emerging from this is the recommendation to reduce consumption of added sugars in the diet, and specifically reduce intake of SSBs. Although significant improvements have been seen in SSB consumption among California children from 1999 to 2009,² there is still room for additional progress.

- California's low-income children averaged just under one (0.82) serving of SSBs per day. (**Table 51**)
- Looking at the type of SSBs consumed, these children reported drinking the most daily servings of sweetened fruit drinks (0.34 serving) followed by flavored milks and soft drinks (0.21 and 0.18 serving). (**Table 51**)
- Children from low-income homes who consumed SSBs drank one-third of a serving less milk than those not having sugary drinks (0.9 vs. 1.2 servings). (**Table 58**)

Fast Food & Dietary Practices:

An objective of the *HP2020* is to reduce the consumption of calories from solid fats and added sugars. While high calorie, low nutrient foods come from many sources, fast foods are often more calorie dense and less nutritious than meals cooked at home. The *2010 DGA* provides suggestions to families for achieving a healthy diet which include: choosing smaller portions or sharing a meal when dining out, checking the calories in foods and selecting lower calorie options, cooking and eating more meals at home, and eating a nutrient-dense breakfast. Decreasing the consumption of fast foods among low-income children in California can improve diet quality and reduce caloric intake.

- Children from low-income households in California who ate fast food were less likely than those without fast food to meet the *HP2020* objectives for fruit (13.3 vs. 38.3%; **Table 130**), vegetables (2.9 vs. 13.2%; **Table 131**), whole grains (43.4 vs. 56.9%; **Table 133**), and added sugars (37.0 vs. 54.7; **Table 135**).
- When examining high calorie, low nutrient foods (HCLN), children eating fast food were more likely to consume SSBs (77.1 vs. 54.7%), sweets (87.5 vs. 74.6%), and high-fat snacks (52.7 vs. 29.9%) (**Table 65**); and twice as likely to consumed larger quantities (3 or more servings) of HCLN foods compared to the children not reporting fast food (31.7 vs. 14.7%). (**Table 57**)
- Fast food consumption was associated with 379 more total calories (1,712.2 vs. 1,333.7) and 139 more empty calories (451.7 vs. 312.9) per day among low-income children. (**Table 59**)

Physical Activity and Sedentary Time:

In line with the *2008 Physical Activity Guidelines for Americans*, the NEOPB recommends that children engage in 60 minutes or more of physical activity (PA) daily. The *2010 DGA* and *HP2020* also provide a guideline for limiting screen time among children (no more than 2 hours a day). The *HP2020* set a target

¹ Sugar-sweetened beverages include soda/soft drinks, fruit drinks, sweetened tea, sweetened coffee/coffee substitutes, sweetened water, sports/energy drinks or sweetened meal replacement/supplement, and sweetened flavored milks. Servings of beverages are measured as 8 fluid ounce-equivalents; dairy is measured in 1 cup-equivalents.

² Keihn AJ, Linares AM, Rider CD, Sugerman S, Mitchell PR, Hudes M. Education, Diet, and Environmental Factors Influence Sugar-Sweetened Beverage Consumption Among California Children, Teens, and Adult. Sacramento, CA: California Department of Public Health; 2012.

of increasing the proportion of children meeting this objective to 86.8% by 2020. Facilitating increased opportunities for PA and reducing screen time encourages the development of healthy and active lifestyles among low-income children in California.

- Just over half (55.5%) of the children surveyed reported getting the recommended amount of PA (60 or more minutes per day). (**Table 73**)
- In contrast, 85.9% of low-income children in California met the guideline for television (TV) viewing (no more than 2 hours a day), falling just below the *HP2020* target of 86.8%. (**Table 77**)
- California children from low-income homes who played on a sports team reported 12 more minutes of PA per day (88.4 vs. 76.3 minutes) and were more likely to meet the PA recommendation than those not participating in team sports (61.3 vs. 52.4%). (**Table 104**)

Overweight:

Overweight among children is defined as a Body Mass Index (BMI) at or above the 85th percentile, but below the 95th percentile. Obesity is represented by a BMI at the 95th percentile or higher. One major objective of the *HP2020* that aligns with NEOPB is to reduce the prevalence of obesity among children aged 6 to 11 (*HP2020* target: 15.7%). To reach this target, obesity among low-income children in California will need to be reduced by over 40%. Promising approaches to support healthy weight among low-income children include family meals, removing televisions from children's bedrooms, and household rules limiting screen time.

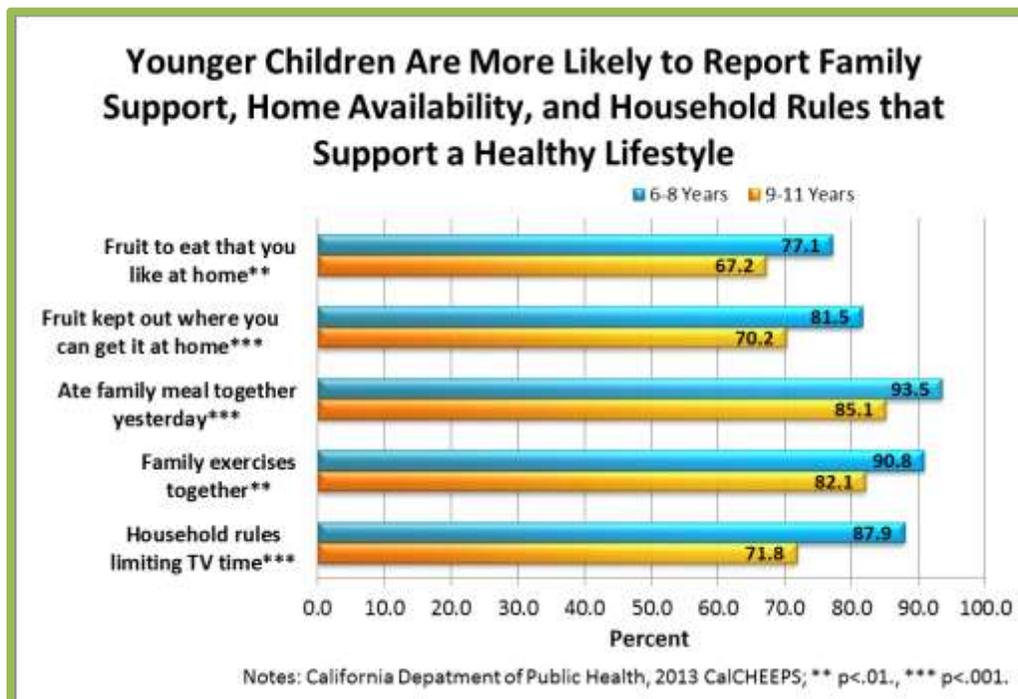
- In 2013, three out of seven (43.1%) of California's low-income children were classified as overweight or obese. The prevalence of obesity was 27.1% among low-income children. (**Table 90**)
- When comparing overweight and obese children to those not overweight, overweight and obese children were less likely to have household rules limiting TV time (75.2 vs. 82.4%; **Table 102**); more likely to have a TV in their bedroom (68.6 vs. 59.3%; **Table 82**); spent more time watching TV, videos/DVDs, or playing video games (87.9 vs. 73.7 minutes; **Table 77**); and were less likely to meet the screen time recommendation (no more than 2 hours a day) (80.5 vs. 88.1%; **Table 77**).
- Family meals were reported less often by overweight and obese children from low-income homes (86.5 vs. 92.3%). (**Table 60**) They also reported drinking nearly one-third of a serving more SSBs per day than children who were not overweight (0.7 vs. 1.0 serving). (**Table 50**)

Social Norms and Environment:

A key priority of NEOPB is to facilitate changes to policies, systems, and environments that support healthy eating, regular PA, and reduced screen time as the norms for California children. Family norms, household rules, school physical education (PE) classes, and home and school environments can support or inhibit these health behaviors among low-income children in California:

- Participation in school meals was positively related to FV consumption. Low-income children reported a half serving more FV when eating school breakfast (3.8 vs. 3.3 servings) and nearly three-quarters of a serving more FV at school lunch than those not eating these school meals (3.9 vs. 3.2 servings). (**Table 1**)

- Children from low-income homes who reported that the PE offered at their school met the California mandate of 200 or more minutes every 10 days were more likely to meet the daily PA recommendation (60 or more minutes) than those attending schools that provided less PE (61.4 vs. 51.2%). (Table 104)
- Access to the vegetables you like at home and eating family meals together related to higher FV intake among low-income children (1.9 vs. 1.6 servings, 1.8 vs. 1.3 servings; respectively). In contrast, children who reported that adults in their home always eat high-fat foods drank one-third of a serving more SSBs per day (1.1 vs. 0.8 servings). (Tables 103)
- Household rules limiting TV time to no more than two hours a day related to nearly 17 minutes less screen time per day (77.7 vs. 94.6 minutes) and more children meeting the *HP2020* objective (88.3 vs. 76.4%). In addition, low-income children who had a TV in their bedroom were less active (75.5 vs. 88.6 minutes) and less likely to meet the screen time recommendation (83.7 vs. 89.9%) than those without a TV in their bedroom. (Table 104)
- Low-income children who exercised together with their family reported nearly 25 more minutes of PA per day (84.0 vs. 59.6 minutes) and were more likely to meet the recommendations for PA (60 or more minutes per day; 57.3 vs. 43.3%) and screen time (no more than 2 hours a day; 87.0 vs. 78.3%). (Table 104)
- Finally, obesity prevention initiatives targeting young low-income children (6-8 years) should engage parents in the promotion of family support, home availability, and household rules that support healthy eating, PA, and reduced screen time to prevent declining rates among older children (9-11 years) (see figure below).



Highlights from the Nutrition Education and Obesity Prevention Branch's 2013 California Dietary Practices Survey

The *California Dietary Practices Survey (CDPS)* is the most extensive dietary and physical activity assessment of adults 18 years and older in the state of California. The *CDPS* was first conducted in 1989 and is administered biennially in odd years. The *CDPS* was designed to monitor dietary trends, especially fruit and vegetable (FV) consumption, among California adults to evaluate their progress toward meeting the *2010 Dietary Guidelines for Americans*, the *Healthy People 2020 Objectives*, and the *2008 Physical Activity Guidelines for Americans*. In 2013, the survey sample (n=1,505) was selected in part through random digit-dial (RDD) and in part through a list of low-income adults in the state. Data were analyzed by various demographic factors. Selected key demographic information is presented in this document (see box, right). Additionally, only significant ($p < 0.05$) findings are discussed. This document highlights the most notable findings from the 2013 survey and references the more detailed findings posted to the

Nutrition Education and Obesity Prevention Branch's (NEOPB) website:

<http://www.cdph.ca.gov/programs/cpns/Pages/CaliforniaStatewideSurveys.aspx#1>.

Key Demographics

- Race/Ethnicity
 - White
 - Hispanic
 - African American
 - Asian/Other
- SNAP/*CalFresh* Status, Federal Poverty Level (FPL) %
 - Participant
 - Likely Eligible, $\leq 130\%$
 - Not Eligible, $>185\%$

* Note, 131-185% FPL group is omitted from analyses due to insufficient sample size.

Fruits & Vegetables:

Improving Californians' FV consumption was *NEOPB's* original goal, and indicators of FV consumption have been tracked by the *CDPS* for many years. The *2010 Dietary Guidelines for Americans* recommends adults consume between 3.5 and 6.5 cups of fruits and vegetables each day, dependent on gender and age. Relevant indicators of Californians' progress on this recommendation include:

- In 2013, FV consumption among adults was 4.5 servings (2.25 cups per day), far short of recommendations. Though consumption appears lower than in past years, the term *servings* was redefined to survey respondents in the 2013 survey. For this reason, data cannot be statistically trended with past years' data. **(Table 7)**

- Adults who are a healthy weight and/or meet the aerobic physical activity recommendation of 150 minutes per week eat more FV than adults who are overweight or obese and do not meet the physical activity recommendation. **(Table 7)**
- The top four issues adults cited as reasons why they are not eating more FV were: 1) Not readily available, 2) Too expensive, 3) Take too much time to prepare, and 4) Not in the habit of eating them. **(Table 13)**
- *CalFresh* participants and likely eligibles were less likely to report having access to good quality and affordable, fresh fruits and vegetables in their neighborhoods than adults not eligible for *CalFresh*. **(Table 68)**

Sugar-Sweetened Beverages:

Decreasing sugar-sweetened beverage (SSB) consumption among Californians is a more recently adopted goal of *NEOPB*. The *2010 Dietary Guidelines for Americans* indicated that 46% of added sugar consumed by Americans is from SSBs. Emerging from this is the recommendation to reduce consumption of added sugars in the diet, and specifically reduce consumption of SSBs:

- *CalFresh* participants reported drinking more servings of SSBs than those not eligible. Consumption among likely eligibles was not different than participants or those not eligible for *CalFresh*. **(Table 30)**
- *CalFresh* participants and likely eligibles were less likely to order water instead of an SSB when dining out as compared to adults not eligible for *CalFresh*. **(Table 37)**

Fast Food & High Calorie, Low Nutrient Foods:

An objective of *Healthy People 2020* is to reduce the consumption of calories from solid fats and added sugars in the diet. While high calorie, low nutrient foods can come from many sources, meals from fast food are often more calorie dense than those eaten at home. The *2010 Dietary Guidelines for Americans* has specific suggestions for adults, including: eating smaller portions or sharing a meal when dining out, reviewing the calorie content of foods and beverages and choosing those lower in calories, and choosing to eat more meals at home. In this context, there is a need for improvement in Californians' fast food-related behavior:

- Adults who ate at a fast food restaurant on the previous day consumed one serving fewer FV than adults eating in a sit-down restaurant or adults not eating in either type of restaurant. **(Table 33)**
- Adults who reported eating fast food on the previous day ate more deep-fried food and fried snack food, high fat sweets and breakfast pastries, and drank more SSBs than adults not eating in a sit-down or fast food restaurant. **(Table 34)**
- Working adults who brought their lunch to work ate nearly two more servings of FV per day than adults who bought their lunch at or near work. **(Table 64)**

- *CalFresh* participants and likely eligibles were more supportive of the government limiting the number of fast food restaurants than adults not eligible for *CalFresh*. (**Table 70**)

Physical Activity and Sedentary Time:

The *2008 Physical Activity Guidelines for Americans* recommend that adults should do the equivalent of 150 minutes of moderate-intensity aerobic activity each week. In addition, adults should take part in muscle strengthening activities at least twice per week. Though *Healthy People 2020* does not have an objective regarding screen time limits for adults, the objective for children aged 2 years to 12th grade is to increase the proportion that view television, videos, or play video games for no more than two hours per day. In turn, the CDPS uses two hours as a surrogate marker. Facilitating increased physical activity and decreased time spent sedentary is clearly needed for many Californians:

- Twenty-four percent of adults reported participating in no leisure time physical activity in the past month. (**Table 41**)
- Twenty-three percent of *CalFresh* participants and likely eligibles were meeting the aerobic recommendation of 150 minutes of moderate activity per week plus muscle strengthening activities at least two times per week as compared to 35.8% of those not eligible for *CalFresh*. (**Table 40**)
- *CalFresh* participants and likely eligibles were less likely to report having access to safe exercise facilities in their neighborhoods than adults not eligible for *CalFresh*. (**Tables 67**)
- On average, adults watch 2.5 hours of television and spend a combined 2.3 hours using the computer for recreation and school, household, or job-related business each day. (**Table 44**)
- Of adults watching two or more hours of television a day, two-thirds reported they were too busy to be more physically active. (**Table 45**)

Obesity:

Healthy weight is defined as a Body Mass Index (BMI) of less than 25. Overweight refers to a BMI of greater than or equal to 25, but less than 30. Obese is defined as a BMI of greater than or equal to 30. Two major objectives of *Healthy People 2020* are to: 1) Increase the proportion of adults at a healthy weight and 2) Decrease the proportion of adults who are obese. The target for both objectives is to see a 10% improvement by 2020. To reach this target, Californians have room for improvement:

- Among all California adults, the prevalence of obesity increased from 16% in 2001 to 30.2% in 2013. Obesity rates significantly increased between 2005 and 2007, and then again between the 2009 and 2011 surveys. There was no increase between 2011 and 2013. (**Table 46**)
- In 2013, 73.3% of Hispanics and 70.3% African Americans were considered overweight or obese, as compared to 62.2% of Whites and 61.6% of Asian/Other. (**Tables 47**)
- Of adults whose BMI classified them as overweight or obese, 40.7% said they believed their weight to be about average or underweight. (**Table 49**)

Food Security:

A key goal of *Healthy People 2020* is to reduce household food insecurity and in doing so, reduce hunger. Though the *CDPS* does not calculate a percentage of food insecure Californians, it utilizes a module of questions designed to pull apart the various aspects of food insecurity. Food insecurity continues to be a concern for many Californians:

- Nearly one in three adults reported that the food they bought did not last and they did not have money to buy more and they could not afford balanced meals in the last 12 months. (**Table 59**)
- One in four adults reported they cut or skipped meals in the last 12 months. (**Table 59**)
- One in five adults reported they were hungry but did not eat because they could not afford enough food in the last 12 months. (**Table 59**)



This material was produced by the California Department of Public Health's Nutrition Education and Obesity Prevention Branch with funding from USDA SNAP-Ed, known in California as CalFresh. These institutions are equal opportunity providers and employers. CalFresh provides assistance to low-income households and can help buy nutritious food for better health. For CalFresh information, call 1-877-847-3663. For important nutrition information, visit www.CaChampionsForChange.net.



California Adolescents Are More Physically Active When They Have Greater Opportunities for Physical Activity in Their School and Community

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2014

Summary

Physical activity is an important component of a healthy lifestyle, yet most teens fall short of recommended levels. This brief report presents research identifying community and school opportunities that predict how much physical activity California adolescents get. It also identifies differences in predictors for teen boys and girls that may help explain the marked gender disparities that currently exist in teen physical activity. Effective strategies to improve access to opportunities for teens to be physically active may help Californian teens meet physical activity guidelines and improve their overall health.

Background

Obesity is a serious public health issue affecting not only adults, but also children and adolescents.^{1,2} Physical activity (PA) plays a central role for adolescents in attaining and maintaining a healthy weight, improving cardiovascular health, building bone and muscle strength, reducing chronic disease risk, and possibly reducing symptoms of anxiety and depression. To achieve these benefits of PA, all children and adolescents age 6-17 should get at least 60 minutes of moderate to vigorous intensity PA daily, through activities such as active play, sports, aerobic activities, and activities of daily life.^{3,4}

Unfortunately, the majority of adolescents do not get sufficient PA. Nationwide, only 15% of high school students (grades 9-12) report getting 60 minutes of PA a day.⁵ In a California survey of 12-17 year olds, 16% of teens met this same target.⁶ Both surveys found that teen boys were twice as likely as teen girls to get 60 minutes of daily PA. A growing body of evidence supports the notion that when adolescents have greater opportunities to be physically

active at school, safer neighborhoods, and better access to PA facilities in the community, they will be more physically active.⁷⁻¹⁰

This brief report describes the school and community PA opportunities found to predict the PA frequency (number of days in the last week with at least 60 minutes) and PA duration (number of minutes yesterday) of California adolescents. A second goal of this brief report is to identify whether there are differences in the PA opportunities that are important for predicting PA for adolescent boys and girls.

Data presented in this brief report were taken from the 2012 *California Teen Eating, Exercise, and Nutrition Survey (CaTEENS)*. *CaTEENS* is a biennial statewide survey of 12-17 year old adolescents, designed to track changes in key dietary and PA indicators and related factors. (See Data Sources and Methods for a detailed description of this survey and Appendix 1 for a list of all variables included for this analysis).

Survey Findings

Physical Activity Opportunities at School

Teens spend a substantial amount of time at school, and the school environment can potentially offer numerous PA opportunities, such as physical education (PE) classes, school sports teams, and structured and unstructured activity on campus during the after school period. Our analyses showed that teens, both boys and girls, are physically active about one-fifth day more each week when they have more days per week of PE class, and

two-thirds of a day more when they have more opportunities for PA after school^a. In addition, having more after-school opportunities also predicts increased minutes of PA on the prior day for all teens (15 minutes for boys; 17 for girls), but PE only predicts increased minutes of PA for girls (6 minutes). Table 1 presents the changes in boys' and girls' PA associated with each variable. Detailed findings are presented in Appendices 2 and 3.

Table 1. Changes in Physical Activity Associated with School Opportunities

	Number of Days During the Week with ≥ 60 minutes of Physical Activity		
	Boys	Girls	All Teens
Average Number of Days During the Week with ≥ 60 minutes of Physical Activity	4.4	3.8	4.1
Household poverty status*	ns	+0.20	ns
School based factors			
Number of days/week in PE class	+0.22	+0.20	+0.25
After-school PA related opportunities**	+0.58	+0.75	+0.67
	Number of Minutes Physically Active Yesterday		
	Boys	Girls	All Teens
Total Number of Minutes Physically Active Yesterday	68.9	63.2	66.1
Household poverty status*	ns	+10.3	ns
School based factors			
Number of days/week in PE class	ns	+6.3	ns
After-school PA related opportunities**	+15.2	+16.9	+16.4

ns = non-significant

* Household poverty status was defined by the following four categories: Supplemental Nutrition Assistance Program (SNAP) participant household, ≤130% Federal Poverty Level (FPL)—not SNAP participant household, >130% to ≤185% FPL, and >185% FPL

** This is a composite, scaled variable representing four survey questions about school-site after-school physical activity opportunities and organized sports.

^a After-school PA opportunities were assessed by combining four survey items: In the past 7 days, how many days did you participate in physical activity or sports on school grounds during after school programs? In the past 7 days, how many days did you participate in physical activity or sports on school grounds after school not as part of a program? How many days each week do you usually use the school gym or other sports facilities at school for physical activity after school and on weekends? During the past 12 months, on how many sports teams did you play? (Include any teams run by your school or community groups.)

Physical Activity Opportunities in the Community

Opportunities outside of school, as well as having a safe place to be active can be important for adolescents. Our analyses showed that all teens, both boys and girls, reported more days being physically active in the prior week when they participate in “individual sports” (e.g., martial arts, gymnastics, or dance), resulting in more than a half day more for boys and over a third of a day more for girls.

Boys participating in individual sports also reported an 8 minute longer duration of PA on the prior day compared to other boys. In addition, higher perceived neighborhood safety was a significant predictor of greater frequency (0.29 days per week) and duration of PA (12 minutes per day) for adolescent boys, but not girls. Detailed findings are presented in Appendices 2 and 3.

Table 2. Changes in Physical Activity Associated with Community Opportunities

	Number of Days During the Week with ≥ 60 minutes of Physical Activity		
	Boys	Girls	All Teens
Average Number of Days During the Week with ≥ 60 minutes of Physical Activity	4.0	2.5	3.3
Household poverty status*	ns	+0.20	ns
Community/Home based factors			
Perceived neighborhood safety**	-0.29	ns	-0.26
Participation in individual sports	+0.58	+0.38	+0.38
	Number of Minutes Physically Active Yesterday		
	Boys	Girls	All Teens
Total Number of Minutes Physically Active Yesterday	80.8	34.1	56.4
Household poverty status*	ns	+10.3	ns
Community/Home based factors			
Perceived neighborhood safety**	-12.0	ns	-8.3
Participation in individual sports	+8.4	ns	+6.6

ns = non-significant

* Household poverty status was defined by the following four categories: Supplemental Nutrition Assistance Program (SNAP) participant household, ≤130% Federal Poverty Level (FPL)–not SNAP participant household, >130% to ≤185% FPL, and >185% FPL

** “It is safe to be physically active by myself in my neighborhood” scaled 1=strongly agree to 5=strongly disagree

Summary and Conclusions

Being physically active is fundamental to health, yet few teens are sufficiently active to support good health. With a key priority of obesity prevention efforts focused on increasing low rates of PA, this analysis identified several important opportunities and behaviors at school and in the community that predict higher PA among California teens. California adolescents reported more PA or PA more often when they also reported:

SCHOOL

- More days per week spent in physical education (PE) class;
- More opportunities to be active after school;

COMMUNITY

- Participating in individual sports activities such as dance, gymnastics, or martial arts; and
- Perceiving that their neighborhood is a safe place to be physically active (teen boys only);

HOUSEHOLD POVERTY

- In addition to the school and community factors described above, household poverty status was associated with PA for teen girls. Girls from middle and higher income homes reported greater PA (teen girls only).
- There was no evidence of a link between household poverty status and PA for teen boys.

Different sets of predictors were found for adolescent boys and girls, suggesting that different strategies may be needed to most effectively reach them. In addition, these analyses found that lower income adolescents – especially lower income adolescent girls – are not getting sufficient PA, and may need a more supportive environment to help them change that.

This study points to evidence-based strategies that schools, communities, and policy makers can implement to provide a PA-friendly environment for teens. Policy makers should consider how they can support schools' efforts to require and provide daily PE, to offer sports and active programming after school, and to allow access to school facilities after hours through joint use agreements, especially in areas that lack parks and recreational facilities. Community groups, such as parks and recreation departments, community-based organizations, and faith organizations, can promote adolescent PA by offering a safe space, facilities, and equipment for team sports and individual sport activities, and to ensure the affordability of these programs for the populations they serve. Policy makers, neighborhood organizations, residents, and even

teens themselves can collaborate to improve the safety of their communities so that all teens can get PA in their own neighborhoods. Identifying and utilizing effective strategies to improve opportunities for teens to be active in the places where they live, learn, and play can improve the health of California teens.

