

COUNTY OF SAN BERNARDINO PRESCHOOL SERVICES DEPARTMENT



Obesity Intervention Program Children Ages 2-5 San Bernardino County 2013-2014



Executive Summary

In 2008 a child and family obesity program named Healthy For Life started in San Bernardino County. What began as a pilot in one high desert Head Start class now operates in nine (9) high desert schools with 250 students. From inception the program was designed to produce measurable changes in the health of children reporting the number of overweight and obese children dropping a weight classification as recommended by Healthy People 2020. The program has been made possible with the funding and technical assistance of First 5 San Bernardino. The program led by St. Joseph Health, St. Mary started the County of San Bernardino's Preschool Services Department (PSD) on a path implementing additional child obesity interventions targeting young children ages 3-5 years. This report summarizes results addressing obesity for the 2013-2014 school year across 40 Head Start locations serving 4,500 low income students. Together the programs identified a total of 1,394 overweight or obese children as determined by Body Mass Index measurements. This aggregates to 32% of low income children in San Bernardino County (ages 3-5 years of age) are at risk for the onset of obesity and child diabetes.

The report highlights obesity programs that are achieving the following results: (1) measurable weight loss in children ages 2 to 5 years of age, (2) changes in how play and nutrition education are taught in classrooms, (3) parents self-reporting their adoption of healthier eating and exercise habits and (4) parental advocacy leading to "system changes" as neighborhoods gain parks and schools and city governments pass health promotion policies. For the 2013-2014 school year PSD reports that 49% of the 1,394 at risk children made improvements in weight status as determined by BMI measurements. Additionally, the program led by St. Mary reports addressing "system issues" cited by researchers as contributing factors in obesity. This includes opening community gardens, installing exercise stations and engaging school and city leaders to pass policies promoting health.

The report details the progress the County of San Bernardino Preschool Services department is achieving with child obesity. However the report is a call to action that additional funding is required to strengthen efforts. Of particular note is the need for additional Registered Dietitian (RD) resources that would provide motivational techniques with families of at-risk children in adopting healthier eating and exercise habits. Additionally, these RD resources should target efforts to address system changes in neighborhoods where schools and families live. In sum, the report is a urges consideration that additional funding be provided to improve outcomes for this disease prevention program. The authors of the report believe adoption of the program across San Bernardino County is worth considering.

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Obesity Intervention with Children ages 2-5 in San Bernardino County

Background

In 2014 a research project carried out by the Institute for Health Metrics and Evaluation at the University of Washington was published in the prestigious medical journal *The Lancet*. This project examined the prevalence of excess weight in children and adults between 1980 and 2013. Worldwide in 1980, 857 million people were overweight as compared to 2.1 billion in 2013, a much higher proportion of the world's population. The World Health Organization (WHO), reports that almost 33% of the world's population is overweight or obese. The WHO also reports that each year more people die from overweight or obesity related causes than from malnutrition. Current research is indicating a rapid rise in child and youth obesity. According to the Center for Disease Control (CDC) the obesity rate for children ages 2-5 has doubled since 1980. According to WHO figures for 2012 more than 40 million children under the age of 5 across the globe suffer from obesity.

A study by Longwoods and published in the *Home and Community Care Digest* indicates that most excess weight is gained by 5 years of age and this weight gain is a predictor of metabolic syndrome at 9 years of age. This study suggests that if children are targeted for weight control strategies at a young age (0-5 years) a healthier weight might be maintained thereafter. This conclusion is supported by a similar study called "Incidence of Childhood Obesity in the United States" funded by the Eunice Kennedy Shriver National Institute of Child Health and Human Development in 2013.

According to a Study published in the *Journal of the American Medical Association* about a quarter of 2-5 year olds are overweight and obese in the United States and according to the CDC about 30% of low-income preschoolers are overweight or obese. When these children become adults the health consequences of being overweight and obese may include: hypertension, Dyslipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea and respiratory problems, and some cancers.

In 2014 WHO suggested that government can take a strong role in combating obesity. Dr. Roberto De Vogli from the Department of Public Health Sciences at the University of California, Davis stated that public policies targeting food and nutrition are needed across several sectors including industry and education. Some steps might include economic disincentives for industries to sell fast food, ultra-processed foods, and soft drinks with high sugar content. The average number of annual fast food transactions per capita is increasing. In a 2012 study Yale University researchers found that more than \$2 billion in the federal food stamp program (SNAP) goes to sales of sugary drinks that offer no nutritional value.