Data Sources and Methods

CalTEENS used both random-digit-dial (RDD) for a general population sample and Medi-Cal (CalFresh) list-assisted telephone interviews with random samples of California households receiving CalFresh to gather its data. The telephone interviews, conducted in English and Spanish, collect information from teens 12-17 years old regarding dietary intake, physical activity, weight status, and knowledge, attitudes, and beliefs about diet and exercise. The analyses in this report used information regarding physical activity and related factors (see Appendix 1 for all variables tested). In total, 1,143 teens completed the telephone interview. Cooperation rates were 46% for the CalFresh sample and 50% for the RDD sample. The weighting procedure included standard CalFresh and RDD and population adjustments. The data were post-stratified to adjust for variability in sex, age, and race/ethnicity between the sample and the population. The California population data are from the 2010 United States Census (U.S. Census Bureau).

This study used hierarchical multiple regression analyses to identify potential determinants of physical activity. Specifically, hierarchical multiple regression analyses were conducted entering poverty status in the first step to control for the effects of this variable, then the set of variables related to physical activity were entered in the second step. R^2 change values were used to determine significance of the set of variables and t-tests were used to determine significant individual variables. Analyses of *CalTEENS* data were conducted using SPSS Statistics 20.0 (SPSS Inc., 2011, Chicago, IL).

Limitations

There are some limitations of *CalTEENS* data used in this report. First, these analyses were conducted using both a sample of CalFresh recipients in California and a sample from the California general population, and therefore the results may not be generalizable to the general population in the State, other states, or the nation. However, all data were weighted and analyses controlled for the level of poverty status. Second, there is both a self-report and social desirability bias that may impact the data reported by respondents.

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Appendix

Appendix 1. List of All Variables Tested

Dependent Variables
During the past 7 days, on how many days were you physically active for a total of at least 60 minutes per day? (Add up all the time you spent in any kind of physical activity that increased your heart rate and made you breathe hard some of the time.)
Yesterday, about how many minutes were you physically active doing moderate or vigorous activities such as basketball, dancing, soccer, or brisk walking? Include ALL activities, such as PE class or classes outside of school.
Independent Variables
Demographic and Socioeconomic Factors
<i>Gender (boy and girl)</i>
<i>Household Poverty Status (SNAP participant, ≤ 130% FPL, > 130% to ≤ 185% FPL, and > 185% FPL) ¹</i>
School and After-School Factors
<i>In an average week when you are in school, on how many days do you go to physical education (PE) classes?</i>
How many days in a usual week do you walk, ride a bike, or skateboard on the way TO school?
Does your school offer physical activities after school, other than sports, such as dance, yoga, gymnastics, weight training, or martial arts?
<i>After-School Physical Activity Opportunities (Composite of four questions below) ²</i>
<i>In the past 7 days, how many days did you participate in physical activity or sports on school grounds during after school programs?</i>
<i>In the past 7 days, how many days did you participate in physical activity or sports on school grounds after school not as part of a program?</i>
<i>How many days each week do you usually use the school gym or other sports facilities at school for physical activity after school and on weekends?</i>
<i>During the past 12 months, on how many sports teams did you play? (Include any teams run by your school or community groups.)</i>
Community Factors
<i>It is safe to be physically active by myself in my neighborhood. Would you say you... ³</i>
There are playgrounds, parks, or gyms close to my home that are easy for me to get to. Would you say you... ³
<i>Are you currently involved in any individual sports such as dance, martial arts, or yoga?</i>

Independent variables with a significant relationship to either dependent variable in the final model are shown in this table with italics.

¹ Household poverty status was defined by the following four categories: Supplemental Nutrition Assistance Program (SNAP) participant household, ≤ 130% Federal Poverty Level (FPL)–not SNAP participant household, > 130% to ≤ 185% FPL, and > 185% FPL.

² This is a composite, scaled variable representing four survey questions about school-site after-school physical activity opportunities and organized sports. Questions were combined due to high inter-correlations among them.

³ Responses scaled 1=strongly agree to 5=strongly disagree.

Appendix 2. Opportunities to be Physically Active that Predict Frequency of Physical Activity, 2012 *CaITEENS*

Summary of Hierarchical Regression Model	All Teens (n = 1,036)			Teen Boys (n = 471)			Teen Girls (n = 564)		
	<i>B</i>	<i>SE</i>	<i>β</i>	<i>B</i>	<i>SE</i>	<i>β</i>	<i>B</i>	<i>SE</i>	<i>β</i>
Variables									
Step 1									
Household Poverty Status ¹	.030	.027	.033	-.032	.037	-.036	.097	.038	.107*
Step 2									
Household Poverty Status ¹	.023	.026	.025	-.040	.036	-.044	.088	.036	.097*
Perceived neighborhood safety for PA ²	-.304	.066	-.127***	-.336	.095	-.141***	-.171	.092	-.071
Number of days of PE per week	.121	.027	.122***	.114	.040	.111**	.092	.037	.097*
After-school PA-related opportunities ³	.127	.011	.322***	.108	.014	.286***	.143	.015	.359***
Participation in individual sports (e.g. dance or martial arts)	.895	.130	.183***	1.180	.208	.214***	.832	.170	.185***
Model Fit	R²	R²change		R²	R²change		R²	R²change	
Step 1	.001			.036			.107*		
Step 2	.197	.196***		.428	.182***		.473	.213***	

¹ Household poverty status was defined by the following four categories: Supplemental Nutrition Assistance Program (SNAP) participant household, ≤ 130% Federal Poverty Level (FPL)–not SNAP participant household, > 130% to ≤ 185% FPL, and > 185% FPL.

² “It is safe to be physically active by myself in my neighborhood” scaled 1=strongly agree to 5=strongly disagree.

³ This is a composite, scaled variable representing four survey questions about school-site after-school physical activity opportunities and organized sports. Questions were combined due to high inter-correlations among them.

* p < .05, ** p < .01, *** p < .001

Appendix 3. Opportunities to be Physically Active that Predict Duration of Physical Activity, 2012 *CaITEENS*

Summary of Hierarchical Regression Model	All Teens (n = 1,035)			Teen Boys (n = 470)			Teen Girls (n = 564)		
	<i>B</i>	<i>SE</i>	<i>β</i>	<i>B</i>	<i>SE</i>	<i>β</i>	<i>B</i>	<i>SE</i>	<i>β</i>
Variables									
Step 1									
Household Poverty Status ¹	1.902	.820	.068*	-.477	1.153	-.017	4.343	1.157	.155***
Step 2									
Household Poverty Status ¹	1.355	.823	.048	-1.692	1.166	-.061	4.515	1.165	.161***
Perceived neighborhood safety for PA ²	-9.626	2.129	-1.31***	-14.156	3.100	-.190***	-5.457	3.000	-.073
Number of days of PE per week	1.699	.867	.056	.219	1.285	.007	2.866	1.201	.098*
After-school PA-related opportunities ³	3.109	.342	.257***	2.869	.471	.240***	3.236	.496	.264***
Participation in individual sports (e.g. dance or martial arts)	15.510	4.211	.103***	22.961	6.755	.133**	8.626	5.541	.062
Model Fit	R²	R²change		R²	R²change		R²	R²change	
Step 1	.005*			.000			.024***		
Step 2	.117	.112***		.124	.124***		.135	.111***	

¹ Household poverty status was defined by the following four categories: Supplemental Nutrition Assistance Program (SNAP) participant household, ≤ 130% Federal Poverty Level (FPL)–not SNAP participant household, > 130% to ≤ 185% FPL, and > 185% FPL.

² “It is safe to be physically active by myself in my neighborhood” scaled 1=strongly agree to 5=strongly disagree.

³ This is a composite, scaled variable representing four survey questions about school-site after-school physical activity opportunities and organized sports. Questions were combined due to high inter-correlations among them.

* p < .05, ** p < .01, *** p < .001



This material was produced by the California Department of Public Health's Nutrition Education and Obesity Prevention Branch with funding from the U.S. Department of Agriculture's (USDA) Supplemental Nutrition Assistance Program-Education, known in California as CalFresh. CalFresh provides assistance to low-income households and can help buy nutritious food for better health. For CalFresh information, call 1-877-847-3663. For important nutrition information, visit www.CaChampionsForChange.net.

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Evaluation of the 2013 Champions for Change Media Campaign

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2014

EXECUTIVE SUMMARY

Introduction

The California Department of Public Health, Nutrition Education and Obesity Prevention Branch, 2013 Champions for Change Media Campaign (Campaign) consisted of TV, radio, billboard, website, and transit TV ads intended to promote healthful eating and physical activity. The Campaign was designed to support and reinforce local interventions aimed at individuals living in households at or below the 185% Federal Poverty Level – the United States Department of Agriculture (USDA) Supplemental Nutrition Assistance Program (SNAP) low-income standard for program services.

The Campaign ran over a 27-week period, ending on September 29, 2013, with three types of campaigns: *Legacy of Health* (African American focused), *Not My Kids* (Latino focused), and *CalFresh*.

Legacy of Health (one TV, two radio, & two billboard ads): These ads communicated that building legacies and passing down traditions has always been important to African American families, especially when it comes to food. The ads emphasized healthy traditions with resources such as healthy recipes and tips on healthier eating, and ways to keep family members active.

Not My Kids (two TV, three radio, & four billboard ads): These ads were designed to encourage Latino families to protect their children from chronic diseases such as type-2 diabetes that can result from childhood obesity. The TV ads depicted multigenerational families at home, walking and riding bikes with their children, preparing food in kitchens, and shopping for fruits and vegetables. All *Not My Kids* ads included Spanish-language versions: *A Mis Hijos No*

CalFresh (two TV & two billboard ads, English- and Spanish-language): These ads communicated that the once-titled California Food Stamp Program is now called CalFresh, and that the program can be used to purchase healthy foods. The TV ad depicted fruits and vegetables with images of the CalFresh card. It also included plates of food with half the plates with fruits and vegetables.

All ads included a website address; all radio and billboard *Legacy of Health* and *Not My Kids* ads also included a phone number to obtain additional information.

Campaign Scope and Number of Impressions

A total of 27,027 thirty-second TV ads and 26,135 sixty-second radio ads aired during the Campaign; 15,937 billboard ads (4,948 large and 10,989 small) were displayed in low-income census tracts during the 27-week period. Campaign impressions, or members of the target population exposed to a TV, radio, or billboard ad at least once, was 1,676,197.

Evaluation Design and Assessing Campaign Exposure

Member of the target population were randomly sampled and recruited for two telephone interviews, three months apart, after the Campaign ended. A total of 1,143 mothers participated in the initial interviews and 596 were re-interviewed three months later.

Exposure to campaign messages was assessed by comparing open-ended responses to standardized survey items that asked women about ads that they saw or heard with a list of the images, messages, and spoken words appearing in the Campaign ads. These procedures resulted in coding 15.9% of the sample as “definitely saw or heard” a Campaign ad.

Analyses

Repeated measures analyses were conducted to investigate changes over time in self-reported behaviors between survey respondents who “definitely saw or heard” a Campaign ad versus those who did not. The analyses controlled for levels of education, participation in WIC during the previous 12 months, and race/ethnicity.

Findings

Campaign exposure was not related to changes in fruit and vegetable consumption, when examining intake of fruit, salad, carrots, and other vegetables separately or in combination; or in terms of meeting the recommended level for daily consumption. In addition, eating at least half a plate of fruits and vegetables was also not related to recall of Campaign messages. The three measures of physical activity examined in this study, including participating in at least 150 minutes of physical activity per week, were also not related to Campaign exposure.

Discussion

Self-reported behaviors did not differ by levels of exposure to Campaign messages across the 13 outcome variables assessed in this study. It is feasible that Campaign messages did change behaviors over those that mothers from the California SNAP population engaged in prior to the initiation of the Campaign in April 2013, but the design of this study did not allow for detecting such changes. Our findings only allow us to conclude that potential positive behavioral changes resulting from the Campaign did not continue from a period of time of approximately one month after the Campaign ended until three months later.

Introduction

The California Department of Public Health (CDPH), Nutrition Education and Obesity Prevention Branch (NEOPB), provides grant funding to local health departments (LHDs) to implement individual- and community-focused interventions that promote healthful eating and physical activity. The relationship between the State and LHDs is one where the NEOPB provides training, support, and guidance to LHDs on evidence-based, practiced-based, or promising interventions as well as structured survey instruments and tools, procedures, and reporting systems to evaluate the interventions. LHDs, in turn, have the autonomy to determine if they (e.g., county public health staff) or other organizations such as non-profits within their jurisdiction are most qualified to implement interventions, and to tailor intervention messages and approaches based on population characteristics, community priorities, and other factors.

Thus, the majority of NEOPB-funded intervention activities across California occurs and is driven at the local level. The exception is the annual Champions for Change Media Campaign (Campaign) consisting of TV, radio, billboard ads, and to a lesser extent website and transit TV ads (i.e., ads displayed on monitors within public buses). Messages in the 2013 Campaign ads were intended to support and reinforce local interventions aimed at individuals living in households at or below the 185% Federal Poverty Level (FPL) – the United States Department of Agriculture (USDA) Supplemental Nutrition Assistance Program (SNAP) low-income standard for program services. Launched on April 8, 2013, coinciding with CDPH's Public Health Week, the Campaign ran over a 27-week period, ending on September 29, 2013.

This report summarizes the primary messages of the Campaign, the estimated number of impressions, and the findings from interviews with women from SNAP-Ed households to investigate correlations between levels of Campaign exposure and behavior changes over a three-month period. Specifically, women were interviewed soon after the Campaign ended, and then again three months later, and asked questions about fruit and vegetable consumption and other behaviors that the Campaign ads were designed to influence.

THE CAMPAIGN

Development of Campaign Messages

The Campaign included three types of messages selected from focus group testing. Initially, ten concepts were developed by Runyon Saltzman and Einhorn, Inc. (RS&E) and presented to focus group participants in San Francisco, Fresno, and Los Angeles. Three concepts were developed for African American audiences, three concepts for Latino audience and four concepts for the multicultural audience. The focus group procedures included presenting hand-drawn images of potential TV, billboard, and website ads, with the moderator facilitating a discussion about the intended purpose of the ads and eliciting participants' general impressions about each ad. Focus group participants responded most favorably to the images and messages of the concepts called Legacy of Health (African American focused), Not My Kids (Latino focused) and CalFresh, a multicultural ad promoting the CalFresh Program as a means of obtaining healthy foods.

Final Ads by Type of Medium and Message

The *Legacy of Health* messages were communicated through one TV ad, two radio ads, and two billboard ads. The *Not My Kids* messages appeared in two TV ads, three radio ads, and four billboard ads. All *Not My Kids* ads included Spanish-language versions: *A Mis Hijos No*. Finally, two *CalFresh* TV and billboard ads (English- and Spanish-language versions) were included in the 2013 Campaign. Every ad included a website address; all radio and billboard *Legacy of Health* and *Not My Kids* ads also included a phone number to obtain additional information.

The visual images, spoken words, and text of these ads are presented below.

Legacy of Health

These ads communicated that building legacies and passing down traditions has always been important to African American families, especially when it comes to food. The ads emphasized that the Network for a Healthy California¹ has tools to help families make new, healthy traditions with resources such as healthy recipes and tips on healthier eating, and ways to keep family members active. The TV ads depicted African American families in neighborhood settings and cooking meals together, as well as presented images of children skipping to a neighbor's house and jumping rope, and families riding bikes.

Billboard #1



Billboard #2



TV Script: *New traditions aren't always passed from generation to generation. Sometimes they're passed from neighbor to neighbor, and daughter to mom. And with the right tools and information, we can make sure those traditions last, moving them away from obesity, high blood pressure and type 2 diabetes and toward more physical activity and better health. Visit LegacyOfHealth.net for healthy recipes and tips on how to keep your family active. To help you become a champion for change.*

Radio Script #1: *Passing down traditions has always been important to African-American families, especially when it comes to the tradition of food. But for too long, many of those traditions of rich foods have also led to a legacy of health problems, which have become too big to ignore. Obesity, high blood pressure, and type-2 diabetes are far too common and represent a legacy in need of serious change. The Network for a Healthy California has resources to help make that change with tips on healthier eating, ways to keep your family active and healthy recipes to help you start a new, positive tradition for you and your family both now and for years to come. Call 1-888-328-3483 or visit LegacyOfHealth.net to start your new tradition today. That's 1-888-328-3483 or legacyofhealth.net. A message from the California Department of Public Health. Funded by USDA SNAP-Ed. Equal opportunity providers and employers.*

¹All the USDA SNAP-funded NEOPB intervention activities, including the Champions for Change Media Campaign, were collectively known as the Network for a Healthy California in 2013.

Radio Script #2: We all want to leave our kids with something more than what we had, a legacy they can be proud of, giving them the tools they need to be happy and successful. But when it comes to health, what legacy will you leave? Will it be one of obesity, high blood pressure and type-2 diabetes, all of which are far too common within our community? Or will it be a legacy of good eating habits, active living and the knowledge and resources to help ensure a healthier future? At the Network for a Healthy California we're here to help provide those resources with easy access to tips on how to eat better, information on staying active and healthy recipes to help you leave a legacy you can be proud of. Call 1-888-328-3483 or visit LegacyOfHealth.net to shape your new legacy today. That's 1-888-328-3483 or LegacyOfHealth.net. A Message from the California Department of Public Health. Funded by USDA SNAP-Ed. Equal opportunity providers and employers.

Not My Kids (A Mis Hijos No)

These ads were designed to encourage Latino families to protect their children from chronic diseases such as type-2 diabetes that can result from childhood obesity. The TV ads depicted multigenerational families at home, walking and riding bikes with their children, preparing food in kitchens, and shopping for fruits and vegetables.

Billboard #1



Billboard #2



Billboard #3



Billboard #4



“Walk together for a healthier future”

“Teach them to choose healthy foods”

English-language TV Script: Mom: I didn't know... Mom 2: my parents didn't know... Mom 3: that childhood obesity can lead to type-2 diabetes. Mom 4: But now that I know I won't let it happen to my kids. Mom 2: I'm making important changes so my kids can have the chance... Mom 3: to live a long and healthy life. Visit NotMyKids.net to get healthy recipes, ideas to keep your family active, and many more tips. Visit NotMyKids.net today. Do it for your kids' health.

Spanish-language TV Script (translated): MOM 1: I didn't know... MOM 2: My parents didn't know...MOM 3: That childhood obesity can lead to type 2 diabetes. MOM 4: I was diagnosed with that disease... MOM 1: And my life has changed completely. MOM 2: The last thing I want... MOM 3: Is for that to happen to my kids too. MOM 4: That's why now I cook in a healthier way...

MOM 1: *And we do physical activity as a family. Announcer (ANNCR): These moms are protecting their children from childhood obesity and type 2 diabetes. You can do it too. Visit AMisHijosNo.net or call 1-888-328-3483 to get healthy recipes, and tips. MOM 2: I want my kids to live a long and healthy life... Visit AMisHijosNo.net or call 1-888-328-3483 today. Do it for your kids' health. Message from the California Department of Public Health. Funded by USDA SNAP-Ed. Equal opportunity providers and employers.*

English-language Radio Script #1: MOM 1: *I didn't know...* MOM 2: *My parents didn't know...* MOM 3: *That childhood obesity can lead to type 2 diabetes.* MOM 4: *I was diagnosed with that disease...* MOM 1: *And my life has changed completely.* MOM 2: *So the last thing I want...* MOM 3: *Is for my kids to go through the same thing.* MOM 4: *That's why now I cook in a healthier way...* MOM 1: *And we are more physically active as a family. ANNCR: These moms are protecting their kids from childhood obesity and type 2 diabetes. And you can too. Visit NotMyKids.net or call 1-888-328-3483 to get healthy recipes, ideas to keep your family active and many more tips. MOM 2: I just want my kids to have a chance... MOM 3: To live a long and healthy life. Visit NotMyKids.net or call 1-888-328-3483 today. Do it for your kids' health. A message from the California Department of Public Health. Funded by USDA SNAP-Ed. Equal opportunity providers and employers.*

English-language Radio Script #2: DAD: *When I was a kid, I was a little on the chubby side, and my family thought it was so cute. But they didn't know that childhood obesity can lead to type-2 diabetes. Now, my doctor told me I have type-2 diabetes... and there's nothing cute about that. MOM: When my husband told me, I got so worried... for him, and for our kids too. What if the same thing happens to them? DAD: I knew it was time to make some important changes. So, now we go running with the kids, or we play soccer instead of sitting in front of the TV. MOM: And we cook our dishes in a healthier way. These parents are protecting their kids from childhood obesity and type-2 diabetes, and you can too. Visit NotMyKids.net or call 1-888-328-3483 to get healthy recipes, ideas to keep your family active and many more tips. Do it for your kids' health. A message from the California Department of Public Health. Funded by USDA SNAP-Ed. Equal opportunity providers and employers.*

Spanish-language Radio Script (translated): DAD: *As a kid, I was a little on the chubby side. And my family thought it was so cute. But they didn't know that childhood obesity can lead to type 2 diabetes. Now, my doctor told me I have type 2 diabetes... and that's really serious. MOM: When my husband told me, I got really worried... for him, and for our children. What if the same thing happens to them? DAD: Now we go running with the kids, or we play some soccer instead of sitting in front of the TV. MOM: And we cook our dishes in a healthier way. These parents are protecting their kids from childhood obesity and type-2 diabetes. You can do it too. Learn how at AMisHijosNo.net or call 1-888-328-3483 to get healthy recipes and tips. Do it for your kids' health. Message from the California Department of Public Health. Funded by USDA SNAP-Ed. Equal opportunity providers and employers.*

CalFresh

The *CalFresh* TV ads communicated that the once-titled California Food Stamp Program is now called CalFresh, and that the program can be used to purchase healthy foods. The TV ad depicted fruits and vegetables with images of the CalFresh card. It also included plates of food with half the plates with fruits and vegetables.

TV Script (English- and Spanish-language): *If you want a healthy meal, freshen up your plate with CalFresh. CalFresh is the new name for California's Food Stamp Program. CalFresh can help you purchase healthy foods for your family, to help make half your plate fruits and vegetables. That's the start of good nutrition. CalFresh can help you get there. To learn more and apply for CalFresh today, visit CalFresh.ca.gov and enjoy better food for better living.*

Billboard #1



Billboard #2



Campaign Scope and Impressions

A total of 27,027 thirty-second TV ads and 26,135 sixty-second radio ads aired during the Campaign; 15,937 billboard ads (4,948 large and 10,989 small) were displayed in low-income census tracts during the 27-week period.

RS&E facilitated the placement and purchase of all ads. Before the initiation of the Campaign, they were required to demonstrate that they had selected an appropriate mix of media (TV, radio, etc.) that when combined would reach 50% of individuals at or below 185% of the FPL. Campaign ads were displayed throughout California except for the media markets in Del Norte, Siskiyou, Lassen, Alpine, and Mono Counties.

Campaign impressions, or the number of individuals exposed to an ad at least once, was reported by RS&E to be 2,056,014. Eighty-five percent of this estimate, or 1,747,612 impressions, represent the number of individuals in California thought to be at or below the 185% FPL in the selected media markets. As discussed below, the evaluation of the 2013 Campaign focused only on TV, radio, and billboard ads. The overall impressions for these media were 1,971,997, with impressions among members of the target population estimated to be 1,676,197. It is important to note that the calculations for impressions are based on imprecise estimates, third party sources (billboard vendors), and samples of viewers (A.C. Nielsen ratings) and listeners (Arbitron ratings).

THE EVALUATION

Member of the target population were recruited for two telephone interviews, three months apart. Random sampling was used with stratification by race/ethnicity (Whites, Latinas, and African Americans). Assessing exposure to the Campaign focused on survey participants' recall of TV, radio, and billboard ads. The evaluation study received Institutional Review Board (IRB) approval.

Target Population and Sampling

The target population was mothers 18 to 54 years of age from the Medi-Cal Eligibility Data System (MEDS database). The sampling frame represented individuals from households participating in the SNAP in California as of August 27, 2013. Within each stratum, a sample of 28,638 telephone lines was selected with the goal of completing 334 interviews within each of the three racial/ethnic groups.

Data Collection

Wave I interviews were conducted from November 4 to December 6, 2013; Wave II interviews ran from March 6 to April 6, 2014. The telephone interviews were conducted in English and Spanish by trained staff at NORC at the University of Chicago. Survey participants were mailed \$10 in appreciation of their time.

A total of 1,141 women were interviewed soon after the Campaign ended, for an overall response rate of 26.9% (Table 1). Cooperation and response rates were highest for whites, followed by African Americans then Latinas. Three months later, 596 Wave II interviews were completed, for a retention rate of 52.2%. Follow-up interviews were least successful for African American and most successful for white Wave 1 survey participants.

Table 1. Number of completed interviews, and cooperation, response, and retention rates, by survey wave, racial/ethnic strata, and overall

	White	African American	Latina	Total
<u>Wave I</u>				
Number of Completed Interviews	456	386	299	1,141
Cooperation Rate	71.6%	70.2%	60.7%	68.0%
Response Rate	31.5%	27.6%	21.3%	26.9%
<u>Wave II</u>				
Number of Completed Interviews	242	197	157	596
Retention Rate	53.1%	51.0%	52.5%	52.2%

Outcome Variables

The survey instrument was designed to assess a number of outcomes, but 11 items in particular were identified as pertinent to the messages appearing in the 2013 Campaign.

Three questions assessed the potential of the Campaign to change the home environment to one more conducive of healthful eating and physical activity. Specifically, survey participants

were asked, “How often do you make it easy for (any of/your) child(ren) living in your home to eat fruit and vegetables, such as by having them washed, cut and ready to eat?;” “How often do you make it easy for (any of/your) child(ren) living in your home to be physically active, such as by taking them to sports practice, playing ball with them, or encouraging them to play outside or ride a bike?;” and “How often do you or your children do a physical activity together, such as playing ball, riding bikes, or taking a walk?” Responses to the three questions were coded into the categories of “every day” versus all other answers.

Five items assessed the frequency of healthful eating behaviors. Four separate items asked mothers to estimate how often they eat fruit, green salad, carrots, and other vegetables. Mothers were allowed to respond in times per day, week, month, or year time frame. All responses were subsequently coded to the “times per day” unit. Analyses were conducted for each item separately, and as a composite variable. A dichotomous variable was also based on meeting the recommendation for fruit and vegetable consumption per day. A final eating behavior item was presented to participants as: “When you think about your plate at mealtimes, how much of your plate is usually filled with fruit and vegetables?” The USDA recommended standard of half a plate was used to code responses into less than half a plate versus half a plate or more.

Three items were designed to assess changes in levels of physical activity three months after the end of the Campaign. The first question asked, during a “usual week,” are there any days where you are physically active for at least 10 minutes. Those responding “yes” to this question were asked for how many days per week are they physically active for 10 minutes, and then how much time (hours or minutes) per day do they participate in physical activities. Number of days and how much time for physical activity were multiplied, and converted to a dichotomous variable representing meeting the recommendation of weekly physical activity of 150 minutes.

Assessing Exposure to Campaign Messages

Exposure to campaign messages was assessed by comparing open-ended responses to standardized survey items asking women about ads that they saw or heard with a list of images, messages, and spoken words appearing in the Campaign ads. Research staff independently coded the open-ended responses into six categories, which were subsequently collapsed into two categories: “Definitely Saw or Heard” versus “other” for the TV, radio, and billboard ads. A fourth exposure variable was created to represent “Definitely Saw or Heard” any Campaign ads versus all others responses. The details of the coding processes are presented below.

During Wave I interviews, survey participants were presented with the following statement:

I would like to ask you some questions about ads you may have seen or heard. In the last three months, including July, August and September, have you seen any ads on TV recommending that people eat fruit and vegetables or be physically active for better health? I don’t mean ads for specific restaurants, grocery stores, or health clubs.

Those responding “yes” to this question were then asked to answer the following open-ended questions: “Please describe what you remember about the TV ad.” Interviewers were trained to record respondents’ answers verbatim. The questionnaire also included the following probes: “What was the main message of the ad?;” “What do you remember about the story?;” and “What do you remember about the characters?”

The same series of questions was repeated for radio and billboard ads.

The coding of the open-ended responses was conducted in the following way: First, NEOPB research staff comprehensively reviewed each ad and related script to develop a list of the verbal (key words, phrases) and visual elements from the ads. Second, an instruction manual was developed that outlined the procedures and rules for coding. Third, three staff independently compared open-ended responses with the reference list so that responses from each Wave I survey participants were independently coded by two staff into six categories (Table 2).

Table 2. Initial codes and related criterion for coding open-ended Campaign exposure responses

Code	Criterion
1. Definitely saw or heard ad	Provided accurate details of ad as related to words or phrases (<i>“Better Food for Better Living,” “Preventing family from diabetes and obesity,” “Champions for Change,” “Not My Kid”</i>); TV characters <u>and</u> settings/activities (<i>“African American mother and daughter shopping for produce at the grocery store”</i>) and/or billboard pictures or images (<i>“Father playing soccer with his kids,” “Mother gardening with son”</i>)
2. Maybe saw or heard ad	Provided some details similar to ad words or phrases and/or characters <u>or</u> settings/activities. (<i>“A woman making a meal with vegetables,” “An African-American child eating fruit”</i>)
3. Possibly saw or heard ad	Provided vague descriptions of words or phrases and/or characters <u>or</u> settings/activities similar to ads (<i>“Eat Healthy,” “Be Active,” “A group of adults playing sports”</i>)
4. Probably did not see or hear ad	Provided details or description of non-Campaign ads (<i>“Thrive,” “Let’s Move,” “Choose My Plate,” “WIC ad”</i>)
5. Did not see ad	Responses such as <i>“Do not recall”</i> or <i>“Don’t remember”</i>
6. Saw or heard a previous year’s NEOPB ad	Provided details or description of previous year Campaign messages (<i>“Five a day,” “What’s harder,” “My shopping cart, my rules”</i>)

The following codes were subsequently collapsed into dichotomous categories (Code 1 versus Codes 2 through 6). Inter-coder reliability was assessed by calculating Cohen’s Kappa (k) statistic. The k value for TV was .72, radio was .88, and for Billboards was .91. The value of .70 or above is considered satisfactory.²

² Landis RJ, Koch GG. The measurement of observer agreement for categorical data. *Biometrics*. 2007; 33: 159-174

Analyses to Assess Campaign Exposure in Relation to Self-Report Behavioral Changes

An initial dataset from the survey contractor of only the open-ended responses was used to code levels of Campaign exposure. A subsequent database surprisingly included an additional 21 Wave I survey participants.

GLM repeated measures analyses were conducted on the 1,120 survey participants using Wave 1 and Wave 2 data with each outcome variable as the within-subject factor and the dichotomous exposure variable (“definitely saw or heard” a Campaign ad versus other) as the between-subject factor. These analyses tested whether changes over time (Wave I to Wave II) significantly differed for those mothers exposed to Campaign messages compared with those not coded as exposed to Campaign ads.

The analyses controlled for level of education (up to high school education versus some college or higher) and participation in WIC during the previous 12 months. An initial series of analyses included Latino versus all other racial/ethnic groups as a covariate. A second series of analyses replaced the Latino variable with one distinguishing African Americans from other race/ethnicities. In cases where race/ethnicity was significant, subsequent analyses were conducted within the racial/ethnicity group by level of Campaign exposure.

RESULTS

We determine that 15.9% of SNAP mothers “definitely saw or heard” a Campaign TV, radio, and/or billboard ad.

The percent of mothers reporting that they encouraged their children to eat fruits and vegetables and be physically active decreased over the three-month survey period ($p < 0.001$). Decreases by levels of Campaign exposure were not found to differ for the complete sample. However, among Latinas, Campaign exposure was related to a rate of decrease (27.8%) that significantly different from the decrease among those not exposed to Campaign messages (45.2%; Table 3). Changes in the percent of mothers who were physically active with their children everyday also decreased from the end of 2013 (Wave I) to March/April 2014 (Wave II), but did not differ by levels of Campaign exposure.

Campaign exposure was not related to increases in fruit and vegetable consumption, whether examined individually; using a variable that combined fruit, salad, carrots, and other vegetables; or in terms of meeting the recommended level for daily consumption (Table 4). Self-reports of adopting the images of the CalFresh ads – eating at least half a plate of fruits and vegetables – significantly decreased over time ($p < 0.001$) and were not related to recall of Campaign messages.

The percent of respondent claiming to be physically active for at least 10 minutes a day increased about five points over the three-month period, however increases were not related to Campaign exposure (Table 5). Campaign exposure was also not associated with changes over time for physically active days and engaging in at least 150 minutes of physical activity per week.

Table 3. Comparisons of promoting healthy behaviors by mothers not exposed and exposed to messages from the 2013 Champions for Change Media Campaign

	Campaign Exposure	Wave I Survey	Wave II Survey	Difference	P Value
Percent of mothers who everyday make it easy for children to eat fruits and vegetables	No	76.8	38.1	-38.7	0.11
	Yes	75.2	44.0	-31.2	
<u>Among Latinas ...</u>					
Percent of mothers who everyday make it easy for children to eat fruits and vegetables	No	78.4	33.2	-45.2	0.02
	Yes	76.5	48.7	-27.8	
Percent of mothers who everyday make it easy for children to be physically active	No	76.3	39.0	-37.3	0.12
	Yes	71.5	41.9	-29.6	
Percent of mothers who everyday are physically active with their children	No	40.2	19.9	-20.3	0.53
	Yes	40.8	23.4	-17.4	

Note: p values are for comparisons of changes over time by Campaign exposure.

Table 4. Comparisons of eating behaviors by mothers not exposed and exposed to messages from the 2013 Champions for Change Media Campaign

	Campaign Exposure	Wave I Survey	Wave II Survey	Difference	P Value
Number of time per day ... eat fruit	No	1.58	1.54	-0.04	0.35
	Yes	1.78	1.59	-0.19	
eat salad	No	.66	.65	+0.01	0.88
	Yes	.79	.79	+0.00	
eat carrots	No	.45	.41	-0.04	0.32
	Yes	.48	.52	+0.04	
eat other vegetables	No	1.23	1.16	-0.07	0.92
	Yes	1.31	1.25	-0.06	
drink fruit juice; eat fruit, salad, carrots, potatoes, or other vegetables	No	4.91	4.72	-0.19	0.75
	Yes	5.84	5.77	-0.07	
Percent meeting recommendation for daily fruit and vegetable consumption	No	49.9	51.6	+1.7	0.74
	Yes	44.6	48.5	+3.9	
Percent eating at least half a plate of fruits and vegetables	No	48.9	26.3	-22.6	0.55
	Yes	47.0	27.3	-19.7	

Note: p values are for comparisons of changes over time by Campaign exposure.

Table 5. Comparisons of physical activity by mothers not exposed and exposed to messages from the 2013 Champions for Change Media Campaign

	Campaign Exposure	Wave I Survey	Wave II Survey	Difference	P Value
Percent physically active for at least 10 minutes a day during usual week	No	85.4	90.2	+4.8	0.91
	Yes	88.1	92.5	+4.4	
Number of days per week physically active	No	4.48	4.66	+0.18	0.97
	Yes	4.73	4.92	+0.19	
Percent meeting recommendation for physically activity per week (150 minutes)	No	65.4	66.3	+0.9	0.24
	Yes	66.7	74.2	+7.5	

Note: p values are for comparisons of changes over time by Campaign exposure.

DISCUSSION

This evaluation study found, among a random sample of SNAP mothers, that the behaviors promoted in the 2013 Campaign TV, radio, and billboard ads remained stable or, in some cases, significantly declined over the three-month study period. Moreover, our findings did not differ by levels of exposure to Campaign messages across the 13 outcome variables presented in Tables 3 through 5. One positive result was that the rate of decrease over time in making it easy for children to eat fruits and vegetables was less among Latinas exposed to the Campaign compared with Latinas not exposed to the ads. This may be explained by the fact that the Latino-focused *Not My Kids* ads more explicitly conveyed the message of the importance of preparing fruits and vegetables for your children's health than did the other ads.

A challenge in this study was determining whether or not a respondent had actually been exposed to a Campaign ad. This was accomplished by systematically comparing the scripts and images from the Campaign ads with answers to open-ended questions asking about "ads you may have seen or heard in the last three months." However, even if an individual had seen a Campaign ad, she may not have been sufficiently articulate to convey the specific words, phrases, or visual elements required to be coded as "definitely saw or heard" an ad. Consequently, a number of responses may have fallen into the grey area of "maybe" or "possibly" saw or heard an ad, and those respondents were not included in the positively exposed group, thereby diminishing the sensitivity of our primary independent variable. Alternatively, a respondent could have been exposed to and influenced by a Campaign message, but not during the three-month recall period used to assess exposure. They too would have been misclassified per the manner in which exposure was operationalized for this study.

This study also suffered from low response and retention rates. We also did not assess exposure to the Campaign ads appearing in transit TV or websites promoted in the ads. Most importantly, our findings should be interpreted in light of the limitation of the study design – the three-month period used to assess potential behavioral changes occurred after the Campaign ended in September 2014. It is feasible that Campaign messages did change behaviors over those that mothers from the California SNAP population engaged in prior to the initiation of the Campaign in April 2013, but the design of this study did not allow for detecting such changes. Our findings only allow us to conclude that potential positive behavioral changes resulting from the Campaign did not continue from a period of time of approximately one month after the Campaign ended until three months later. It is possible that the Campaign did increase these types of behaviors initially, and our findings demonstrate the inability of the Campaign to elicit longer-term changes.

The shortcomings of the evaluation design will be addressed in FFY 2015 when Wave I interviews with SNAP mothers are scheduled to occur before the start of the Campaign, with follow-up Wave II interviews taking place three months into the Campaign. This approach will do a much better job at detecting relationships between Campaign exposure and behavior change, at least in the short term, for a few reasons, including that the recall period will coincide with the first three months of the Campaign. FFY 2015 will also provide the opportunity to possibly improve the wording of the questions about Campaign exposure and associated probes to obtain more valid responses.



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Executive Summary

Introduction

This study combined information on United States Department of Agriculture (USDA) Supplemental Nutrition Assistance Program-Education (SNAP-Ed) interventions with interviews responses from the California Health Interview Survey (CHIS) to investigate the viability of linking these large-scale process and outcome databases at the Census-tract level, and to examine associations between levels of intervention reach and fruit and vegetable consumption, consumption of fast food and sugar-sweetened beverages, and physical activity.

Methods

Information on the actual and eligible number of individuals participating in SNAP-Ed, and the location of intervention sites, as recorded in the Education and Administrative Reporting System (EARS) were used to develop levels of intervention reach across the 1,527 Census tracts meeting the SNAP-Ed eligibility requirements in 2011. The location of 2011/12 CHIS respondents was also geo-coded and then linked with EARS data. Regression analyses examined the levels of intervention reach with self-reported healthful eating and beverage consumption behaviors, as well as participation in physical activity. Analyses were conducted with CHIS data from 4,245 adults, 465 teenagers, and 1,217 children. These analyses included measures for gender, age, race/ethnicity, and education to discount the potential influence of confounding variables.

Introduction

In Federal Fiscal Year (FFY) 2011, the Nutrition Education and Obesity Prevention Branch (NEOPB) of the California Department of Public Health funded 120 contractors to provide one-on-one and group interventions to the Supplemental Nutrition Assistance Program (SNAP)

Results

Intervention reach ranged from no SNAP-Ed interventions (661 of the 1,527 Census tracts); to low (0.01% to 39.99% of the target population reached), to moderate (40%-89.99% reached); to high (90%-100% reached). Adults and children from high reach Census tracts reported eating more fruits and vegetables than adults and children from no intervention Census tracts. Adults from Census tracts with low, moderate, and high levels of SNAP-Ed interventions also reported eating fast food less often. Teenagers from low reach Census tracts reported an increased number of physical activity days than teens not exposed to SNAP-Ed interventions.

Discussion

The greatest concentration of SNAP-Ed interventions was associated with eating more fruits and vegetables among adults and children, and eating less fast food among adults. Limitations of this study include the absence of measures of intervention exposure at the individual-level or differences in the characteristics of the Census tracts; a temporal relationship between presumed intervention exposure and behavior change; the ability to control for non-SNAP interventions and campaigns intended to influence the same behaviors, and limited statistical power for the teen sample.

population. Information about individuals who participate in the United States Department of Agriculture (USDA) SNAP-Education (SNAP-Ed) interventions is recorded by contractors into the USDA's Education and Administrative Reporting System (EARS). NEOPB staff train and provide

ongoing technical assistance to contractors on EARS documentation, and clean and summarize the data for annual reports to the USDA and for other purposes such as program planning.

The California Health Interview Survey (CHIS) is an ongoing stratified random digit dial health survey that interviewed by telephone 42,935 adults, 2,799 teenagers, and 7,334 children throughout the State from June 2011 through December 2012. Survey data for children are collected by the adult proxy from the sampled households. The 2011/12 survey instrument included items related to three intended SNAP-Ed outcomes: healthful eating and beverage consumption, and achieving recommended levels of physical activity.

This study was conducted to address two overall questions: Was it feasible to use EARS data to identify levels of intervention activity at the Census-tract level that could be merged with CHIS data to explore relationships between levels of presumed exposure and related self-reported outcomes? Second, were CHIS survey participants from Census tracts with higher levels of interventions more likely to report increased fruit and vegetable consumption, decreased consumption of fast food and sugar-sweetened beverages, and more physical activity?

Methodology

Matching EARS with CHIS Data

The foundation for this study was matching EARS intervention data to CHIS interview data at the Census-tract level. The 2011 EARS database identified each SNAP-Ed intervention site's address, which was geocoded using ArcGIS (version 10.1) based on 2000 Census data. These Census tracts were linked to Census tract information from the 2011/12 CHIS after survey respondents' addresses were geocoded, resulting in available interview data from 4,245 adults, 465 teenagers, and 1,217 children.

Developing the Independent Variable

The Using Census tract information from EARS, we determined that SNAP-Ed interventions occurred in 866 of the 1,527 Census tracts (56.7%) meeting the population eligibility requirements for SNAP-Ed interventions in 2011 (see Appendix). Rather than examining level of interventions as a dichotomous variable, we conducted the following steps to categorize the 866 Census tracts by levels of intervention reach. Four types of interventions from EARS were considered: **Direct Education** represents structured learning interventions facilitated by a trained educator

and/or through interactive media. **Social Marketing** is interventions where a participant is actively engaged in one of our targeted group interventions (e.g., Power Play!). Social Marketing differs from Direct Education in that the events and programs are directed towards a specific segment of the population. **Location-Targeted** interventions are defined as participation in one of NEOPB's Retail or Worksite Program events. Information is entered into EARS for each individual who participates in Direct Education, Social Marketing, and Location-Targeted interventions. However, the number of contacts rather than individuals is documented in EARS for **Indirect Education** interventions, which often involve the distribution of information and resources to larger groups of individuals in settings where a specific count of participants cannot be ascertained.

Duplicate counts of participants in Indirect Education as well as the other three types of interventions were identified by the following procedures: The location of each intervention was reviewed for more than one type of intervention. In cases where Direct Education was provided, the counts for all other interventions were removed. Indirect education cases were removed in cases where the intervention location included Social Marketing and/or Location-Targeted, but not Direct Education.

If a site had more than one Direct Education intervention, only the first event was retained. School-based interventions, for example, often have the same cohort of students attend the same event a number of times. A similar approach was taken for Social Marketing interventions. If a school had multiple events only the first event was counted unless different classrooms were identified in EARS.

Finally, the potential for different contractors to record the same individuals as participating in an intervention was addressed by sorting and reviewing the data by location name within cities. Geocoding location address was also used to identify and remove duplicate cases.

These procedures resulted in removing 10.5 million cases, leaving 6.6 million presumed unduplicated individuals to develop a categorical level of reach variable across all four types of interventions.

Levels of reach were established by estimating the proportion of individuals exposed to these interventions within each Census tract. Specifically, the number of cases remaining from the procedures described above were divided by the total number of individuals from the SNAP-Ed target population within each of the 866 Census tracts. Finally, based on the distribution of the proportions

across the 866 Census tracts, three categories of reach were established: “low” (0.01% to 39.99% of the target population reached); “moderate” (40%-89.99% reached); and “high” (90%-100% reached). Along with the CHIS participants from the 661 Census tracts that did not have any NEOPB interventions, the independent variable for this study consisted of four levels of intervention reach: no, low, moderate, and high.

Characteristics of the CHIS Sample

Table 1 displays the characteristics of the CHIS samples of adults, teens, and children across the 1,527 Census tracts by socio-demographics, as well as the number of individuals from the three age groups by levels of intervention reach. No statistically significant differences ($p < 0.05$) were found between the intervention and no intervention Census tracts for the socio-demographic variables. The proportion of the sample by levels of intervention reach was similar across the three age groups with roughly 33% to 36% in the no intervention group, 36% to 40% in the low reach group, 10% to 13% in the moderate group, and 15% to 17% in the high group.

Dependent Variables

Answers to CHIS survey questions about eating fruit were combined with those related to vegetables to develop one fruit and vegetable consumption variable for adults, teens, and children.

The questions asked of adults were “During the past month, how many times did you eat fruit? Do not count juices” and “During the past month, how many times did you eat any *other* vegetables like green salad, green beans, or potatoes? Do not include fried potatoes.” Responses to these questions were summed and converted to a per-day unit of measurement.

For teenagers, the responses to the questions “Yesterday, how many servings of fruit, such as an apple or banana, did you eat?” and “Yesterday, how many servings of other vegetables like green salad, green beans, or potatoes did you have? Do not include fried potatoes.” were combined. Child proxy interviews with adults included the questions “Yesterday, how many servings of fruit, such as an apple or a banana, did (child) eat?” and “Yesterday, how many servings of other vegetables like green salad, green beans, or potatoes did (child) have? Do not include fried potatoes.”

The same question was used to assess fast food consumption among adults, teens, and children: “Now think about the past week. In the past 7 days, how many times did you (“he/she” for children) eat fast food? Include

fast food meals eaten at work, at home, or at fast-food restaurants, carryout or drive through.”

The different types of sugar-sweetened beverages on the market today include regular (non-diet) soda, sweetened fruit drinks, and sports and energy drinks. The 2011/12 CHIS survey of adults focused on consumption of regular sodas only with the question “During the past month, how often did you drink regular soda or pop that contains sugar? Do not include diet soda.” Responses were subsequently converted to a per-week basis.

The following two questions to teens were combined to assess levels of sugar-sweetened beverage consumption “Yesterday, how many glasses or cans of soda that contain sugar, such as Coke, did you drink? Do not include diet soda” and “Yesterday, how many glasses or cans of sweetened fruit drinks, sports, or energy drinks, did you drink?” The following question was asked to assess consumption among children: “Yesterday, how many glasses or cans of soda, such as Coke, or other sweetened drinks, such as fruit punch or sports drinks did {he/she} drink? Do not count diet drinks.”

Physical activity was also measured differently for adults versus teens and children. Minutes of walking per week for adults was assessed with a series of questions that asked about number of times per week and number of minutes per day of walking for transportation versus relaxation or exercise.

Physical activity for teens was assessed with the question “Not including school PE, in the past 7 days, on how many days were you physically active for at least 60 minutes total per day?” Proxy interviews for children included the similar question “Not including school PE, on how many days of the past 7 days was (child) physically active for at least 60 minutes total?”

Analysis

Outliers were examined across all variables and only removed for minutes walking per week among adults. Responses of more than 750 minutes (over 12 hours) per week were deemed extreme and therefore assigned as outliers.

Statistical modeling was used to control for four potentially confounding factors. Age was collapsed into the following categories: 0-4, 5-11, 12-17, 18-24, 25-44, 45-64, and 65+. The racial/ethnic groups included in the models were White, Hispanic, African-American, Asian and Other. Gender and educational attainment (less than high school versus high school or greater) were also identified as controls.

Table 1. Characteristics of Study Sample by SNAP-Ed Eligible Census Tracts With and Without SNAP-Ed Interventions

	Intervention Census Tracts (n=866)						No Intervention Census Tracts (n=661)					
	Adults (18+ Years)		Teens (12-17 Years)		Children (0-11 Years)		Adults (18+ Years)		Teens (12-17 Years)		Children (0-11 Years)	
	n		n		n		n		n		n	
Age (mean)	2,738	49.35	305	14.39	808	5.54	1,507	49.31	160	14.35	409	5.71
Gender												
<i>Male</i>	1,043	38.09	148	48.52	451	55.82	560	37.16	82	51.25	222	54.28
<i>Female</i>	1,695	61.91	157	51.48	357	44.18	947	62.84	78	48.75	187	45.72
		100%		100%		100%		100%		100%		100%
Education*												
< <i>High School</i>	1,123	41.02	182	59.67	410	50.74	591	39.22	87	54.38	200	48.9
>= <i>High School</i>	1,615	58.98	123	40.33	398	49.26	916	60.78	73	45.63	209	51.1
		100%		100%		100%		100%		100%		100%
Race/Ethnicity												
<i>Hispanic</i>	1,609	58.77	260	85.25	666	82.43	919	60.98	145	90.63	351	85.82
<i>White</i>	558	20.38	21	6.89	62	7.67	262	17.39	2	1.25	17	4.16
<i>Asian</i>	244	8.91	12	3.93	33	4.08	192	12.74	4	2.50	18	4.40
<i>African American</i>	206	7.52	6	1.97	22	2.72	98	6.50	7	4.38	13	3.18
<i>Other Race</i>	121	4.42	6	1.97	25	3.09	36	2.39	2	1.25	10	2.44
		100%		100%		100%		100%		100%		100%
Federal Poverty Level*												
0-99%	1,561	57.01	184	60.33	476	58.91	835	55.41	99	61.88	250	61.12
100-186%	1,177	42.99	121	39.67	332	41.09	835	44.59	61	38.13	159	38.88
		100%		100%		100%		100%		100%		100%
Intervention Reach												
<i>No Intervention</i>							1,507	35.50	160	34.41	409	33.61
<i>Low</i>	1,522	35.85	185	39.78	465	38.21						
<i>Moderate</i>	482	11.35	48	10.32	156	12.82						
<i>High</i>	734	17.29	72	15.48	187	15.37						

* Assigned for teens based on parent or legal guardian providing consent and for children based on adult identified as most knowledgeable about the child's health.

Two multivariate modeling techniques were used to examine the relationship between intervention reach and the dependent variables. Negative binomial models were developed for outcomes based on counts (Fruit and Vegetables Consumption, Fast Food Consumption, Sugar-Sweetened Beverage Consumption, Physical Activity for teens and children). Linear modeling (OLS) was used for the continuous outcome of Physical Activity (minutes per week walking) among adults.

The models take the following forms:

Negative Binomial model for count outcomes:

$$\text{logit}(\mu) = \alpha + X\beta + CT$$

Linear model for continuous outcomes:

$$Y = \alpha + X\beta + CT$$

where in both models, α is the intercept, X is the design matrix of the adjusted characteristics, age, sex, race/ethnicity and education, β is a vector of the regression coefficients associated with those confounders. C is a set of indicators for levels of intervention reach; the reference level is the comparison group (no intervention). T is the regression coefficient of the intervention reach. For goodness of fit for the linear models, normality of the residual distributions were checked through Q-Q plots and scatter plots.

We hypothesized that SNAP-Ed interventions have a positive impact on the targeted population and therefore a one-sided p values was selected to determine statistical significance at the 0.05 alpha level.

Findings for Relationships Between Levels of Intervention Reach and Outcomes

Higher levels of intervention reach were related to more healthful eating behaviors among adults (Table 2). Specifically, adults from high reach Census tracts reported on CHIS a greater frequency of eating fruits and vegetables. Moreover, adults from Census tracts with low, moderate, and high levels of SNAP-Ed interventions reported eating fast food less often in the past week, compared with CHIS participants living in Census tracts with no SNAP-Ed interventions.

Similar to the finding for adults, children from high reach intervention Census tracts ate more fruits and vegetables than those youngsters from Census tracts with no interventions. Levels of intervention reach were not related

to levels of consumption of sugar-sweetened beverages across all three age groups.