The San Bernardino County 2012 Indicators Report showed that in 2011, 49.9% of San Bernardino County students had unhealthy body compositions (overweight or underweight). Of these, 31.7% were considered “high risk”.

The San Bernardino County “Our Community Vital Signs” community engagement summary for 2013 indicates that San Bernardino County has one of the worst Retail Food Environment Index (RFEI) in California. The RFEI is the ratio of unhealthy food retail, such as fast food and convenience stores, to healthy food retail including grocery stores and produce markets. In 2007 San Bernardino County had the worst RFEI in California at 5.7 compared to the State average of 4.2. This means that for every food outlet selling healthy food, there are more than five outlets selling unhealthy food. A two-point increase in RFEI has been correlated with a 20%-25% increase in the proportion of residents with obesity or type 2 diabetes. The (RFEI) in some San Bernardino County cities has been calculated to be as high as 9.0.



Introduction

In the 2011-2012 school year about 30% of all children aged 2-5 enrolled in the San Bernardino County Preschool Services Departments' (PSD) preschool classes were obese, overweight, or underweight. In response San Bernardino County Preschool Services Department implemented a very active and systematic nutritional intervention program that teaches healthy life choices to children ages 0-5 and their parents/care providers. This program focuses on teaching children (0-5) and their parents and/or care providers healthy life choices. This program includes ongoing Agency classroom activities as well as community based educational activities. PSD maintains community engagement as outlined in several MOU's with Universities, Government organizations, First 5, and local medical organizations.

Each program year (PY) PSD measures body mass index (BMI) on all enrolled children at the beginning of the program year and near the end of the program year. All the preschool children participate in classroom nutrition education and physical activity lessons using *Color Me Healthy*, a research-based curriculum from University of North Carolina.

"At risk" children, underweight, overweight, obese as determined by the American Academy of Pediatrics, are identified and those children and their parents/care providers are provided with additional intervention programs.

During the 2013-2014 program year (PY) PSD had identified the following number of children "at risk":

- Overweight: 562 children ages 2-5 with BMI within the 85%-95% range
- Obese: 617 children ages 2-5 with BMI exceeding the 95% range
- Underweight: 215 children ages 2-5 with BMI less than the %5 range
- Anemia (low Hgb); 184 children ages 3-5 with Hgb less than 10.9
- Number of children ages 3-5 with food allergies/religious food restrictions: 387

The goal PSD established for the PY 2013-2014 was to achieve a measurable impact on the weight of children, promote the adoption of healthier eating, and increase physical activity by families. PSD will target an overall 10% reduction of children being identified through BMI measures taken at the beginning of the PY as being "at risk" as indicated below:

- identified as obese dropping to overweight at the end of the PY
- identified as overweight dropping to a BMI below the 85% range at the end of the PY
- identified as underweight by BMI measures increasing to healthy weight by end of PY

Several program interventions were provided to the children and their parents and/or care providers to achieve this goal.

Color Me Healthy is a program curriculum provided to all children enrolled in PSD preschool classroom programs. This is a nutrition and physical activity program for preschool settings. It is designed to stimulate all the senses of young children: touch, smell, sight, sound, and of course taste. *Color Me Healthy* uses color, music, and exploration of the senses to teach children that healthy eating and physical activity are fun.

At the beginning and end of the PY 2013-2014 all children ages 2-5 enrolled in PSD programs were measured for BMI and reports were produced that identified all children considered to be underweight, overweight, and obese. The children and parents and/or care providers of these “at risk” children were offered the intervention programs described on pages 8-29.



Objectives

The goal of this project is to improve children’s lifelong eating and physical activity habits by teaching children and parents/care providers on the importance of healthy nutrition and physical activity to help reverse the trend of overweight, obesity, and underweight among the children and families enrolled in PSD. The objectives of this project are:

1. To introduce an Agency wide nutrition curriculum that teaches healthy eating and physical activity.
2. Provide nutrition education to teaching staff and establish classroom activities for children that promote nutrition education.
3. Provide parents/ care providers with education related to healthy food choices and physical activities for their family.
4. Provide individual support from a Registered Dietitian for families with “at risk” children identified by BMI as overweight, obese, and underweight.
5. Conduct pre and post BMI’s on all enrolled children to track progress.