In terms of physical activity, teens from low reach Census tracts reported an increased number of physical activity days than teens not exposed to SNAP-Ed interventions. Contrary to expectations, teens living in Census tracts with SNAP-Ed interventions ate fast food more often in the past week than those from Census tracts without SNAP-Ed interventions.

Discussion

The greatest concentration of SNAP-Ed interventions was related to eating more fruits and vegetables among adults and children, and eating less fast food for adults only. These interventions include messages to adults on the health benefits of fruits and vegetables and preparing meals at home, healthful recipes, and demonstrated or hands-on skills to prepare fruits and vegetables, and may have been responsible for significant changes to the snacks and meals made and eaten by parents at home, which in turn translated into increased fruit and vegetable consumption by their children. Decreased fast food consumption among adults may be explained by behavior changes during the day when parents had been more likely to rely on the convenience of fast food. SNAP-Ed interventions may have prompted parents to alter their choices away from fast food when out of the house for work or errands while their children were attending day care or school, for example.

Our counterintuitive findings for teens and fast food could be interpreted as not statistically significant in light of our directional hypotheses, but must be discussed given the strength of the computed Z statistics and the implications that SNAP-Ed interventions produce an opposite-than-intended effect. It may be the case that teenagers from Census tracts with SNAP-Ed interventions may opt to use more of their disposable income on fast food in direct response to more healthful snacks and meals being offered at home that resulted from effective SNAP-Ed interventions directed at their parents.

We also found higher levels of physical activity reported by teens from low reach Census tracts, compared with those not exposed to SNAP-Ed interventions. Limited statistical power may be responsible for the lack of significant findings for teens from the moderate and high reach areas. CHIS data for only 48 and 72 teens from these Census tracts, respectively, were available, and the statistical models

Table 2. Relationships Between Reach of SNAP-Ed Interventions and Healthful Eating Behaviors, Consumption of Sugar-Sweetened Beverages, and Physical Activity Among Adults, Teens, and Children

		Fruit and Vegetable Consumption	Fast Food Consumption	Sugar-Sweetened Beverages Consumption	Physical Activity
Adults (18+ Years)	n	Times Per Day Z-value	Times Past Week Z-value	Times Drinking Regular Sodas Per Week Z-value	Total Walking Minutes/Week T-value
Reach					
<i>No Intervention</i>	1,507	--	--	--	--
<i>Low</i>	1,522	0.85	-1.67*	-0.14	-0.53
<i>Moderate</i>	482	0.39	-2.13*	0.40	-1.57
<i>High</i>	734	1.79*	-2.08*	-1.15	1.05
Teens (12 – 17 Years)	n	Servings Yesterday Z-value	Times Past Week Z-value	No. of Glasses/Cans of Regular Soda, Fruit, Sports, or Energy Drinks Yesterday Z-value	Days Physically Active ≥ 60 Minutes Last Week Z-value
Reach					
<i>No Intervention</i>	160	--	--	--	--
<i>Low</i>	185	-1.14	2.78**	1.00	1.81*
<i>Moderate</i>	48	-1.26	2.44**	0.39	1.26
<i>High</i>	72	-0.55	3.28**	1.05	1.13
Children (0 – 11 Years)	n	Servings Yesterday Z-value	Times Past Week Z-value	No. of Glasses/Cans of Regular Soda, Fruit, Sports, or Energy Drinks Yesterday Z-value	Days Physically Active ≥ 60 Minutes Last Week Z-value
Reach					
<i>No Intervention</i>	409	--	--	--	--
<i>Low</i>	465	0.60	0.07	0.65	0.15
<i>Moderate</i>	156	1.08	-0.15	-0.25	-0.14
<i>High</i>	187	2.07*	0.04	-0.44	1.47

All models controlled for gender, race/ethnicity, education, and age for children (0-4 and 5-11 years) and adults (18-24, 25-44, 45-64, and 65+ years)

* p-value <0.05, one-sided, based on hypothesized direction.

** p-value <0.05, two-sided, based on non-hypothesized direction.

were likely further under-powered by including age as a categorical variable along with five racial/ethnic groups as controls. As such, the Z statistics for all three rather than only one reach group may have reached or exceeded the one-sided criterion for significance if responses from more (>100) teens had been available.

One advantage of this study is that all Census tracts from which EARS and CHIS data were obtained met the same criteria for SNAP-Ed eligibility. Non-significant differences across intervention groups (no versus low, moderate, and high) when compared on age, gender, race/ethnicity, education, and Federal Poverty Levels strengthen the case that SNAP-Ed interventions may have explained more healthful behaviors among adults and children. However, this study is limited in that we do not know to what extent CHIS participants in the low, moderate, or high intervention reach groups actually participated in an intervention; we only know that increasing levels of reach heightened the probability that a CHIS respondent was also a SNAP-Ed participant. In addition, this study did not compare how the unique characteristics of the Census tracts may have differed across the reach groups. Our high-reach intervention Census tracts, for example, may be located in cities or counties that are more likely to have adopted policies or have environmental supports that promote more healthful eating.

For many cases in this study there was an established time order between presumed SNAP-Ed intervention exposure and behavior change. The independent variable occurred for seven months prior to assessment of the dependent variables, from October 2010 through May 2011. Moreover, CHIS was administered a full three months after FFY 2011 ended. However, the overlap in EARS and CHIS data collection for many cases subjects this study to the limitation of the cross-sectional design in establishing a true temporal relationship between the independent and dependent variables.

Finally, it is unclear if the CHIS participants in this study were exposed to non-SNAP-Ed interventions that may have influenced their behaviors. It is conceivable that other organizations also intentionally targeted in-need populations within our high reach Census tracts to implement interventions or campaigns.

Given these limitations, one should interpret our findings of significant relationships between SNAP-Ed interventions and more healthful dietary intake with caution. The second research question for this study was, can process evaluation data from EARS be linked to behavioral survey data such as assessed for CHIS. The research teams from NEOPB and UCLA were able to establish methodology for the successful merging of the two datasets for this study, as well as establish criteria for the classification of Census tracts into four reach groups. Moreover, these results highlight the viability of utilizing GIS methods to combine process evaluation data with behavioral surveillance data like CHIS, to explore the potential impacts of large-scale interventions like SNAP-Ed.

These processes and the potentially promising findings suggesting that SNAP-Ed interventions may be related to intended behavior changes will be examined in two forthcoming studies. First, the same methodology is being replicated with FFY 2013 EARS data and survey data from California SNAP households (mothers, teens, and children) collected in 2013 using food and beverage items from the Behavioral Risk Factor Surveillance System (BRFSS) survey. Second, the levels of intervention reach established with this study will be applied to EARS data from FFY 2013 through 2016, and merged with longitudinal survey data from mothers, teens, and children from 17 California local health departments. The advantages of this study will include within- and between-cohort changes in food and beverage intake as assessed through valid 24-hour dietary recall methodologies. The new NEOPB funding structure to local health departments has increased the number of contractors providing interventions throughout the state, from 120 in 2011 to over 250 in 2014, for example. As such we may be able to expand into more categories our reach variable and in turn increase the likelihood of finding significant differences across levels of interventions. Finally, guidance from the USDA on allowable SNAP-Ed interventions since FFY 2011 has placed greater emphasis of messages related to reducing sugar-sweetened beverages and increasing physical activity. Thus, in addition to replicating the findings for more healthful eating, these subsequent studies may find significant relationships between SNAP-Ed interventions and the other primary outcomes such intervention are designed to influence.

Appendix

Four criteria were used in 2011 to determine population eligibility for NEOPB interventions. First, the 2000 Census (or the 2005-2009 American Community Survey) tract that the intervention site was located in must have (1) 50% or greater of the population in that tract reside in households at or below 185% of the Federal Poverty Level (FPL) for all race/ethnicities or (2) 50% or more of the residents have incomes at or below 185% of the FPL for a specific race/ethnic group for SNAP-Ed efforts targeting a specific race/ethnic audience segment within the tract. Second, any school where 50% or more of the students qualify for free and reduced price meals was considered eligible. Third, individual sites that were based on the population they served and considered the targeted population (at or below 185% FPL) rather than their physical location were considered eligible. This includes sites like food banks, WIC, Head Start and other low-income programs. Fourth, site surveys were also used in limited circumstances in lieu of other qualifying information. Site surveys collect data about the income information of the people in attendance and were considered eligible if respondents were generally low-income. Site surveys are generally done for a limited number of circumstances and environments including churches, worksites and grocery stores.



This material was produced by the California Department of Public Health's Nutrition Education and Obesity Prevention Branch with funding from the U.S. Department of Agriculture's (USDA) Supplemental Nutrition Assistance Program-Education, known in California as CalFresh. CalFresh provides assistance to low-income households and can help buy nutritious food for better health. For CalFresh information, call 1-877-847-3663. For important nutrition information, visit www.CaChampionsForChange.net.

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Key Facts about California Teens, 2010: Creating Change With Youth Voice

The Nutrition Education and Obesity Prevention Branch (NEOPB) 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. The NEOPB surveys randomly-selected teens (age 12-17) across California by phone every two years through the *California Teen Eating, Exercise and Nutrition Survey (CalTEENS)*. These key facts from the 2010 *CalTEENS* highlight barriers faced by California's teens to achieving a healthy lifestyle as well as promising opportunities for intervention.



fact 1

Teens are interested in taking action to improve nutrition in their schools and communities.

Three out of four California teens surveyed said that they were interested in working to improve nutrition in their schools and communities. A particularly high level of interest was expressed by African American teens (87%) and teens from homes participating in CalFresh (84%). However, the proportion of teens who have actually participated in activities to improve nutrition is not necessarily in line with their expressed interest. The strong interest voiced by teens speaks to the importance of providing platforms and opportunities for youth to be part of the conversation and movement to improve the health of low-income communities throughout California.

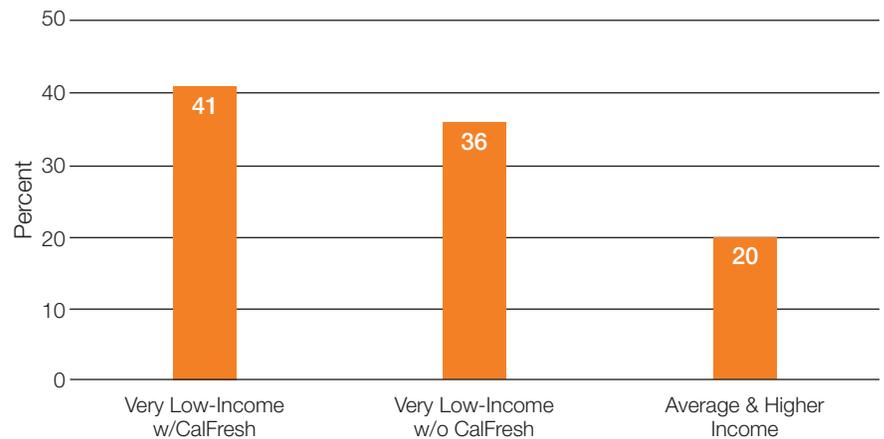


fact 2

Over a quarter of California's teens are overweight or obese¹, and very low-income youth are at highest risk.

Very low-income teens in California report overweight or obesity at much higher rates than average or higher income adolescents. Obesity prevention programs targeting these at-risk youth will continue to be a key to reducing the burden of obesity and chronic disease in California.

Rates of Overweight and Obesity Are Much Higher Among Very Low-Income Teens



¹ Calculated from self-reported height and weight data using the CDC 2000 reference data by age and gender for BMI. Overweight = BMI > 85th < 95th percentile. Obese = BMI > 95th percentile

fact 3

Teens do not report getting the recommended amount of physical activity.

Fewer than half (42%) of teens in California meet the guideline to engage in at least 60 minutes of moderate and vigorous physical activity daily. This is a decline from roughly two-thirds (66%) of teens meeting this guideline in 2006. The most commonly cited barrier to getting physical activity is lack of time, reported by a quarter (26%) of teens as the main reason they don't exercise more.

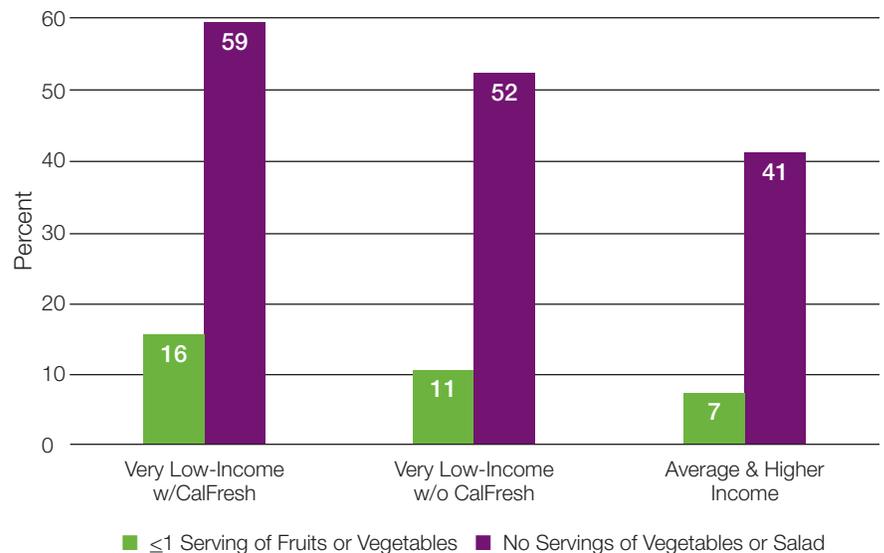
fact 4 Teens report not eating enough fruits and vegetables.

Half (49%) of teens report eating no vegetables, while one in ten (10%) teens report having less than a serving of either fruit or vegetables. Over a quarter of teens (27%) report not liking the taste as the main reason they do not eat more fruits and vegetables.

fact 5 Disparities in fruit and vegetable consumption are present among California teens.

Very low-income teens and youth from communities of color are most likely to report not eating any fruits and vegetables. African American teens are about twice as likely as their White peers to report eating no vegetables or salad (79% vs. 39%) and to report less than a serving of any fruits or vegetables (19% vs. 9%). Very low-income teens are more likely to report not eating fruits and vegetables, especially those whose families are participating in CalFresh.

Very Low-Income Teens
Are Most Likely To
Report Not Eating Any
Fruits and Vegetables



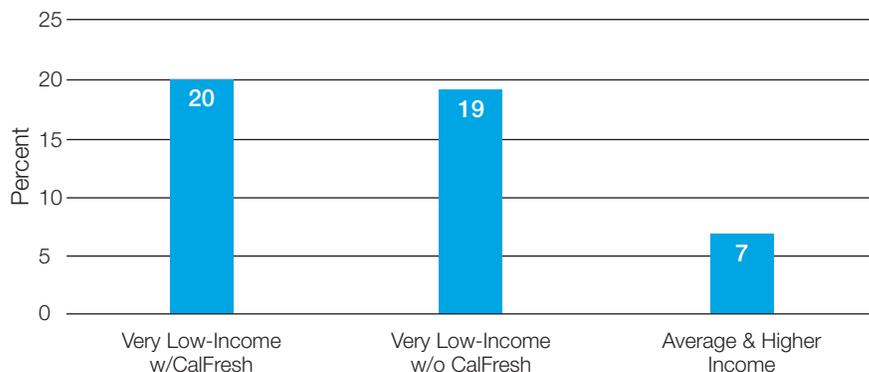


fact 6

Many very low-income teens report skipping breakfast, putting them at risk for other negative outcomes.

One out of five very low-income teens report that they do not consume anything for breakfast on the previous day, regardless of whether the household participates in CalFresh (20%) or does not (19%). Our survey also finds that skipping breakfast is associated with a 12% increased rate of overweight among California adolescents as well as relatively poor academic outcomes.

**Very Low-Income
Teens Are Much
More Likely To
Report Missing
Breakfast**

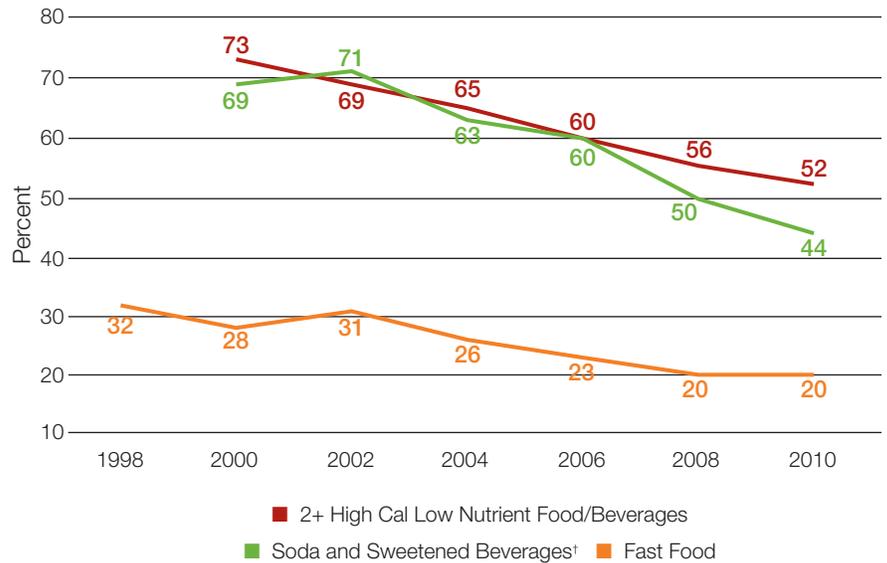


fact 7

Teens are consuming fewer less healthy foods and beverages.

Over the last decade, the proportion of California's teens reporting that they ate or drank various less healthy foods and beverages has declined. The percent of teens who reported fast food consumption declined 36% between 2000 and 2010 while those who reported sugary drink intake declined 37% from 1998 to 2010. Those who reported consuming two or more less healthy foods (including sugary drinks, desserts, and fried foods, for example) declined by 28% between 2000 and 2010.

Fewer Teens Report Intake (Yesterday) of Less Healthy Foods and Beverages, Including Sugary Drinks and Fast



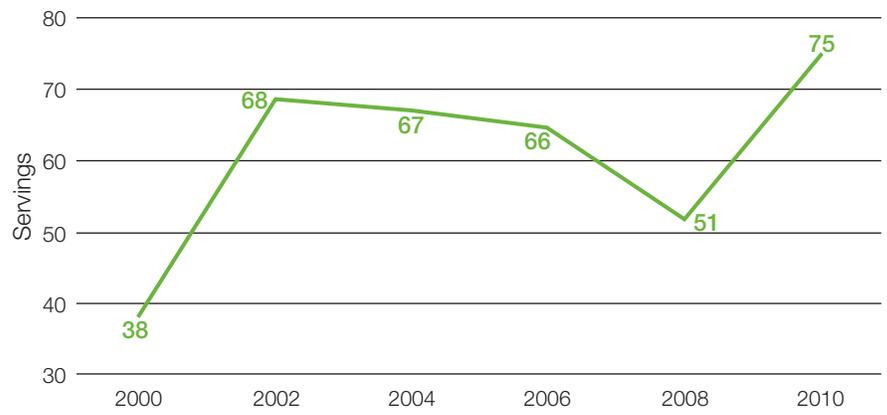
† Excludes sports drinks

fact 8

Most of California's teens are meeting guidelines for television viewing on schooldays.

In 2010, three out of four (75%) teens in California reported watching two hours or less TV on a typical school day, the recommendation set by Healthy People 2020. This is nearly twice as many teens achieving this goal as in 2000 (38%).

California Children Who Have School Breakfast Eat More Fruits and Vegetables





Conclusion

While there are disparities in the reported health behaviors of low-income youth from communities of color, there is also strong interest from these groups in taking action to improve the nutrition of their communities. It is important to continue giving youth who are interested in taking action a place at the table to voice their views and opinions.

Data Source

California Department of Public Health, Nutrition Education and Obesity Prevention Branch, Research and Evaluation Section, 1998-2010 California Teen Eating, Exercise and Nutrition Survey (CalTEENS). Background and documentation for the 2010 CalTEENS are available at: <http://cdphinternet/programs/cpns/Documents/Backgroundon2010CalTEENS.pdf>

Data Description

Comparisons are made among three groups of 12- to 17-year-old adolescents using federal poverty level (FPL) and CalFresh (CF) participation, formerly Food Stamps (Table 1). Due to small sample size, data from adolescents where household income fell between 131%-185% FPL are not presented. Only statistically significant differences are reported ($p < .05$).

Table 1: Categorization of Adolescents

HOUSEHOLD INCOME GROUPS	CALFRESH (CF) HOUSEHOLDS	FEDERAL POVERTY LEVEL (FPL)
Very Low-Income w/CalFresh (N=463)	Yes	$\leq 130\%$
Very Low-Income w/o CalFresh (N=380)	No	$\leq 130\%$
Average and Higher Income (N=312)	No	$> 185\%$



This material was produced by the California Department of Public Health's Nutrition Education and Obesity Prevention Branch with funding from USDA SNAP-Ed, known in California as CalFresh. These institutions are equal opportunity providers and employers. CalFresh provides assistance to low-income households and can help buy nutritious food for better health. For CalFresh information, call 1-877-847-3663. For important nutrition information, visit www.CaChampionsForChange.net.



Obesity in California: The Weight of the State, 2000-2012

2014

**California Department of Public Health
Nutrition Education and Obesity Prevention Branch**

Executive Summary

Obesity Prevalence and Trends

From 1980 to 2010, national obesity rates more than doubled for adults and children 2 to 5 years, while approximately tripling among children 6 to 11 years and adolescents 12 to 19 years.⁵⁻⁷ During the past several decades, obesity rates among all population groups have increased regardless of age, sex, race, ethnicity, socioeconomic status, education level, and geographic region.⁶⁻⁹ In recent years, the national childhood obesity rate has leveled off. California is among a select few states that have reported modest decreases in childhood obesity rates possibly as a result of taking comprehensive action to address the epidemic.¹⁰⁻¹²

Although meeting the *Healthy People 2020* targets, a significant percentage (25.4%) of California adults and adolescents (15.8%) are obese.¹⁻³ Unfortunately, obesity rates among low-income children 2 to 4 years old (17.2%) and 5 to 19 years old (23.3%) exceed the targets (see table).⁴

These prevalence rates double when overweight and obesity are combined for adults and adolescents and nearly double among low-income children 2 to 4 years and 5 to 19 years.^{1,2,4}

Prevalence of Obesity and <i>Healthy People 2020</i> Targets for Californians			
Age	Overweight or Obese (%) ^a	Obese (%) ^b	<i>Healthy People 2020</i> Obesity Targets (%)
Low-Income Children			
2-19^c	38.8	21.0	14.5
2-4	33.4	17.3	9.6
5-19	42.1	23.3	N/A
General Population			
12-17^d	32.4	15.8	16.1
18+^e	62.1	25.4	30.5
Notes: ^a Overweight and obese among children and adolescents is a BMI at the 85th percentile or greater; adult overweight is a body mass index (BMI) of 25 or greater. ^b Obese among children and adolescents is a BMI at the 95th percentile or greater; adult obesity is a BMI of 30 or greater. ^c 2010 Pediatric Nutrition Surveillance System. ^d 2011-12 California Health Interview Survey. ^e 2012 Behavioral Risk Factor Survey. N/A = not available.			

Obesity and Health Disparities

Despite signs of progress, racial and ethnic, socioeconomic, and geographic disparities in obesity rates persist in California. Among low-income children 2 to 19 years, Hispanics, Native American/Alaskan Natives, Pacific Islanders, and youth ages 9 to 11 were disproportionately affected by obesity compared with other race/ethnic and age groups.⁴ The rates of obesity are highest among those with very low income and lowest among higher income Californians.^{1,13-15}

Recent data show that substantial differences exist in obesity prevalence by age and race/ethnicity which vary by gender in adults. For example, adults 51 to 64 years were twice as likely to be obese than 18 to 24 year olds.¹ Over one-third of African American females (41.6%) and Latinas (35.9%) were obese compared to the obesity rate of 21.6% in white females. A similar disparity was seen between Latino (33.2%) and white males (23.3%).¹

In 2001, no California county had an adult obesity rate that exceeded the *Healthy People 2020* goal of 30.5%. However, by 2012, 21 of California's 58 counties had adult obesity rates of 30.5% or more.¹⁷ For low-income children, the news is much worse. Only one county in California has an obesity rate among low-income preschool-age children that meets the national *Healthy People 2020* target of 9.6%^{4,16} and no county has an obesity rate among low-income children aged 5 to 19 that meets the national *Healthy People 2020* target of 14.5%.^{4,16}

Health Consequences of Obesity

Obesity increases the risk of many health conditions and contributes to some of the leading causes of preventable death, posing a major public health challenge.^{18,19}

Health conditions associated with obesity include:

- Coronary heart disease, stroke, and high blood pressure;
- Type 2 diabetes;
- Cancers, such as endometrial, breast, and colon cancer;
- High total cholesterol or high levels of triglycerides;
- Liver and gallbladder disease;
- Sleep apnea and respiratory problems;
- Degeneration of cartilage and underlying bone within a joint (osteoarthritis);
- Reproductive health complications such as infertility; and
- Mental health conditions.

State Indicators and Targets for Obesity Prevention

This report highlights current prevalence measures for breastfeeding, dietary behaviors, physical activity, and screen time among Californians to help evaluate the State's progress toward meeting the evidence-based objectives for obesity prevention.²⁰

Breastfeeding

Breastfeeding has been shown to have a protective effect against obesity, with longer durations of breastfeeding being associated with additional reductions in obesity.²¹ The American Academy of Pediatrics recommends that babies are breastfed exclusively for about six months and continue to be breastfed for a year or longer with complementary foods.²² In California, only 27.4% of infants reach six months of exclusive breastfeeding.²³

Dietary Behaviors

Fruit and Vegetables

With respect to dietary behaviors, fruit and vegetable consumption promotes nutrient adequacy, disease prevention, overall good health, and may also protect against weight

gain.²⁴⁻²⁹ However, the consumption of five or more fruits and vegetables among Californians decreases with age. Only 59.6% of California children age 2 to 5 years and 47.6% age 6 to 11 years report consuming five or more servings of fruits and vegetables per day.² Among adolescents the prevalence drops to 25.8% with adults consuming the least at 23.4%.^{1,2}

Sugar Sweetened Beverages

Limited consumption of sugar-sweetened beverages and fast food reduces the risk of weight gain and obesity,³⁰⁻³⁴ but the latest data on sugar-sweetened beverage consumption indicate that sugar-sweetened beverage consumption increases from young childhood through adolescence with the proportion of 2 to 5 year olds drinking two or more sugar-sweetened beverages at 4.4%, 6 to 11 year olds at 7.5%, adolescents 12 to 17 years old at 29.5%.^{1,2}

Fast Food

Approximately two-thirds of California’s adults (63.6%), young children (64.7%), and older children (69.6%) report eating fast food in the past week.² Adolescents are more likely to eat fast food than other age groups in the State with over three-quarters (76.4%) of adolescents reporting that they ate fast food during the past week.²

Prevalence of Protective and Risk Factors for Obesity Among Californians					
Age	Five or More Fruits and Vegetables per Day (%) ^a	Two or More Sugar-Sweetened Beverages per Day (%) ^b	Ate Fast Food in the Past Week (%)	Met Physical Activity Guideline (%) ^c	Two or Fewer Hours Watching Television (%) ^d
2-5 ^e	59.6	4.4	64.7	45.6	63.4
6-11 ^e	47.6	7.5	69.6	30.4	56.8
12-17 ^e	25.8	29.5	76.4	16.1	48.4
18+ ^f	23.4	15.8	63.6	25.3	25.3

Notes: ^a Children and adolescents report in servings; adults report in times. ^b Children and adolescents report in glasses; adults report in times. ^c Children and adolescents engage in 60 minutes or more of physical activity every day per week; adults achieve at least 150 minutes of moderate-intensity or 75 minutes a vigorous-intensity aerobic activity (or an equivalent combination) per week, along with muscle strengthening exercise at least twice per week. ^d Child and adolescent data are for weekends only; children age 2 not included in analysis. ^e 2009 (TV time; weekends only), 2011-12 California Health Interview Survey. ^f 2012 Behavioral Risk Factor Survey, 2011-12 California Health Interview Survey (fast food), 2011 California Dietary Practices Survey (TV time).

Physical Activity

Regular physical activity helps people maintain a healthy weight and prevent excess weight gain.^{35,36} Yet, the majority of Californians fail to meet the physical activity guidelines. Although close to half (45.6%) of young children meet the physical activity recommendation, the prevalence declines through adolescence.² Only 30.4% of older children and 16.1% of adolescents engage in at least 60 minutes of physical activity every day per week.² Adults fare slightly better than adolescents, with one-quarter (25.3%) achieving the guideline for adults (see table).¹

Lastly, screen time, particularly television viewing, is associated with poor diet quality and obesity.³⁷⁻³⁹ In contrast to physical activity, as Californians age they spend more time watching television. The prevalence of limited television viewing (no more than 2 hours a day) is highest among young children 3 to 5 years (63.4%) and lowest in adults (25.3%).^{40,41} Approximately half of California's older children and adolescents (56.8% and 48.4%, respectively) report spending two or fewer hours watching television per day.⁴⁰

Obesity Is Costly

California has the highest obesity-related costs in the United States, estimated at \$15.2 billion with 41.5% of these costs financed through Medicare and Medi-Cal.⁴² In 2012, California Office of Statewide Health Planning and Development (OSHPD) data indicate that nearly half a million hospital admissions annually are due to obesity-related conditions in the State, accounting for \$33.8 billion in hospital charges, representing a 39.7% increase since 2005.⁴³ If adult BMI was reduced by 5%, California could save \$81.7 billion in obesity-related health care costs by 2030.⁴⁴ Individuals who are obese have medical costs that are \$1,429 higher per year, or roughly 42% greater, than the costs of those with normal body weight.⁴⁵ Obesity has also been linked with reduced worker productivity, chronic absence from work, and medical expenditures that total \$73.1 billion per year for full time employees in the United States.⁴⁶

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Overview of Obesity

During the past 30 years, obesity rates doubled for adults and preschool children, while tripling among school-age children and adolescents.^{6,7} The rise in obesity rates has reached all population segments –age, sex, race, ethnicity, socioeconomic status, education level, or geographic region.⁶⁻⁹ Significant health disparities continue to exist by race/ethnicity, socioeconomic status, and geographic region. The high prevalence of obesity has significant health consequences and costs related to health care expenditures and worker productivity. In response to the obesity epidemic, the California Department of Public Health monitored indicators and targets for obesity prevention to track California’s progress.

In this report, body mass index (BMI) is used to classify population segments as obese. BMI was selected as the indicator of obesity because height and weight data are widely available at the population level and correlates with amount of body fat. BMI [weight (kg)/height² (m)] is calculated from clinically measured data for children, and from self-report height and weight measures obtained through telephone interviews with adolescents and adults. For children and adolescents, obesity is based on age- and sex-specific BMI percentiles and those with a BMI at or above the 95th percentile are considered obese.⁴⁷ Adults with a BMI of 30 or higher are considered obese.

Risk Factors for Obesity

There are a number of risk factors for obesity that can complicate the calories-in-calories-out energy balance relationship. Genetic factors may result in a predisposition for obesity, affecting fat storage and distribution as well as the rate of metabolism. Family environment factors can also affect children’s weight status –parents’ behaviors related to eating habits and active lifestyles increase their children’s risk for being overweight or obese.⁴⁸ Furthermore, obese children are more likely to become obese adults.⁴⁹⁻⁵¹

Health conditions such as hypothyroidism, Cushing’s syndrome, and polycystic ovarian syndrome can cause overweight and obesity. Weight gain can also be caused by certain medications. Emotional factors such as boredom, anger, or stress can lead to overeating and weight gain. Smoking cessation can also lead to weight gain. Other factors such as older age, leading to muscle loss, menopause, and pregnancy, can contribute to weight gain that is difficult to lose. Finally, lack of sleep is also a risk factor for obesity.⁴⁸

While there are many factors that contribute to weight gain and ultimately to obesity, inactivity, unhealthy diets, and eating behaviors are the risk factors most amenable to prevention. Inactivity is a result of sedentary behaviors such as a reliance on cars rather

than active transport; more time in front of televisions, computers, and other such technology; and jobs that require a majority of time to be spent sitting at a desk. Inactivity makes it easier to consume more calories than are burned. Additionally, sedentary lifestyles themselves are linked to an increased risk in coronary heart disease, high blood pressure, type 2 diabetes, colon cancer, and other health problems.⁴⁸

Neighborhood environmental factors play a large role in a person's propensity for becoming obese. Lack of access to safe places to exercise in neighborhoods and busy work schedules are notable barriers to physical activity.⁴⁸ When asked about their neighborhood, one in ten Californian teens disagreed or strongly disagreed that the nearby park or playground was safe during the day, while half said the same of the nearby parks or playgrounds during the nighttime.²

On the other side of the equation, neighborhoods that lack access to healthy, affordable food stores, but ready access to oversized food portions in restaurants contribute to higher energy intakes that can be difficult to balance with physical activity.^{48,52} Over one-third of adults in California reported that they seldom, never, or only sometimes could find a variety of good quality, affordable, fresh fruits and vegetables that they want in their neighborhood.⁴¹ Eating out frequently is associated with obesity and when presented with larger portion sizes, people tend to consume a large amount of calories.^{53,54} This is concerning as portion sizes of not only restaurant meals, but packaged foods as well, have been on the rise since the 1970s.⁵⁵ In California, two-thirds of people reported that they had eaten fast food at least once in the past week, while one in ten ate fast food four or more times.² Heavy food advertising for high-calorie foods encourages this consumption.⁴⁸

State Obesity Surveillance and Data Sources

In California, surveillance of obesity is conducted using multiple data sources. Data from the Behavior Risk Factor Surveillance System (BRFSS) 2000 through 2010 are used to examine trends in obesity among adult. BRFSS is an annual, statewide random-digit-dial telephone survey of adults 18 years and older. Height and weight are self-reported by respondents. Due to changes in BRFSS survey weights, data from 2011 and beyond cannot be compared with previous years.

The California Health Interview Survey (CHIS) provides adolescent obesity rates for youth ages 12 to 17. CHIS is a statewide, random-digit-dial telephone survey with an extensive sample large enough to be statistically representative of California's population. Since 2011, CHIS has been conducted on a continuous basis with data providing one-year estimates; in 2009 and earlier, CHIS was conducted biennially. Height and weight are self-reported by adolescents.

The Pediatric Nutrition Surveillance System (PedNSS) in California provided child and adolescent obesity rates for 2- to 19-year olds from low-income families for 2000

through 2010. PedNSS was a program-based surveillance system that monitored the nutritional status of low-income children in federally funded maternal and child health programs: Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) Program; and Title V Maternal and Child Health Program (MCH). Height and weight data were measured and collected by staff at public health clinics. The Centers for Disease Control and Prevention discontinued the PedNSS at the end of 2012.

State Indicators and Targets for Obesity Prevention

California Obesity Prevention Plan

The California Obesity Prevention Plan focuses on policy and environmental change based on emerging evidence which shows that these factors play a critical role in efforts to address the obesity epidemic.²⁰ The Plan uses the CDC's evidence-based target areas at the individual level as indicators of successfully developing and implementing policy and environmental strategies that support Californians to:

- Increase breastfeeding initiation, duration, and exclusivity;
- Increase consumption of fruits and vegetables;
- Decrease consumption of sugar-sweetened beverages;
- Decrease consumption of high energy dense foods (foods that are high in calories but have low nutritional value);
- Increase physical activity; and
- Decrease television viewing time.²⁰

This report includes current prevalence measures for each target area indicator, when available.

Healthy People 2020

Healthy People 2020 provides science-based, national objectives for improving the health of Americans.¹⁶ The weight status objectives include specific targets for reducing obesity with the goal of achieving a 10% improvement from 2010 to 2020. This report will examine how California data compare to the *Healthy People 2020* targets:

- Reduce the proportion of adults who are obese (Target: 30.5%),
- Reduce the proportion of adolescents aged 12 to 19 years who are considered obese (Target: 16.1%),
- Reduce the proportion of children aged 6 to 11 years who are considered obese (Target: 15.7%), and
- Reduce the proportion of children aged 2 to 5 years who are considered obese (Target: 9.6%), and
- Reduce the proportion of children and adolescents aged 2 to 19 years who are considered obese (Target: 14.5%).

Obesity Prevalence and Trends

Adult Obesity

While the prevalence of obesity among California adults in 2012 (25.4%) was lower than the *Healthy People 2020* target of 30.5%,¹⁶ the prevalence of obesity increased from 19.7% in 2000 to 23.8% in 2010 and has continued to rise.

Figure 1. Prevalence of Obesity Among California Adults, 2000-2012 BRFSS

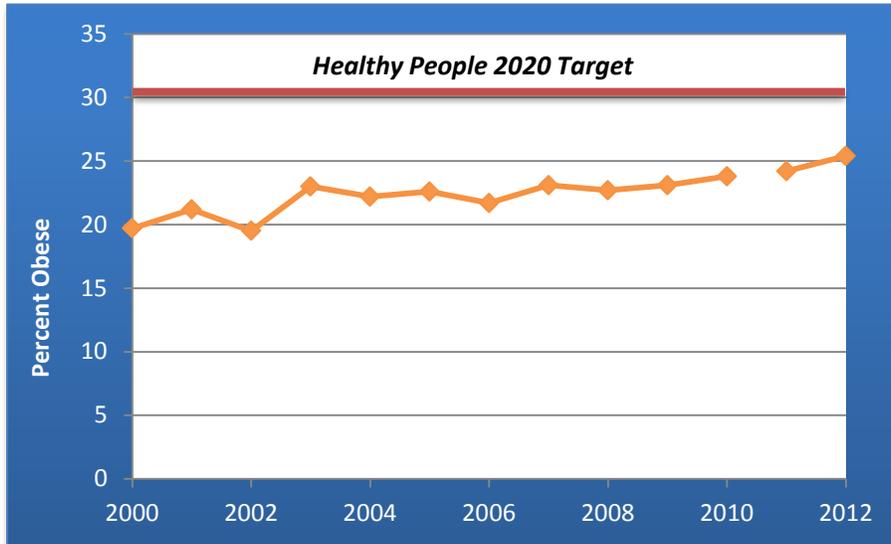


Table 1. Prevalence of Obesity Among California Adults, 2000-2012 BRFSS

Year	N	Obese (%)
2000	3,968	19.7
2001	4,104	21.2
2002	4,256	19.5
2003	4,295	23.0
2004	4,295	22.2
2005	5,896	22.6
2006	5,453	21.7
2007	5,455	23.1
2008	5,616	22.7
2009	5,429	23.1
2010	5,547	23.8
2011	16,511	24.2
2012	4,599	25.4

Notes: The BRFSS weighting and methodology changed between 2010 and 2011, represented by a break in the trend line.

Adolescent Obesity

The prevalence of obesity among California adolescents in 2011 was just below the *Healthy People 2020* target (16.1%).¹⁶ But similar to adults, the prevalence of obesity among adolescents 12 to 17 years old increased between 2003 (12.4%) and 2011 (15.8%).

Figure 2. Prevalence of Obesity Among California Adolescents, 2003-2011 CHIS

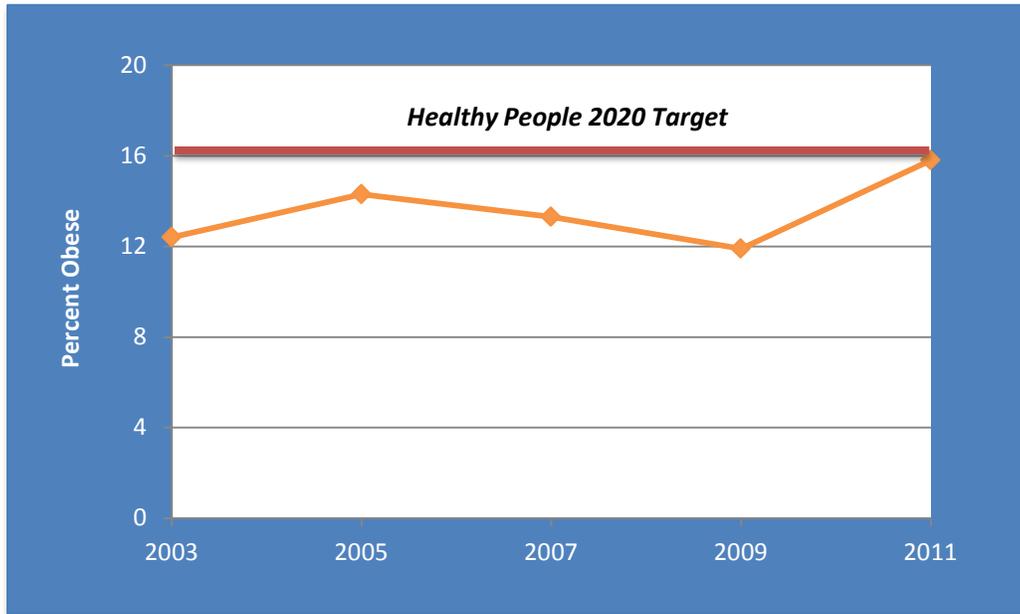


Table 2. Prevalence of Obesity Among California Adolescents, 2003-2011 CHIS

Year	Est. N	Obese (%)
2003	403,000	12.4
2005	481,000	14.3
2007	466,000	13.3
2009	405,000	11.9
2011	494,000	15.8

Obesity in Low-Income Children

The prevalence of obesity among low-income California children aged 2 to 19 years in 2010 (21.0%) was substantially higher than the *Healthy People 2020* target of 14.5%.¹⁶ The prevalence among low-income children 2 to 4 years remained stable from 2000 (16.7%) to 2010 (17.3%), while the rate among those aged 5 to 19 years rose from 19.7% in 2000 to 23.3% in 2010.

Figure 3. Prevalence of Obesity Among Low-Income Children in California, 2000-2010
PedNSS

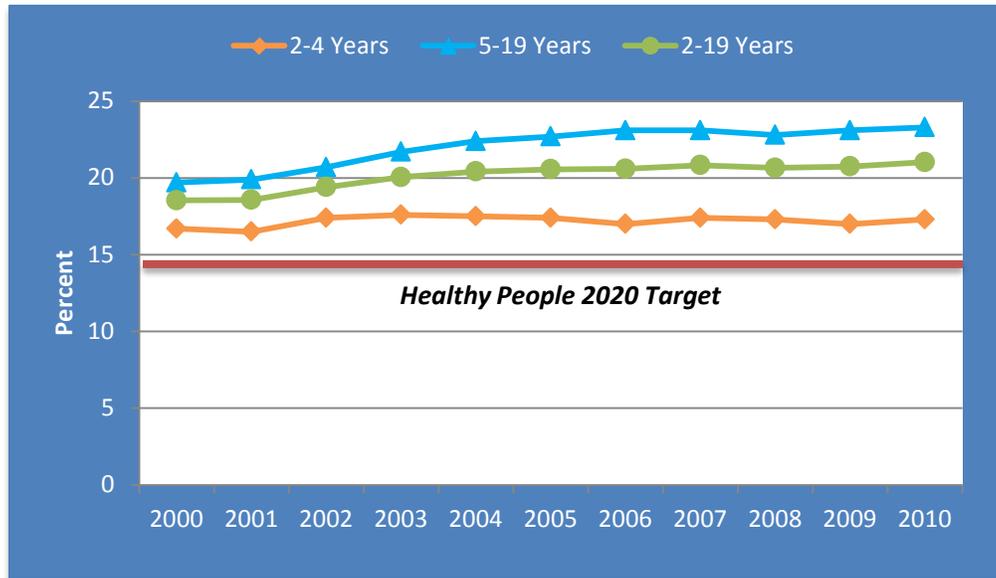


Table 3. Prevalence of Obesity Among Low-income California Children, 2000-2010
PedNSS

Year	2-4 Years		5-19 Years		2-19 Years	
	N	Obese (%)	N	Obese (%)	N	Obese (%)
2000	363,965	16.7	574,820	19.7	938,785	18.5
2001	306,084	16.5	474,493	19.9	780,577	18.6
2002	334,608	17.4	512,497	20.7	847,105	19.4
2003	344,384	17.6	512,204	21.7	856,588	20.1
2004	337,488	17.5	494,440	22.4	831,928	20.4
2005	331,975	17.4	490,680	22.7	822,655	20.6
2006	339,961	17.0	486,312	23.1	826,273	20.6
2007	312,190	17.4	473,184	23.1	785,374	20.8
2008	301,643	17.3	471,455	22.8	773,098	20.7
2009	332,663	17.0	531,378	23.1	864,041	20.8
2010	284,506	17.3	465,332	23.3	749,838	21.0

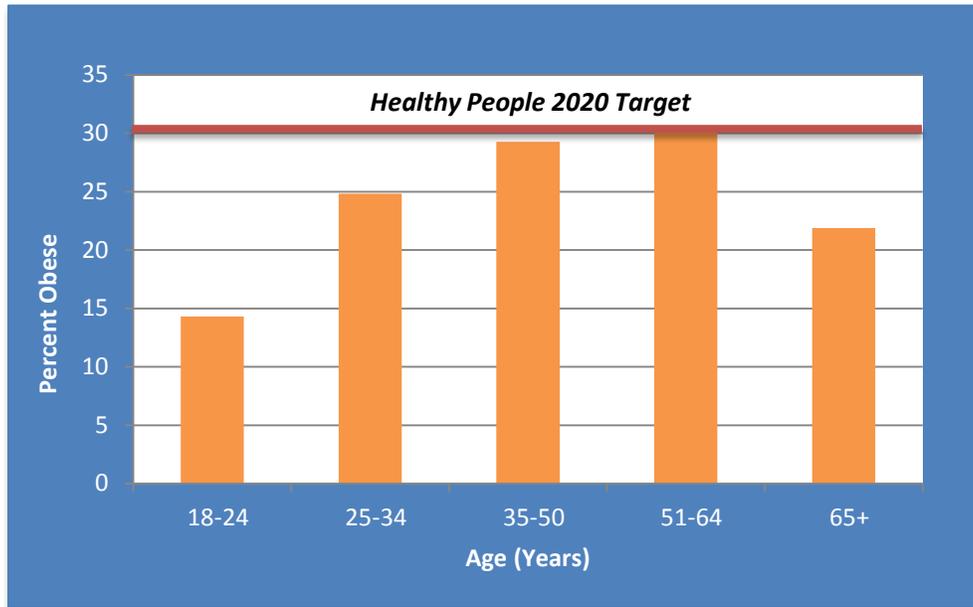
Obesity and Health Disparities

Obesity by Age

Adults

In California, no specific age group of adults exceeded the *Healthy People 2020* target of 30.5%.¹⁶ However, the 35 to 64 year old adults are more likely to be obese compared to their younger and older counterparts, and those between 51 to 64 years old had an obesity rate more than twice that of 18 to 24 year olds.

Figure 4. Prevalence of Obesity Among California Adults by Age, 2012 BRFSS



Age	Obese (%)	CI
18-24	14.3	10.0-18.7
25-34	24.8	20.8-28.9
35-50	29.3	26.3-32.3
51-64	30.1	27.0-33.1
65+	21.9	19.1-24.6

Notes: CI = Confidence Interval.

Low-Income Children

In 2010, the prevalence of obesity among low-income children exceeded the *Healthy People 2020* targets for every age group; with the obesity rate in preschool-age children nearly double the *Healthy People 2020* target of 9.6%.¹⁶ Among low-income children, obesity disproportionately impacts those 9 to 11 years old.

Figure 5. Prevalence of Obesity Among Low-Income Children in California by Age, 2010 PedNSS



Table 5. Prevalence of Obesity Among Low-income Children in California by Age, 2010 PedNSS

Age	Obese (%)	CI
2-4	17.3	17.2-17.4
5-8	21.8	21.6-22.0
9-11	27.8	27.5-28.1
12-14	25.0	24.7-25.3
15-19	20.0	19.8-20.2

Notes: CI = Confidence Interval.

Obesity by Racial and Ethnic Groups

Adults

In 2012, the prevalence of obesity in African American females (41.6%), Latinas (35.9%), and Latinos (33.2%) exceeded the *Healthy People 2020* target of 30.5%.¹⁶ Regardless of gender, California's Asian/Other adults show the lowest rates of obesity (15.9% of males and 8.8% of females).

Figure 6. Prevalence of Obesity Among Adults in California by Sex and Race/Ethnicity, 2012 BRFSS



Table 6. Prevalence of Obesity Among California Adults by Sex and Race/Ethnicity, 2012 BRFSS

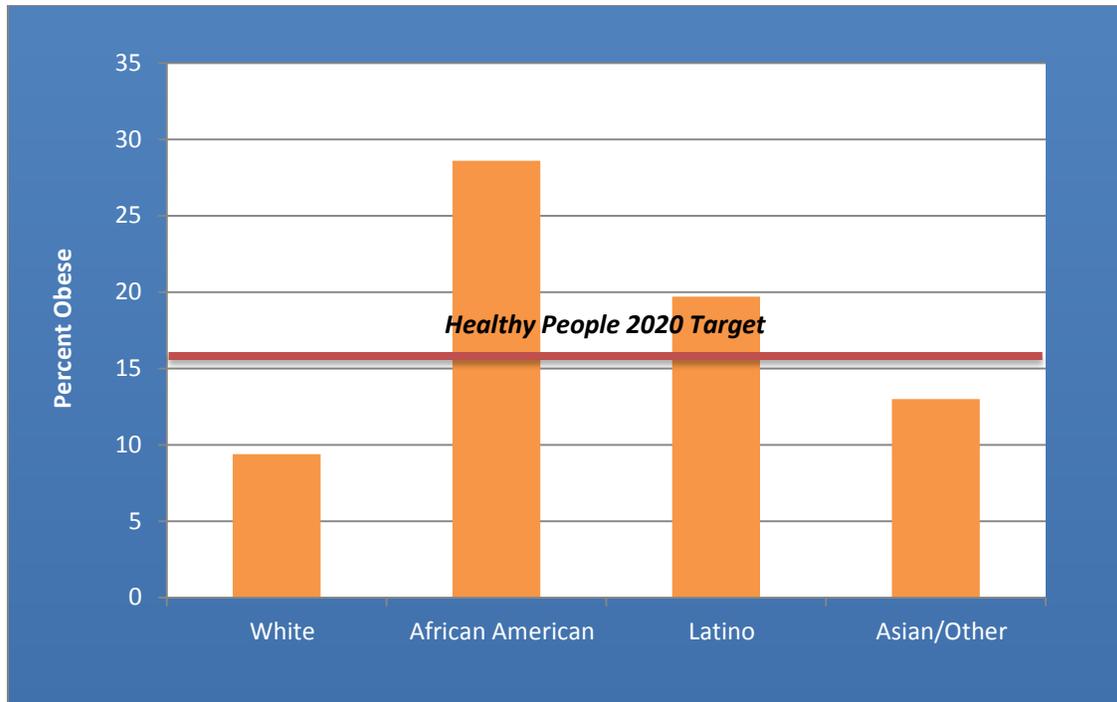
Race/Ethnicity	Male		Female	
	Obese (%)	CI	Obese (%)	CI
White	23.3	20.5-26.1	21.6	19.2-24.1
African American	28.2	17.3-39.0	41.6	31.4-51.8
Latino	33.2	28.6-37.9	35.9	31.8-40.1
Asian/Other	15.9	9.9-21.9	8.8	4.3-13.3

Notes: CI = Confidence Interval.