Supporting Intervention Programs for “At-Risk” Children

Expanded Food and Nutrition Education Program (EFNEP):

EFNEP is funded by the U.S. Department of Agriculture. A major goal of EFNEP is to help limited-income families and youth acquire knowledge, skills, attitudes, and behavior changes necessary to promote health/wellness and reduce the risk of developing a chronic disease. EFNEP provides PSD parents and/or care providers eight week workshops, see Figure 1, which includes food demonstrations and physical activities relating to:

- selecting healthy snacks
- eating more fruits and vegetables as part of meals and snacks
- selecting healthy beverages
- eating breakfast
- selecting healthy food for the family when eating out
- making healthy food choices during pregnancy and while breast feeding
- plan and prepare healthy meals
- compare prices and save on their food bill
- handle and store foods safely
- become more physically active and lose weight sensibly

During the PY 2013-2014 EFNEP staff including bilingual nutrition educators provided these services at 19 Head Start sites. see Figure 2, for this eight week workshop.

A series of nutrition related questions were asked of each participant at the entry and exit of the eight week program (same questions). 72 participants began and completed the program. The pre and post responses were then analyzed with the following highlights:

- 49% increase in participants more often planning meals in advance
- 43% increase in participants more often comparing prices when shopping
- 39% decrease in participants that ran out of food before the end of the month
- 57% increase in participants more often thinking about healthy food choices when shopping
- 81% increase in participants that used the “Nutrition Facts” on food labels when buying food
- 25% increase in participants reporting their children ate breakfast more often

A complete data analysis for the outcomes from the FNEP program is provided in figure 3.

Figure 1



On Site Program Delivery Method – 8 One-Hour+ Lessons

Lesson ONE	Lesson TWO
<p>Intro to EFNEP / Get Moving!</p> <ul style="list-style-type: none"> Welcome About Me & Checklist <p>Activity</p> <ul style="list-style-type: none"> Food tasting – Fruit Smoothie Physical activity – walking DVD <p style="text-align: right;">Enhancement: Calendar (when available)</p>	<p>Portion Size</p> <ul style="list-style-type: none"> Portion size Food Tracker <p>Activity</p> <ul style="list-style-type: none"> Food tasting – Apple Salad Portion Size Game <p style="text-align: right;">Enhancement: Measuring cups & spoons</p>
Lesson THREE	Lesson FOUR
<p>Plan, Shop, Save!</p> <ul style="list-style-type: none"> Meal planning Saving money on food Food safety when shopping Nutrition Facts labels <p>Activity</p> <ul style="list-style-type: none"> Food tasting – Garden Vegetable Soup Plan meal using grocery ads Reading Nutrition Facts labels <p style="text-align: right;">Enhancement: Grocery list & bag</p>	<p>Fruits & Veggies: Half Your Plate</p> <ul style="list-style-type: none"> MyPlate Fruits & vegetables Getting kids to eat fruits & vegetables <p>Activity</p> <ul style="list-style-type: none"> Food tasting – Sweet Potato & Apple Bake Vegetables I Ate Juice Comparison <p style="text-align: right;">Enhancement: Produce brush</p>
Lesson FIVE	Lesson SIX
<p>Make Half Your Grains Whole / Get Moving!</p> <ul style="list-style-type: none"> Importance of whole grains MyPlate portions Importance of breakfast for children Get moving <p>Activity</p> <ul style="list-style-type: none"> Food tasting – Pasta Salad Looking for whole grain & fiber on food label Plan a breakfast <p style="text-align: right;">Enhancement: Stretch band & Physical Activity book</p>	<p>Build Strong Bodies (Bones & Protein)</p> <ul style="list-style-type: none"> Sodium alternatives MyPlate portions Why calcium is important Protein Food Safety (including use of meat thermometer) <p>Activity</p> <ul style="list-style-type: none"> Food tasting – Breakfast Parfait Milk Label Detective Bacteria Bags <p style="text-align: right;">Enhancement: Meat thermometer</p>
Lesson SEVEN	Lesson EIGHT
<p>Get Moving!</p> <ul style="list-style-type: none"> Get moving Food Tracker <p>Activity</p> <ul style="list-style-type: none"> Food tasting – Fried Rice Physical activity – walking DVD <p style="text-align: right;">Enhancement: Cookbook</p>	<p>Make a Change, Feed Children, & Celebrate!</p> <ul style="list-style-type: none"> Limit foods high in fat, sugar, & salt Meal planning Review About Me & Checklist <p>Activity</p> <ul style="list-style-type: none"> Food tasting – Mexican Pinwheels Sugar bags Fast food restaurant menus Graduation! <p style="text-align: right;">Enhancement: Walking DVD, water bottle, & certificate</p>