Adolescents

Among California adolescents age 12 to 17, obesity prevalence is highest among African Americans (28.6%) and Latinos (19.7%), regardless of gender. These two race/ethnic groups also exceeded the *Healthy People 2020* target of 16.1% for adolescents.¹⁶

Figure 7. Prevalence of Obesity Among California Adolescents by Race/Ethnicity, 2011-2012 CHIS



Race/Ethnicity	Obese (%)	CI
White	9.4	7.1-11.8
African American	28.6	16.2-41.0
Latino	19.7	16.0-23.5
Asian/Other	13.0	6.8-19.2

Notes: CI = Confidence Interval.

Low-Income Children

In 2010, the prevalence of obesity among preschool and school-age children exceeded the *Healthy People 2020* targets of 9.6% and 14.5% in all race/ethnic groups, except for school-age Asian children (12.6%).¹⁶ Rates of obesity among low-income children in California are highest among Hispanics, American Indians/Alaskan Natives, and Pacific Islanders.

Figure 8. Prevalence of Obesity Among Low-Income Children in California by Race/Ethnicity and Age, 2010 PedNSS

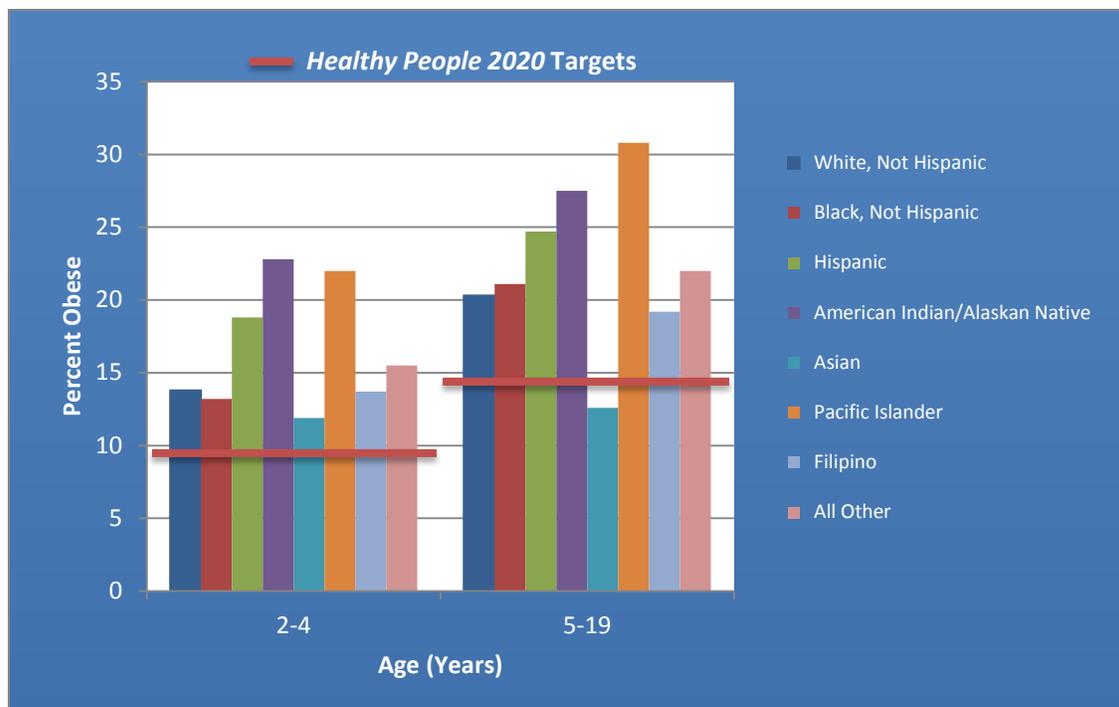


Table 8. Prevalence of Obesity Among Low-income Children in California by Race/Ethnicity and Age, 2010 PedNSS

Race/Ethnicity	2-4 Years		5-19 Years	
	Obese (%)	CI	Obese (%)	CI
White, Not Hispanic	13.8	13.4-14.2	20.3	19.9-20.7
Black, Not Hispanic	13.2	12.7-13.8	21.1	20.6-21.6
Hispanic	18.8	18.6-18.9	24.7	24.6-24.8
American Indian/Alaskan Native	22.8	20.3-25.5	27.5	25.0-30.3
Asian	11.9	11.2-12.6	12.6	12.4-13.1
Pacific Islander	22.0	19.4-24.8	30.8	28.4-33.3
Filipino	13.7	11.5-16.0	19.2	17.6-20.9
All Other	15.5	15.2-15.8	22.0	21.7-22.3

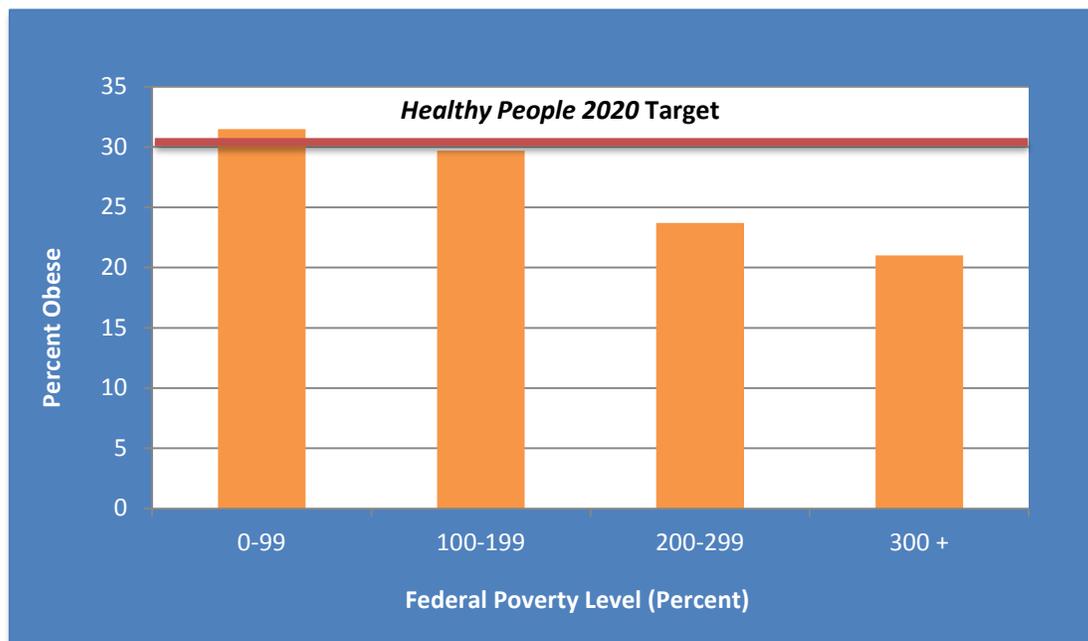
Notes: CI = Confidence Interval.

Obesity by Socioeconomic Groups

Adults

In California, there is an inverse relationship between obesity rates and income. Those with the lowest income (0-99% Federal Poverty Level [FPL]) have the highest rates of obesity exceeding the *Healthy People 2020* target of 30.5%.¹⁶ While those adults in the highest FPL group (300% or more) had a rate of obesity approximately 10 percentage points lower. These disparities are supported by findings from the California Dietary Practices Survey.⁵⁶

Figure 9. Prevalence of Obesity Among Adults in California by Household Poverty Level, 2011-2012 CHIS



Federal Poverty Level (%)	Obese (%)	CI
0-99	31.5	29.5-33.6
100-199	29.7	27.9-31.5
200-299	23.7	22.0-25.5
300+	21.0	20.1-21.8

Notes: CI = Confidence Interval.

Adolescents

The same inverse relationship between obesity rates and income exists for adolescents with obesity rates of 20.7% in adolescents from homes below 100% FPL, while those adolescents living above 300% FPL had just half that rate (10.9%). All three groups below 300% FPL exceeded the *Healthy People 2020* target of 16.1% for adolescent obesity.¹⁶

Figure 10. Prevalence of Obesity Among Adolescents in California by Household Poverty Level, 2011-2012 CHIS

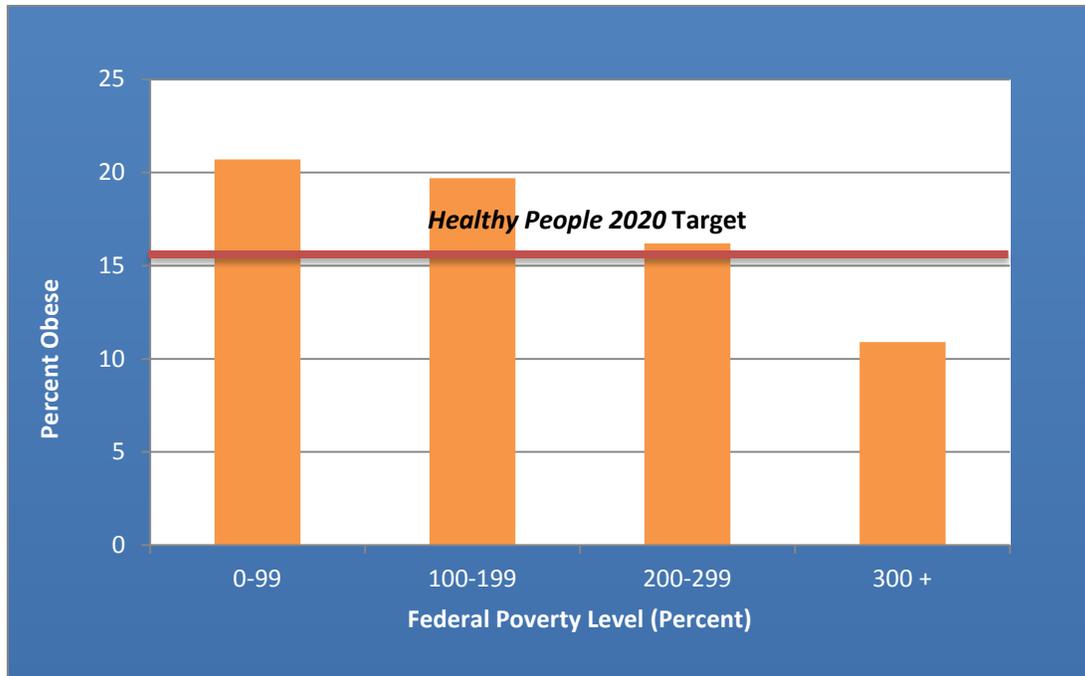


Table 10. Prevalence of Obesity Among California Adolescents by Household Poverty Level, 2011-2012 CHIS

Federal Poverty Level (%)	Obese (%)	CI
0-99	20.7	14.9-26.5
100-199	19.7	14.2-25.2
200-299	16.2	9.9-22.6
300 +	10.9	8.2-13.6

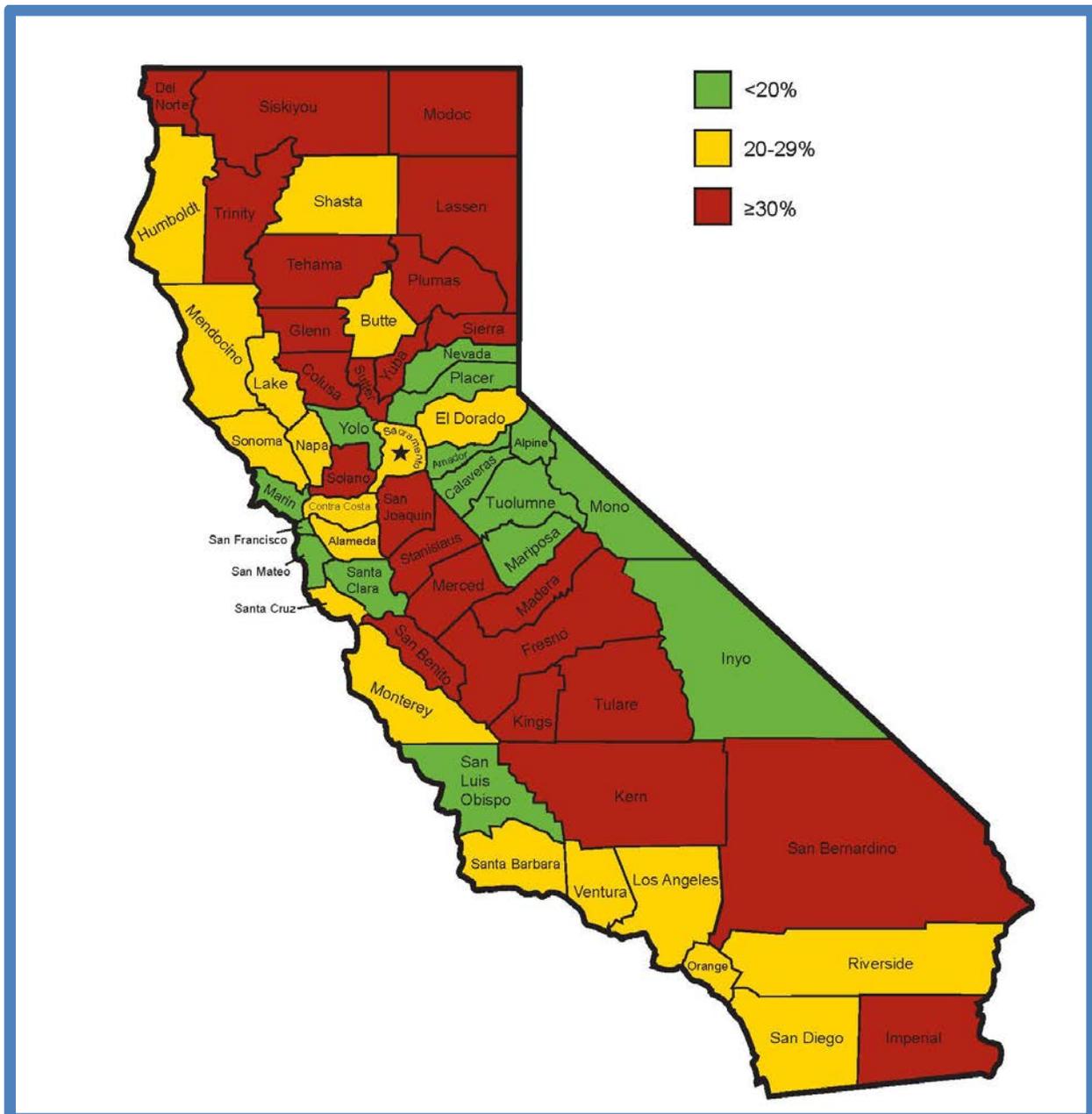
Notes: CI = Confidence Interval.

Obesity by County

Adults

Obesity varies significantly by county in California with only 11.3% of the adults living in San Francisco County obese compared with 41.7% of Imperial County adults (Table 11). One in three counties in California has an obesity rate that surpassing the national *Healthy People 2020* goal (Target: 30.5%).¹⁶ By 2012, 21 California counties had obesity rates of 30.5% or more compared with none of the counties in 2001.^{2,16,17}

Figure 11. Percentage of Adults in California Who Are Obese by County, 2011-2012
CHIS



Notes: Obese is a body mass index ≥ 30 .

Table 11. Prevalence of Obesity Among Adults in California and by County, 2001 and 2011-2012 CHIS

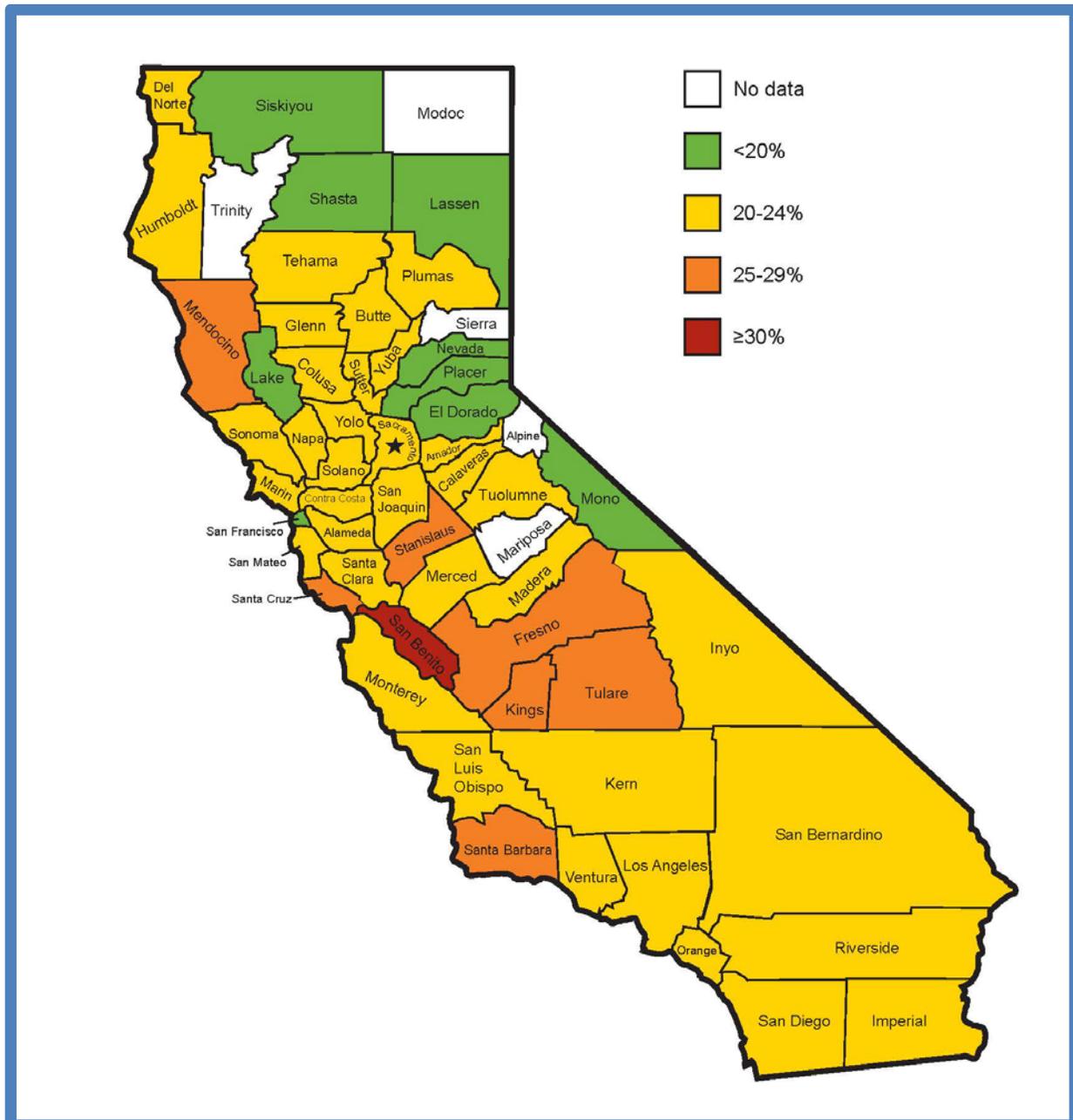
County	2001	2011-2012	
	% Obese	% Obese	Rank
Alameda	17.4	21.0	11
Butte	18.9	23.8	17
Contra Costa	20.4	24.0	18
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	22.7	31.4	32
El Dorado	18.3	22.9	15
Fresno	26.3	30.0	29
Humboldt	22.0	27.6	26
Imperial	29.0	41.7	44
Kern	25.6	33.2	34
Kings	27.1	36.6	40
Lake	26.1	26.4	23
Los Angeles	20.1	24.7	19
Madera	25.4	34.4	37
Marin	11.8	13.9	3
Mendocino	21.7	26.5	24
Merced	29.6	34.1	36
Monterey	25.3	25.1	20
Napa	17.7	28.9	28
Nevada	15.6	18.5	7
Orange	14.8	23.1	16
Placer	15.7	18.1	6
Riverside	20.9	25.9	22
Sacramento	21.8	28.0	27
San Benito	-	41.2	43
San Bernardino	24.9	33.2	35
San Diego	16.5	22.1	13
San Francisco	11.5	11.3	1
San Joaquin	25.6	34.7	38
San Luis Obispo	16.3	12.6	2
San Mateo	17.4	16.6	4
Santa Barbara	17.2	20.5	10
Santa Clara	15.5	19.3	9
Santa Cruz	15.2	27.1	25
Shasta	20.8	25.7	21
Solano	22.5	35.8	39
Sonoma	14.1	21.5	12
Stanislaus	24.8	30.1	31
Sutter	25.3	30.1	30
Tehama, Glenn, Colusa	24.3	38.2	42
Tulare	23.9	38.0	41
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	16.7	18.7	8
Ventura	17.5	22.7	14
Yolo	18.6	17.8	5
Yuba	26.1	32.2	33

Notes: Rank compares this county's rate to other counties or county clusters with a rank of 1 representing the lowest obesity rate.

Low-Income Children, 5 to 19 Years

Obesity varies significantly by county in California with 16% or fewer of the low-income school-age children living in Nevada, Mono, and Lassen Counties obese compared with greater than 30% in San Benito County (Table 12).⁴ Not a single county in California has an obesity rate among low-income children ages 5 to 19 years that meets the national *Healthy People 2020* target (14.5%).^{4,16}

Figure 12. Percentage of Low-Income School-Age Children in California Who Are Obese by County, 2010 PedNSS

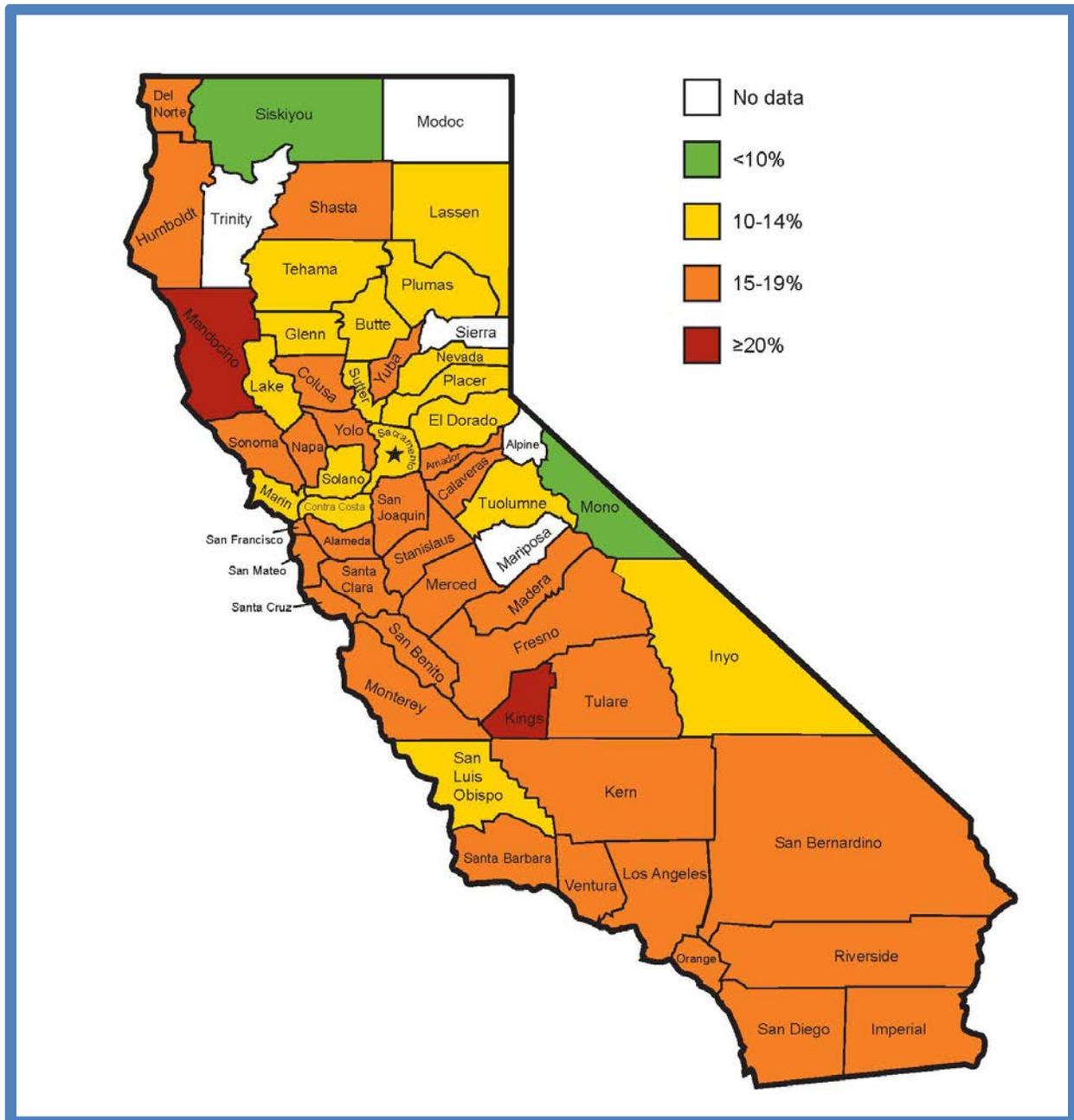


Notes: Obese is a body mass index $\geq 95^{\text{th}}$ percentile.

Low-Income Children, 2 to 4 Years

Obesity varies significantly by county in California with fewer than 10% of the low-income preschool children living in Mono and Siskiyou Counties obese compared with 20% or more in Kings and Mendocino Counties (Table 13).⁴ Only one county (Mono County) in California has an obesity rate that meets the national *Healthy People 2020* target (9.6%).^{4,16}

Figure 13. Percentage of Low-Income Preschool Children in California Who Are Obese by County, 2010 PedNSS



Notes: Obese is a body mass index $\geq 95^{\text{th}}$ percentile.

Table 12. Prevalence of Obesity Among Low-Income Children in California and by Age and County, 2010 PedNSS

County	2-4 Years		5-19 Years	
	% Obese	Rank	% Obese	Rank
Alameda	17.4	39	22.8	24
Alpine	*	*	*	*
Amador	17.7	42	20.1	10
Butte	14.1	13	21.0	11
Calaveras	17.0	37	24.4	41
Colusa	15.1	20	23.8	34
Contra Costa	14.8	18	23.8	35
Del Norte	16.5	32	21.1	12
El Dorado	11.8	5	19.5	8
Fresno	18.5	45	25.7	48
Glenn	14.5	14	24.8	42
Humboldt	16.0	26	22.1	20
Imperial	15.7	25	23.4	30
Inyo	14.7	17	21.2	14
Kern	16.3	30	24.8	43
Kings	20.5	52	25.7	49
Lake	14.5	15	19.6	9
Lassen	12.5	8	16.0	3
Los Angeles	18.9	48	23.2	27
Madera	16.1	27	24.3	40
Marin	13.7	9	24.0	36
Mariposa	*	*	*	*
Mendocino	20.6	53	25.8	50
Merced	18.6	46	24.0	37
Modoc	*	*	*	*
Mono	6.4	1	15.7	2
Monterey	19.3	51	24.2	39
Napa	18.6	47	24.9	45
Nevada	10.3	3	15.6	1
Orange	16.9	36	21.1	13
Placer	11.8	6	17.3	4
Plumas	12.0	7	22.3	21
Riverside	16.2	29	22.0	18
Sacramento	13.7	10	21.2	15
San Benito	19.1	49	32.3	53
San Bernardino	15.4	21	22.0	19
San Diego	16.5	33	23.6	32
San Francisco	15.6	23	19.0	6
San Joaquin	16.8	35	23.3	29
San Luis Obispo	13.8	12	23.1	25
San Mateo	17.9	43	23.6	33
Santa Barbara	17.6	40	25.4	47
Santa Clara	17.6	41	23.1	26
Santa Cruz	16.7	34	25.3	46
Shasta	16.1	28	19.3	7
Sierra	*	*	*	*
Siskiyou	9.7	2	18.1	5
Solano	14.9	19	24.0	38
Sonoma	15.6	24	23.5	31
Stanislaus	17.1	38	25.9	51
Sutter	14.6	16	22.7	23
Tehama	13.7	11	21.5	16
Trinity	*	*	*	*
Tulare	18.1	44	26.8	52
Tuolumne	11.4	4	21.7	17
Ventura	19.1	50	24.8	44
Yolo	15.4	22	23.2	28
Yuba	16.3	31	22.5	22

Notes: Rank compares this county's rate to other counties with a rank of 1 representing the lowest obesity rate. *Percentages and ranks are not calculated when N < 100 records.

Prevalence of Risk Factors for Obesity

The following section examines the current prevalence measures for breastfeeding, dietary behaviors, physical activity, and screen time to evaluate California’s progress toward meeting the State objectives for obesity prevention:

- Increase breastfeeding initiation, duration, and exclusivity;
- Increase consumption of fruits and vegetables;
- Decrease consumption of sugar-sweetened beverages;
- Decrease consumption of high energy dense foods (foods that are high in calories but have low nutritional value);
- Increase physical activity; and
- Decrease television viewing time.²⁰

These markers reflect the current evidence-based recommendations from the American Academy of Pediatrics, the *2010 Dietary Guidelines for Americans*, the *Healthy People 2020* objectives, and the *2008 Physical Activity Guidelines for Americans*.^{16,22,24,35}

Breastfeeding

Breastfeeding has been shown to have a protective effect against obesity, with longer durations of breastfeeding associated with additional reductions in obesity.²¹ The American Academy of Pediatrics recommends that babies are breastfed exclusively for about six months and continue to be breastfed for a year or longer with complementary foods.²² In California, while 91.6% of infants are ever breastfed, and 45.3% are breastfed through the first year of life, only 27.4% of infants reach six months of exclusive breastfeeding.²³

Ever Breastfed	91.6 %
Breastfed for at least 6 months	71.3%
Exclusively Breastfed for at least 6 months	27.4%
Breastfed through the first year	45.3%
Notes: <i>Breastfeeding Report Card—United States 2013</i> ; National Immunization Survey, Provisional Data, 2010 births.	

Dietary Behaviors

Fruits and Vegetable Consumption

The *2010 Dietary Guidelines for Americans* recommend that individuals increase their fruit and vegetable intake to promote nutrient adequacy, disease prevention, and overall good health.²⁴ Evidence suggests that increased intake of vegetables and/or fruits may also protect against weight gain.²⁵⁻²⁹ In California, consumption of five or more fruits and vegetables decreases with age. Only 59.6% of California children age 2 to 5 years and 47.6% age 6 to 11 years report consuming five or more servings of fruits and vegetables per day.² The prevalence drops to one-quarter among adolescents (25.8%) and adults (23.4%) in California who report that they eat five or more fruits and vegetables per day.^{1,2}

Age	Five or More Fruits and Vegetables per Day (%)^a	Two or More Sugar-Sweetened Beverages per Day (%)^b	Ate Fast Food in the Past Week (%)
2-5 ^c	59.6	4.4	64.7
6-11 ^c	47.6	7.5	69.6
12-17 ^c	25.8	29.5	76.4
18+ ^d	23.4	15.8	63.6

Notes: ^a Children and adolescents report in servings; adults report in times. ^b Children and adolescents report in glasses; adults report in times. ^c 2011-12 California Health Interview Survey. ^d 2012 Behavioral Risk Factor Survey, 2011-12 California Health Interview Survey (fast food).

Sugar-Sweetened Beverages

Nearly half of the added sugars consumed by Americans come from sugar-sweetened beverages.²⁴ Children and adolescents who consume more sugar-sweetened beverages have higher body weight compared to those who drink less, and some evidence also supports this relationship in adults.³⁰⁻³³ Emerging from this is the recommendation to reduce consumption of sugar-sweetened beverages.²⁴ The latest data on sugar-sweetened beverage consumption indicate that very few (4.4%) young children (2 to 5 years) in California drink two or more glasses per day.² Sugar-sweetened beverage consumption increases from young childhood through adolescence with the proportion drinking two or more sugar-sweetened beverages at 7.5% among older children (6 to 11 years), 29.5% in adolescents (12 to 17 years), and 15.8% of adults.^{1,2}

Fast Food

Another objective of the *Healthy People 2020* is to reduce the consumption of calories from solid fats and added sugars.¹⁶ While high calorie, low nutrient foods come from many sources, fast foods are often more calorie dense and less nutritious than meals cooked at home.^{57,58} Individuals who eat fast food are at increased risk of weight gain and obesity.³⁴ Therefore, decreasing the consumption of fast foods among Californians can improve diet quality and reduce caloric intake.^{57,58} Approximately two-thirds of California's adults (63.6%), young children (64.7%), and older children (69.6%) report eating fast food in the past week.² Adolescents are more likely to eat fast food than other age groups in the State with over three-quarters (76.4%) of adolescents reporting that they ate fast food during the past week.²

Physical Activity and Screen Time

The *2008 Physical Activity Guidelines for Americans* provide physical activity recommendations to help individuals achieve and maintain a healthy body weight (Table 15).³⁵ There is strong evidence that regular physical activity helps people maintain a healthy weight and prevent excess weight gain.^{35,36} Although close to half (45.6%) of young children meet the physical activity recommendation, the prevalence declines through adolescence.² Only 30.4% of older children and 16.1% of adolescents engage in at least 60 minutes of physical activity every day per week.² Adults fare slightly better than adolescents, with one-quarter (25.3%) achieving the guideline.¹

Age	Physical Activity Guideline	Met Guideline (%)
2-5 ^a	60+ minutes per day	45.6
6-11 ^a	60+ minutes per day	30.4
12-17 ^a	60+ minutes per day	16.1
18+ ^b	150+ minutes of moderate-intensity or 75+ minutes a vigorous-intensity aerobic activity (or an equivalent combination) per week, along with muscle strengthening exercise 2+ times per week	25.3

Notes: For adults, one minute of vigorous-intensity physical activity counts as two minutes of moderate-intensity physical activity toward meeting the guideline. ^a 2011-12 California Health Interview Survey. ^b 2012 Behavioral Risk Factor Survey.

The American Academy of Pediatrics and the *2010 Dietary Guidelines for Americans* provide a guideline for limiting screen time among children (no more than 2 hours a day).^{24,59} Strong evidence shows that more screen time, particularly television viewing, is associated with poor diet quality and obesity in children, adolescents, and adults.³⁷⁻³⁹ However, as Californians age they spend more time watching television. The prevalence of limited television viewing (no more than 2 hours a day) is highest among young children 3 to 5 years (63.4%) and lowest in adults (25.3%).^{40,41} Approximately half of California's older children and adolescents (56.8% and 48.4%, respectively) report spending two or fewer hours watching television per day.⁴⁰

Age	Screen Time Recommendation	Two or Fewer Hours Watching Television (%)
2-5 ^a	No more than 2 hours a day	63.4
6-11 ^a	No more than 2 hours a day	56.8
12-17 ^a	No more than 2 hours a day	48.4
18+ ^b	No guideline	25.3

Notes: Child and adolescent data are for weekends only; children age 2 not included in analysis. ^a 2009 California Health Interview Survey. ^b 2011 California Dietary Practices Survey.

Health Consequences and Costs of Obesity

Obesity increases the risk of many health conditions (Table 17) and contributes to some of the leading causes of preventable death, posing a major public health challenge.^{18,19} The costs of obesity are substantial and are likely to increase significantly over time with the rising rates of obesity and related health conditions (Figure 14).^{1,2,4} Obesity-related health conditions in adults have an estimated cost of \$190.2 billion annually, representing one-fifth of the total annual medical cost in the United States.⁶⁰ Individuals who are obese have medical costs that are \$1,429 higher per year, or roughly 42% greater, than the costs of those with normal body weight.⁴⁵

Table 17. Obesity-Related Health Conditions ¹⁸
Coronary heart disease, stroke, and high blood pressure
Type 2 diabetes
Cancers, such as endometrial, breast, and colon cancer
High total cholesterol or high levels of triglycerides
Liver and gallbladder disease
Sleep apnea and respiratory problems
Degeneration of cartilage and underlying bone within a joint
Reproductive health complications such as infertility
Mental health conditions

California has the highest obesity-related costs in the United States, estimated at \$15.2 billion with 41.5% of these costs financed through Medicare and Medi-Cal* (22.5% and 19.0%, respectively).⁴² Utilizing California Office of Statewide Health Planning and Development (OSHPD) data, hospital charges for obesity-related conditions and other consequences have increased 39.7% since 2005 (Figure 14). Obesity-related cardiovascular disease (CVD) accounts for the largest proportion of hospital charges, twice the obesity-related cost associated with cancer and diabetes combined (Figure 14). As shown in Table 18, annually there are nearly a half million hospital admissions due to obesity-related conditions in the State, accounting for \$33.8 billion in hospital charges. Furthermore, \$5.8 billion (17.2%) of these charges are paid by California's Medi-Cal system (Table 19).

* In California, Medicaid is known as Medi-Cal.

Figure 14. Obesity-Related Hospital Charges in California, Total and by Conditions, 2005-2012 OSHPD

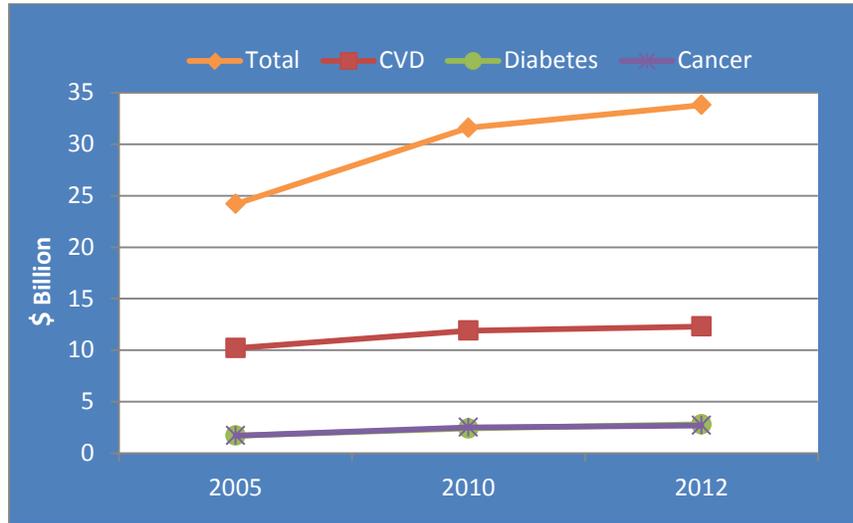


Table 18. Obesity-Related Inpatient Hospital Charges in California, Total and by Conditions, 2012 OSHPD

Obesity Associated Conditions	Number of Admissions	Hospital Charges, Billion
Cardiovascular disease	150,660	\$12.3
Diabetes	55,108	\$2.8
Cancer	31,225	\$2.7
Total	429,493	\$33.8

Notes: This table was generated using a list of obesity-related ICD 9 codes published elsewhere.⁶¹

Table 19. Medi-Cal Obesity-Related Inpatient Hospital Charges in California by Conditions and Percent of All Payers, 2012 OSHPD

Obesity Associated Conditions	Number of Admissions (%)	Hospital Charges, Billion (%)
Cardiovascular disease	19,729 (13.1%)	\$1.9 (15.4%)
Diabetes	13,873 (25.2%)	\$0.7 (25.0%)
Cancer	4,166 (13.3%)	\$0.4 (14.8%)
Total	63,097 (14.7%)	\$5.8 (17.2%)

Notes: This table was generated using a list of obesity-related ICD 9 codes published elsewhere.⁶¹

The costs of obesity in California are substantial and will rise if obesity rates are not reduced. If the increasing rates of obesity continue on the present course, California could see a 15.7% growth in obesity-related health care costs and substantial increases in the incidence of diabetes (10,078), cancer (3,320), coronary heart disease and stroke (22,365), hypertension (22,360), and arthritis (14,783) per 100,000 in population by 2030.⁴⁴ It is also estimated that if adult BMI was reduced by 5%, California could save \$81.7 billion in obesity-related health care costs by 2030.⁴⁴

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Nutrition Education and Obesity Prevention Branch
Policy, System, and Environment (PSE) Evaluation Project
Statewide Aggregated Data
FFY 2014

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Policy, System, and Environment Change Evaluation

In FFY 2014 the Research and Evaluation Section introduced a strategy for evaluation of policy, system, and environment change using the RE-AIM framework (reach, effectiveness, adoption, implementation, maintenance).

1. Evaluation tools were created
 - a. RE-AIM indicator summary sheets for each of the NEOP PSE priority strategies that are aligned with the Western Region SNAP-Ed Evaluation Framework. To the extent possible, identified core indicators will be collected by all local health departments.
 - b. Evaluation plan template for local health departments to document which RE-AIM indicators they will measure and the method for measuring each
 - c. Annual PSE evaluation report form developed in Microsoft Access. This report covers each of the NEOP priority PSE strategies and will be completed annually by LHDs

2. Training and technical assistance was provided
 - a. Training webinars
 - i. Introduction to RE-AIM webinar for local health department staff and their subcontractors, 75 attendees, November 2013
 - ii. PSE reporting webinar for local health department staff and their subcontractors, 118 attendees in two sessions, September 2014
 - b. One-on-one technical assistance
 - i. RES staff provided technical assistance to local health departments and their subcontractors on PSE evaluation and development of a PSE/RE-AIM evaluation plan, including recommendations for methods and tools for measuring RE-AIM indicators
 - c. In-person trainings
 - i. Two in-person trainings at the Local Implementing Agency forum; PSE 101 and PSE Evaluation
 - d. PSE webinars/teleconferences
 - i. Two webinars for each of the 12 NEOP priority PSE strategies. Presented introduction to RE-AIM and the PSE evaluation strategy, 1,420 attendees, spring and summer, 2014

Following is a list of the NEOPB priority PSE strategies and the local health departments (LHD) that reported for each strategy. Following the list is an aggregated statewide summary of WRO SNAP-Ed Evaluation Framework priority indicators, changes adopted, and level of implementation for each NEOPB PSE strategy in SNAP-Ed California.

The summaries presented below represent the type of information that is available to describe WRO SNAP-Ed Evaluation Framework priority indicators as reported by LHDs using the PSE Reporting tool. The data here represent the information as entered by LHDs in the PSE Report via a Microsoft Access form. As such, these data reflect preliminary results and will be cleaned and verified before they are disseminated.

PSE Reports by PSE Strategy and Local Health Department FFY2014

NEOPB PSE Strategy	LHDs Reporting for FFY2014	
1. Early childcare	Alameda Los Angeles Orange Stanislaus	
2. School wellness policies	Alameda Fresno Lake Los Angeles Madera Monterey Orange San Luis Obispo San Mateo Solano Stanislaus	
2a. School wellness policies - Water	Humboldt Imperial Los Angeles Pasadena Santa Cruz Solano	
3. Farm to school	Fresno Ventura	
4. Joint use agreements	Los Angeles	
5. Healthy retail/ Retail recognition	Butte Colusa/Glenn Fresno Imperial Kern Lake Los Angeles Marin Pasadena Riverside	Sacramento San Benito San Diego Santa Barbara Sonoma Sutter Tehama Ventura Yolo

NEOPB PSE Strategy	LHDs Reporting for FFY2014	
6. Restaurants/mobile vending	Los Angeles Santa Cruz	
7. Structured physical activity	Los Angeles Sutter	
8. Community/school gardens	Humboldt Long Beach Los Angeles Merced Mono Placer Sacramento	San Bernardino San Diego San Mateo Shasta Sutter Ventura Yolo Yuba
9. Worksite	Fresno Los Angeles Orange Riverside	
10. Safe Routes to School/ Active transport	Butte Contra Costa Los Angeles Orange Riverside San Diego San Joaquin Santa Cruz	
11. Farmers' markets	Berkeley Del Norte Los Angeles Monterey Nevada San Luis Obispo Sonoma Sutter Tulare Yuba	
12. Healthy food and beverage standards	Alameda Los Angeles Madera Riverside San Bernardino San Mateo Santa Clara	

Early Childcare

4 LHDs

Reach: 3,397 children in 46 qualifying childcare centers

SNAP-Ed reach: 2,578 children in 46 childcare centers

Number of sites

55 total sites

46 sites with PSE changes

9 sites were identified but no PSE changes in FFY14

ST5: Number of local champions

258 total local champions

128 staff and service providers

121 leadership and decision makers

9 other community members

ST6: Number of organizational task forces and other partners

1 task force

3 other partners

MT4: Nutrition supports adopted

Type of change	Number of sites
<i>Environmental changes</i>	
Changes in menus	9
Edible gardens	3
Improvements in free water taste, quality, smell, or temperature	1
Rules on use of foods as rewards	10
Foods served in classrooms	19
<i>Procurement changes</i>	
Changes in food purchasing specifications	1
Increase in fruits and vegetables	6
Increase in 100% whole grains	5
Increase in low fat dairy	1
Increase in lean proteins	4
Lower sugar levels	1

MT5: Physical Activity supports adopted

Type of change**Number of sites***Program or practice changes*

New or improved access to structured physical activity programs

8

LT9 and LT10 Nutrition and Physical Activity Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	1	23	8	14

School Wellness 12 LHDs

Reach: 86,140 children in 35 districts and schools

SNAP-Ed reach: 65,272 children in 36 districts/schools with nutrition supports; 63,377 in 30 districts/schools with PA supports

Number of sites

53 sites

31 reporting at the district level (424 schools with those districts)

6 reporting at this district level but with a subset of schools (20 schools within those districts)

16 reporting at the school level

ST5: Number of local champions

577 local champions

ST6: Number of organizational task forces and other partners

25 task forces

22 other partners

MT4: Nutrition supports adopted

Type of change	Number of sites
<i>Environmental changes</i>	
Improvements in hours of cafeteria operations	2
Improvements in time allotted for meals	3
Improvements in layout or display of food	7
Changes in menus	6
Point of purchase/distribution prompts	4
Edible gardens	8
Improvements in free water taste, quality, smell, or temperature	6
Rules on use of foods as rewards	8
Rules on foods served in classrooms	5
<i>Procurement changes</i>	
Change in food purchasing specifications	5
Change in vendor agreements	3
Farm-to-table	3
Increased availability of fruits and vegetables	8
Increased availability of 100% whole grains	4
Increased availability of low-fat dairy	2
Increased availability of lean protein	2
Lower sodium levels	3

Lower sugar levels	5
Lower sold fats	4
<i>Food preparation changes</i>	
Enhanced training on menu design and healthy cooking techniques	2
Reduced portion sizes	1
Use of standardized recipes	1

MT5: Physical Activity supports adopted

Type of change	Number of sites
<i>Environmental changes</i>	
Improvements in access to safe walking or bicycling paths/SRTS	3
Signage and prompts for use of walking and bicycling paths – 1	1
<i>Program or practice changes</i>	
New or increased use of school facilities during non-school hours for recreation/joint use	1
Increase in school days spent in physical education	4
Improvements in time spent in daily recess	4
New or improved access to structured physical activity programs	7

MT10: Education

Type of change	Number of sites
Low-income schools that require K-12 students to be physically active for at least 50% of time spent in PE	12
Low-income schools that integrate nutrition education into K-12 standards	22

LT9 and LT10 Nutrition and Physical Activity Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	2	4	9	10

School Wellness – Water Stations

6 LHDs

Reach: 13,185 children

SNAP-Ed reach: 11,322 children

Number of sites

23 schools; 1 city

7 sites were asked not to begin implementation due to arsenic in water

3 sites have purchased hydration stations but they were not yet installed

ST5: Number of local champions

200 local champions

ST6: Number of organizational task forces and other partners

7 task forces

8 other partners

MT4: Nutrition supports adopted

Type of change	Number of sites
Improvements in free water taste, quality, smell, or temperature	11
Other changes	
Improvements in access to free water	11
Improvements in layout or presentation of water provisions	4
Water consumption prompts and promotion	12

LT9 Nutrition Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
		1	3	9

Farm-to-School

2 LHDs

Reach: Not reported

Number of sites

8 identified school districts but have not yet implemented (anticipated reach = 58,857)

1 school district implemented farm-to-school/procured locally sourced food

ST5: Number of local champions

3 local champions

ST6: Number of organizational task forces and other partners

3 partners

MT4: Nutrition supports adopted

Type of change	Number of districts*
<i>Environmental changes</i>	
Improvements in layout of food	1
Edible gardens	1
<i>Procurement changes</i>	
Changes in food purchasing specification	1
Farm-to-table	1
Increase in fruits and vegetables	1
MT10: Education	
Integrated nutrition education into K-12 academic standards	1

*All changes occurred in one district

LT9 Nutrition Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
		1		

Joint Use

1 LHD

Number of sites

1 school

ST5: Number of local champions

13 local champions

ST6: Number of organizational task forces and other partners

2 partners

MT5: Physical Activity Supports Adopted

Type of change

Number of sites

Program or practices changes

New or improved access to structured PA programs

1

Other changes

Staffing for maintenance and operations at joint use sites

1

LT10 Physical Activity Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
		1		

Healthy Retail

19 LHDs

Reach: 27,973 per day in 56 sites

SNAP-Ed reach: 13,887 per day in 52 sites

Number of sites

71 sites total -70 existing stores; 1 store to be established

ST5: Number of local champions

358 local champions

ST6: Number of organizational task forces and other partners

16 task forces

49 other partners

MT4: Nutrition supports adopted

Type of change	Number of sites
<i>Environmental changes</i>	
Improvements in layout or display of food	25
Point of purchase distribution prompts	17
<i>Procurement changes</i>	
Change in food purchasing specifications	2
Change in vendor agreements	3
Increased availability of fruits and vegetables	15
Increased availability of lean protein	1
Lower sodium levels	1
Lower sugar levels	1
Lower solid fats	1
MT7: Food industry	
Procure locally sourced food	9
Other changes	
Display of recognition decal	2
Increase in healthy interior or exterior merchandizing	32
Decrease in unhealthy interior or exterior merchandizing	9
Improved quality of fruits or vegetables	10
Improved price of fruits and vegetables	5

LT9 Nutrition Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	22	11	12	3

Restaurants/Mobile Vending

2 LHDs

Reach: not reported

SNAP-Ed reach: not reported

Number of sites

2 sites

ST5: Number of local champions

11 local champions

ST6: Number of organizational task forces and other partners

1 task force

1 other partner

MT4: Nutrition supports adopted

No changes reported

LT9 Nutrition Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

No changes implemented in FFY14

Structured Physical Activity

2 LHDs

Reach: 1,881 in 5 sites

SNAP-Ed reach: 1,619 in 5 sites

Number of sites

8 sites

ST5: Number of local champions

72 local champions

ST6: Number of organizational task forces and other partners

19 other partners

MT5: Physical Activity Supports Adopted

Type of change

Number of sites

Program or practice changes

New or improved access to structured PA programs

5

LT10 Physical Activity Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	3	2	1	

Community/School Gardens

15 LHDs

Reach: 1,372 people worked in the gardens
8,269 additional people learned in the gardens
1,676 additional people ate from the garden

SNAP-Ed reach: 8,564 SNAP-Ed eligible people worked in, learned in, or ate from the gardens in fiscal year

Number of sites

66 gardens

37 established an edible garden

10 changed food procurement

18 had not yet implemented changes

ST5: Number of local champions

691 local champions

ST6: Number of organizational task forces and other partners

22 task forces

99 other partners

LT9 Nutrition Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	24	9	11	4

Worksite

4 LHDs

Reach: 5,860

SNAP-Ed reach: 4,475

Number of sites

52 worksites

ST5: Number of local champions

152 local champions

ST6: Number of organizational task forces and other partners

6 task forces

5 individuals at 2 partner organizations

MT4: Nutrition Supports Adopted

Type of change	Number of worksites
<i>Environmental changes</i>	
Change in menus	
Improvements in free water taste, quality, smell, or temperature	1
Rules on use of foods served in meetings	19
<i>Procurement changes</i>	
Change in vendor agreement	6

MT5: Physical Activity Supports Adopted

Type of change	Number of worksites
Improvements in access to safe walking or bicycling paths	1

Other changes:

Type of change	Number of worksites
Wellness committee established	26
Healthy vending policies	1
Improvements to onsite gym or facility	2

LT9 and LT10 Nutrition and Physical Activity Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	3	8	41	

Safe Routes to School

8 LHDs

Reach: 4,249 in 8 sites

SNAP-Ed reach: 3,694 in 8 sites

Number of sites

21 sites

ST5: Number of local champions

360 local champions in 10 sites

ST6: Number of organizational task forces and other partners

11 task forces in 9 sites

34 other partners in 11 sites

MT5: Physical Activity Supports Adopted

Type of changes

Number of sites

Environmental changes

Improvements in access to safe walking or bicycling paths/SRTS	4
Signage and prompts for use of walking and bicycling paths	1

MT11: Community Design and Safety

Type of changes

Number of sites

Improved access to trails, greenways, or sidewalks	2
Improved signage for trails, greenways, or sidewalks	2
Improved lighting for trails, greenways, or sidewalks	1

LT10 Physical Activity Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	1	2	3	1

Farmers' Markets

10 LHDs

Reach: Estimated average of 500 shoppers per day (range from 36 to 2500) in 16 markets; estimated average of 330 SNAP-Ed eligible shoppers per day (range from 3 to 2250) in 15 markets

ST5 Local Champions

184 local champions

ST6 Partnerships

10 task forces

29 other partners

MT9 Agriculture

PSEs at 22 farmers' markets in 8 counties

4 farmers' markets were established

2 farmers' markets established and EBT acceptance established

1 farmers' market established and bonus incentive program established

1 farmers' market established, EBT acceptance established, bonus incentive program established

8 EBT acceptance established at farmers' markets

7 bonus incentive programs established at farmers' markets

3 farmers' markets in process, not yet open

LT9 Nutrition Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	7	6	7	1

Healthy Food and Beverage Standards

7 LHDs

Reach: 252,198 in 30 sites, including one school district (reach = 149,058) – reported annual reach; 9,615 in 6 additional sites were reported in daily, monthly, or semi-annual periods.

SNAP-Ed reach: 189,258 in 30 sites, including one school district (reach = 137,282) – reported annual reach; 6815 in 6 additional sites were reported in daily, monthly, or semi-annual periods.

Number of sites

- 31 individual sites
- 5 cities (56 sites)
- 8 counties (8 sites)
- 3 organizations (17 sites)

ST5: Number of local champions

216 local champions

ST6: Number of organizational task forces and other partners

- 17 task forces
- 37 other partners

New healthy food and beverage standards were adopted or amended in a total of 92 sites

Type of change	Number of sites
<i>Environmental changes</i>	
Improvements in layout or display of food	4
Point of purchase distribution prompts	1
<i>Procurement changes</i>	
change in food purchasing specifications	5
Change in vendor agreements	3
Increased availability of fruits and vegetables	5
Increased availability of 100% whole grains	2
increased availability of low fat dairy	2
Increased availability of lean protein	2
Lower sodium levels	3
Lower sugar levels	2
Lower sold fats	3
<i>Food preparation changes</i>	
Enhanced training on menu design and healthy cooking techniques	5
Reduced portion sizes	2
Use of standardized recipes	1

Other changes

Display of recognition decal	1
Increase in healthy interior or exterior merchandizing	1
Decrease in unhealthy interior or exterior merchandizing	2

LT9 Nutrition Supports Programs - Implementation

Aggregate number of settings that report a multi-component initiative with one or more PSE changes and 1) evidence-based education, 2) marketing, 3) parent/community involvement, 4) staff training on continuous program and policy implementation

PSE alone	PSE + 1 component	PSE + 2 components	PSE + 3 components	PSE + 4 components
	6	9	17	1

Number of Sites by Category of Venue

NEOPB PSE Strategy	Eat	Live	Learn	Work	Play	Shop
Early Childcare			55 schools/ childcare centers			
School Wellness Policies			29 schools 23 district offices			
School Wellness Policy- Water Stations		1 city	23 schools			
Farm to School			9 district offices			
Joint Use Agreements			1 school			
Healthy Retail						70 stores
Restaurant and Mobile Vending	2 vendors					
Structured Physical Activity		1 public housing 5 churches	2 schools			
Community/School Gardens		1 rehab center 4 apt complexes 18 churches 12 community sites 4 community centers	25 schools		1 park	
Worksite				52 worksites		
Safe Routes to Schools		2 neighborhoods 1 city 1 community center	14 schools		3 parks/ public land	
Farmers' Markets						16 markets 4 produce stands 1 business facility 1 public land
Healthy Food and Beverage Standards	5 emergency food	28 churches 2 community centers 4 community-based organizations 3 WIC programs 2 cities	1 school		1 park	1 store

Supporting a Healthy Lifestyle Among Low-Income Children: Key Findings from the 2011 California Children's Healthy Eating and Exercise Practices Survey

The Nutrition Education and Obesity Prevention Branch (NEOPB) strives to create innovative partnerships that empower low-income Californians with the goal of preventing obesity and related chronic diseases through increased consumption of healthy foods, decreased consumption of less healthy foods, increased opportunities for physical activity, and support for food security.



In 2011, nearly half (46.0%) of California's low-income children* were classified as overweight or obese, with over a quarter of children classified as obese (25.2%).[†] One major objective of the *Healthy People 2020 Objectives (HP2020)* that aligns with NEOPB is to reduce the prevalence of obesity among children aged 6 to 11 years (*HP2020* target: 15.7%).¹ To reach this target, obesity among low-income children in California will need to be reduced by nearly 40%.

Progress related to NEOPB's goals is measured through surveys that track self-reported dietary behaviors and physical activity while also identifying opportunities and challenges that low-income Californians face. This information is used to develop or refine interventions that promote healthy lifestyles.

The California Children's Healthy Eating and Exercise Practices Survey (CalCHEEPS) is one of three surveys implemented by the NEOPB. Conducted biennially, it uses a telephone-based 24-hour recall to monitor diet and physical activity trends among low-income California children (9-11 years) and evaluate their progress toward meeting the *2010 Dietary Guidelines for Americans (2010 DGA)*, the *HP2020*, and the *2008 Physical Activity Guidelines for Americans*.¹⁻³ In 2011, the survey sample was randomly selected from a list of households receiving CalFresh throughout the state. Key findings from the 2011 survey for California's low-income children (n=334) are summarized below. Only comparisons that are significantly different ($p < 0.05$) are presented. For more information about the survey questions and methodology, see the NEOPB statewide survey website: www.cdph.ca.gov/programs/cpns/Pages/CaliforniaStatewideSurveys.aspx#1.

* Low-income is defined as living in a household receiving CalFresh.

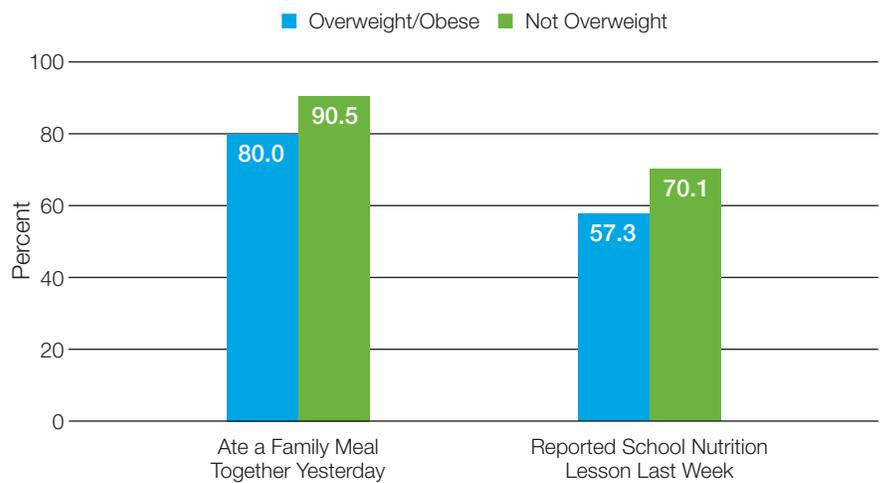
[†] Overweight among children is defined as a Body Mass Index (BMI) at or above the 85th percentile, but below the 95th percentile. Obesity is represented by a BMI at the 95th percentile or higher.



Finding 1 **Family meals and nutrition lessons in school may support healthy weight among low-income children.**

School and home environments both have roles in encouraging healthy eating practices among children. In adolescents, studies have shown the effectiveness of behavior-based nutrition curricula in schools, and eating dinner as a family are associated with healthy dietary intake, including eating more fruits and vegetables.^{4,5} Overweight and obese children from low-income homes were less likely to report family meals and school nutrition lessons than children who were not overweight (Figure 1).

Figure 1. Low-Income Overweight and Obese Children Were Less Likely To Report Family Meals and School Nutrition Lessons



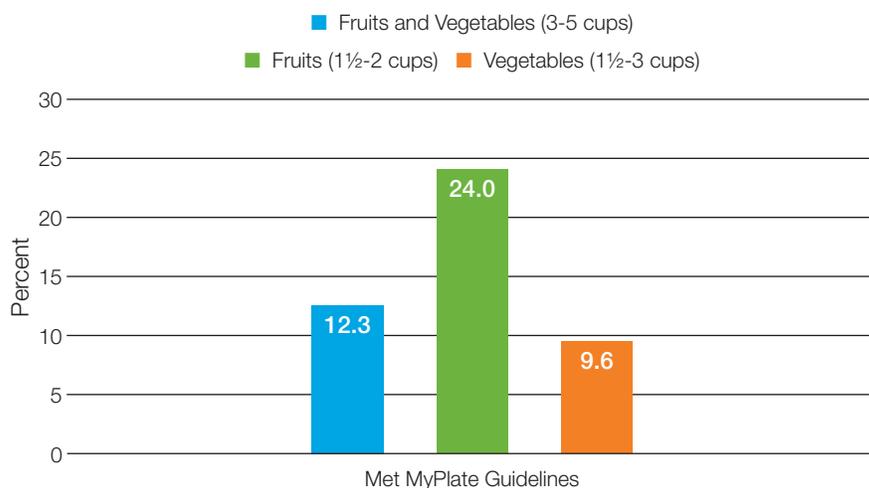
Potential promising approaches to support healthy weight among low-income children might be to include nutrition education at all grade levels in school and promote family meals.

Finding 2

Low-income children eat too few fruits and vegetables.

Fruit and vegetable consumption promotes nutrient adequacy, disease prevention, overall good health, and may also protect against weight gain.^{2,6-8} In 2011, intake among California's low-income children was 1.7 cups per day, below the amount recommended by the *2010 DGA* and *NEOPB* (3-5 cups of fruits and vegetables each day, depending upon age, gender, and activity level).² Moreover, only one-quarter (24.0%) of low-income children met the *DGA MyPlate* guideline for fruit; while one in ten (9.6%) reported eating the recommended number of cups of vegetables (Figure 2).

Figure 2. Most Low-Income Children Fell Short of the MyPlate Guidelines for Fruits and Vegetables





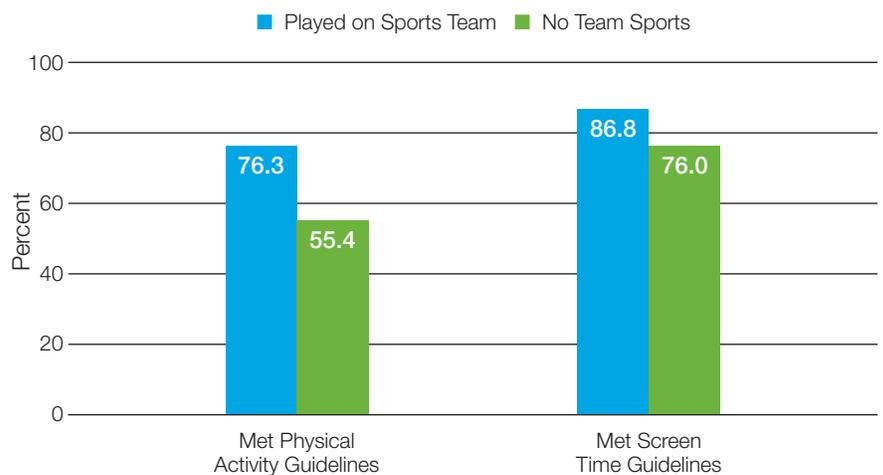
Finding 3

Playing on sports teams helps low-income children meet physical activity and screen time guidelines.

In line with the *2008 Physical Activity Guidelines for Americans*, the NEOPB recommends that children engage in 60 minutes or more of physical activity daily.³ However, less than two-thirds (63.7%) of California’s low-income children reported physical activity at the recommended level in 2011.

California children from low-income homes who played on a sports team were more likely to meet the physical activity (60 minutes or more per day) and screen time (no more than 2 hours per day) recommendations than those not participating in team sports (Figure 3).

Figure 3. Low-Income Children Who Played on Sports Teams Were More Likely to Meet the Physical Activity and Screen Time Guidelines



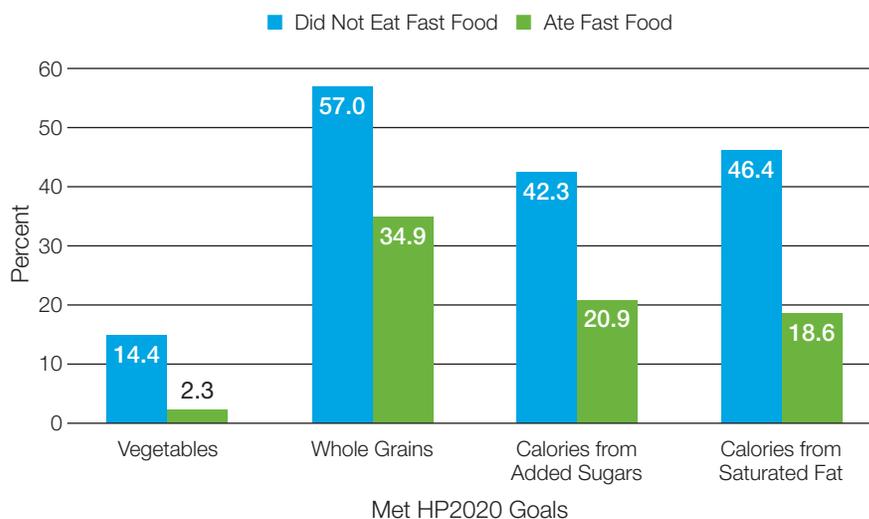
Thus, facilitating increased opportunities for physical activity may encourage the development of healthy and active lifestyles among low-income children in California.

Finding 4

Avoiding fast foods improves diet quality and reduces caloric intake among low-income children.

Decreasing the consumption of fast foods can improve diet quality and reduce caloric intake.^{9,10} Confirming this, children from low-income households in California who did not eat fast food on the prior day were more likely to meet the *HP2020* objectives for vegetables, whole grains, added sugars, and saturated fat in 2011 than those who did not (Figure 4).¹

Figure 4. Low-Income Children Who Ate Fast-Food Were Less Likely to Meet *Healthy People 2020* Targets for Diet Quality



Fast food consumption was also associated with higher total caloric intake among low-income children. Low-income children who reported eating fast food on the prior day consumed over 416 more calories per day compared to those that did not eat fast food (Figure 5).

Figure 5. Low-Income Children Who Ate Fast Food Consumed Over 400 More Calories per Day



The *2010 DGA* provides suggestions to families for achieving a healthy diet, including: choosing smaller portions or sharing a meal when dining out, checking the calories in foods and selecting lower calorie options, cooking and eating more meals at home, and eating a nutrient-dense breakfast.²

Social Norms and Environment

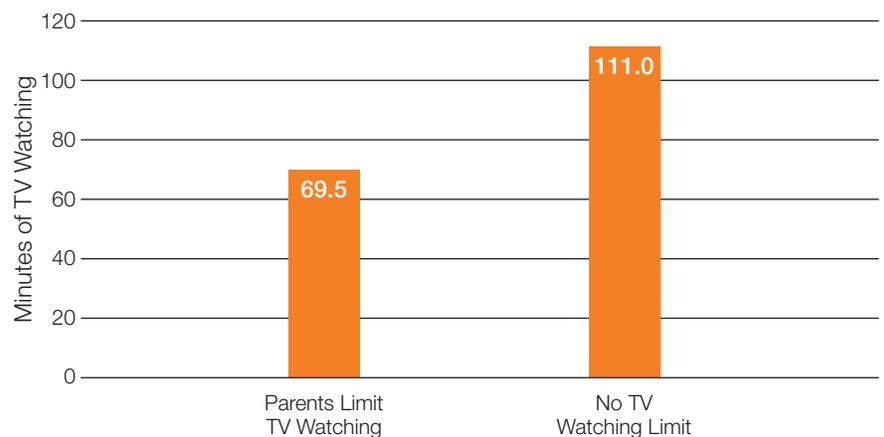
A key priority of the NEOPB is to facilitate changes to policies, systems, and environments to increase support of healthy eating, regular physical activity, and reduced screen time as the norms for California children. Family norms, household rules, nutrition education, and home and classroom environments can support or inhibit these health behaviors among low-income children in California.

Finding 5 Household rules help reduce screen time among low-income children.

Strong evidence shows that more screen time, particularly television viewing, is associated with poor diet quality and obesity in children, adolescents, and adults.^{11,12} The 2010 DGA guideline for screen time among children is no more than 2 hours a day.² In 2011, 80.6% of low-income children met the guideline for television viewing (no more than 2 hours a day); however, this is still below the HP2020 target of 86.8%.¹

When asked “Do your parents limit the amount of time you spend watching television or playing video games to less than two hours per day?”, low-income children who answered “yes” reported 41.5 minutes less screen time per day (Figure 6).

Figure 6. Low-Income Children Watched Less Television When Parents Limited Screen Time



Therefore, setting household rules can support reductions in screen time among low-income children in California.

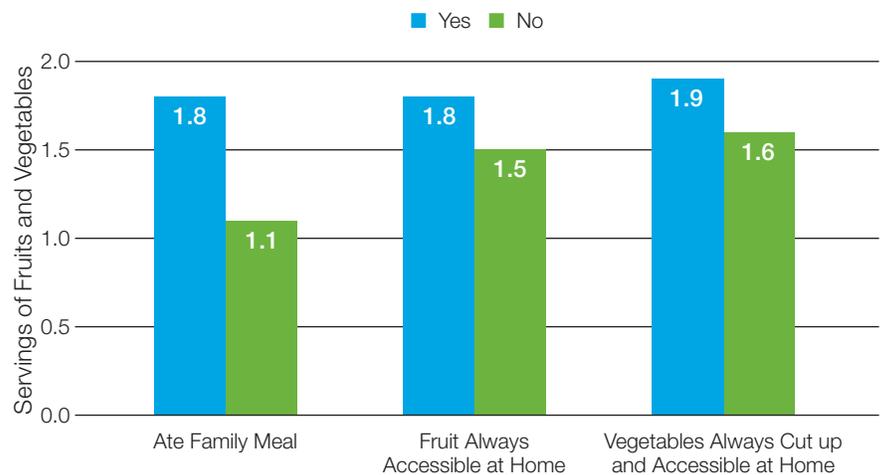
Finding 6

Parents who exercise and eat with their families are role models for healthy lifestyles.

Parents have a profound influence on childhood obesity by providing a healthy home environment, being involved and supportive, and role modeling healthy eating and physical activity.⁴ Low-income children who exercised together with their family were more likely to meet the *HP2020* objective for screen time (83.9 vs. 68.7%).

In addition, eating meals together as a family and access to fruits and vegetables in the home are related to higher fruit and vegetable intake among low-income children (Figure 7).

Figure 7. Low-Income Children Consumed More Fruits and Vegetables When Eating Family Meals Together and When Available in the Home



Notes: Ate a family meal yesterday.

Thus, parents are valuable role models for their children with the opportunity to demonstrate and support healthy eating practices and active lifestyles.



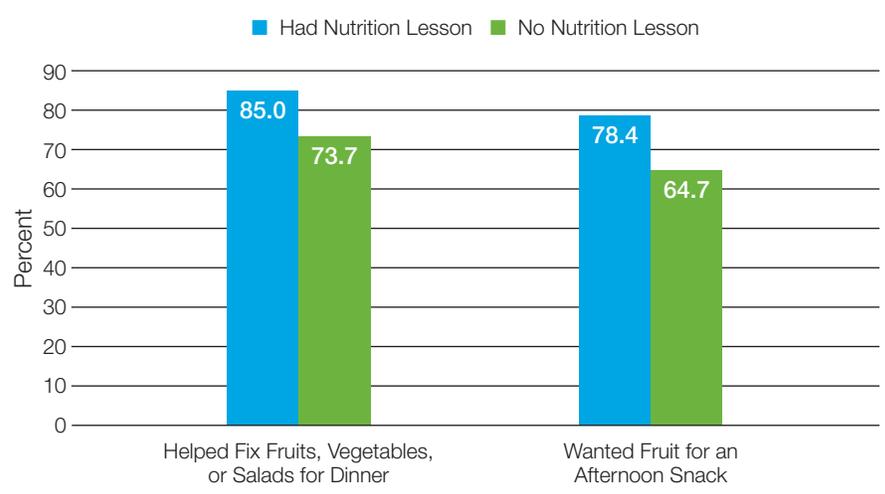


Finding 7 Schools play a critical role in promoting healthy eating.

A. Fruit and Vegetable Taste Testing in the Classroom: Low-income children who previously had the opportunity to taste fruits and vegetables in the classroom ate more fruits and vegetables (3.7 vs. 3.0 servings). Participation in school nutrition lessons may help empower low-income children to make healthy food choices.

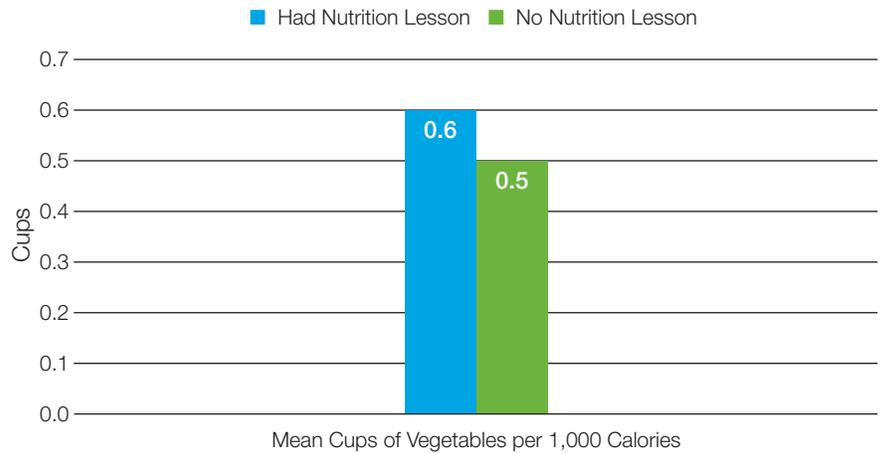
B. Nutrition Lessons at School: Furthermore, low-income children who received nutrition lessons at school were more likely to help fix fruits and vegetables for dinner and to want fruit for a snack (Figure 8).

Figure 8. Low-Income Students Receiving Nutrition Lessons Were More Likely to Help Prepare Fruits and Vegetables for Dinner and Want Fruit as a Snack



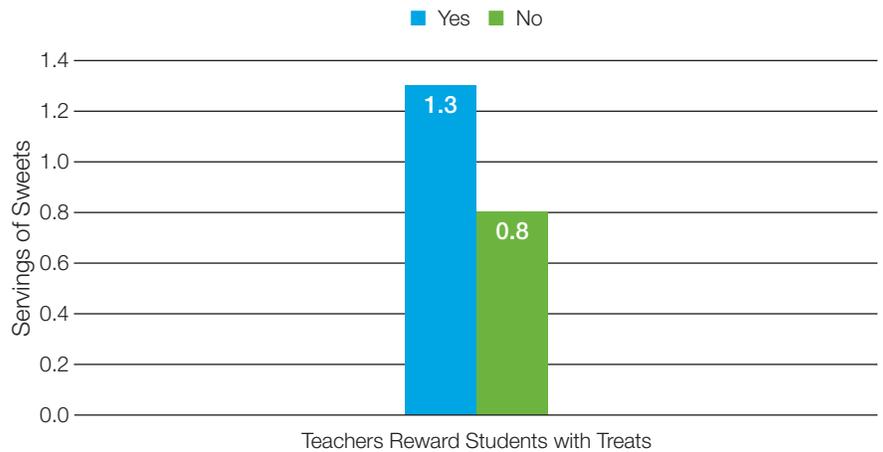
Participation in nutrition lessons at school was also positively related to vegetable consumption. Low-income children who had lessons reported eating more vegetables than those with no lessons (Figure 9).

Figure 9. Low-Income Students Receiving Nutrition Lessons Ate More Vegetables per Day



C. Teacher Using Foods as Classroom Rewards: In contrast, those children with teachers who rewarded students with treats like candy, cookies, and soda reported eating a half serving more sweets per day than those not receiving high calorie treats in the classroom (Figure 10).

Figure 10. Low-Income Students Rewarded by Teacher with Treats in the Classroom Ate More Sweets per Day



School wellness policies that incorporate healthy classroom criteria that limit the use of high calorie, low nutrient foods such as candy, cookies, and soda as rewards to students may help to improve the diets of low-income children and promotes a healthy learning environment.



Data Source

Data presented here are from the California Department of Public Health, Nutrition Education and Obesity Prevention Branch (NEOPB), Research and Evaluation Section, 2011 California Children's Healthy Eating and Exercise Practices Survey (CalCHEEPS). For more information about the survey questions, background and methodology, and to view the 2011 data tables, visit the NEOPB statewide survey website: <http://www.cdph.ca.gov/programs/cpns/Pages/CaliforniaStatewideSurveys.aspx#1>.

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