Figure 2

Head Start Sites 2013-14

- 1) Upland Head Start
8am
Oct 30 - Dec 11, 2013
- 2) Boys & Girls Club
8:00am & 12:45
Sept. 25-Nov. 13, 2013
- 3) Waterman Garden Head Start
San Bernardino
12:45pm
Feb. 6- Mar. 13, 2014
- 4) Chino Head Start
8am
Feb. 5- Mar. 6, 2014
- 5) Ontario Maple Head Start
Ontario
12:30
Mar. 19 - May 14, 2014
- 6) Yucaipa Head Start
Yucaipa
11:30am
Jan. 17- Mar. 7, 2014
- 7) South Redlands Head Start
Redlands
11:30am
Feb. 3- April 7, 2014
- 8) Del Rosa Head Start
San Bernardino
8:00am
April 2- May 7, 2014
- 9) Cucamonga Head Start
Rancho Cucamonga
8:15
Oct. 3- Nov. 21, 2013
- 10) Bloomington Head Start
12:30
Oct. 11 - Dec. 6, 2013
- 11) Westminster Head Start
12:30
Oct. 8- Dec. 11, 2013
- 12) Colton Head Start
8:45 & 12:30
Jan. 30- 8 weeks
- 13) Mill Center Head Start
May 2014
San Bernardino
- 14) Eucalyptus Head Start
8:30am
April. 8- May 13, 2014
- 15) Citrus Head Start
8am
Oct. 1-Nov. 12, 2013
- 16) Citrus Head Start
12:30pm
Jan. 21- Mar. 18, 2014
- 17) San Bernardino Parks & Rec
10am
Mar. 4- April 29, 2014
- 18) Rialto Renaissance Head Start
8am
Jan. 23- Mar. 13, 2014
- 19) Delman Heights
May 2014

Adult Behavior Checklist Summary Report

System: EFNEP
 Region(s): San Bernardino County
 Filter: K. Head Start group class
 Selection: Report by Entire Unit
 Reporting Period: 10/01/2013 - 09/30/2014

I. Distribution of Responses (Core Questions)

Question	Type	Number of Participants	No Response		Do Not Do		Seldom		Sometimes		Most of the Time		Almost Always		
			Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct	
1. Plan meals ahead	Entry	72	0	0%	6	8%	21	29%	12	17%	8	11%	25	35%	PRE
	Exit	72	0	0%	0	0%	10	14%	10	14%	15	21%	37	51%	POS
2. Compare prices before you buy food	Entry	72	0	0%	2	3%	18	25%	8	11%	14	19%	30	42%	
	Exit	72	0	0%	1	1%	0	0%	11	15%	17	24%	43	60%	
3. Run out of food before the end of the month -	Entry	72	0	0%	24	33%	33	46%	5	7%	3	4%	7	10%	
	Exit	72	0	0%	39	54%	25	35%	5	7%	0	0%	3	4%	
4. Shop with a grocery list	Entry	72	0	0%	19	26%	24	33%	5	7%	6	8%	18	25%	
	Exit	72	0	0%	2	3%	9	13%	10	14%	19	26%	32	44%	
5. Let foods sit out for more than two hours	Entry	72	0	0%	60	83%	10	14%	2	3%	0	0%	0	0%	
	Exit	72	0	0%	70	97%	2	3%	0	0%	0	0%	0	0%	
6. Thaw frozen foods at room temperature	Entry	72	0	0%	16	22%	20	28%	19	26%	5	7%	12	17%	
	Exit	72	0	0%	53	74%	11	15%	5	7%	1	1%	2	3%	
7. Think about healthy food choices	Entry	72	0	0%	1	1%	20	28%	15	21%	10	14%	26	36%	
	Exit	72	0	0%	0	0%	1	1%	11	15%	20	28%	40	56%	
8. Prepare foods without adding salt	Entry	72	0	0%	29	40%	28	39%	4	6%	6	8%	5	7%	
	Exit	72	0	0%	5	7%	40	56%	13	18%	4	6%	10	14%	
9. Use 'Nutrition Facts' on the label to make food choices	Entry	72	0	0%	16	22%	31	43%	5	7%	11	15%	9	13%	
	Exit	72	0	0%	0	0%	4	6%	17	24%	20	28%	31	43%	
10. Children eat within 2 hours of waking up	Entry	72	1	1%	5	7%	10	14%	8	11%	11	15%	37	51%	
	Exit	72	1	1%	2	3%	10	14%	5	7%	10	14%	44	61%	

I. Distribution of Responses (California EFNEP Supplemental Checklist Questions, 2013)

Question	Type	Number of Participants	No Response		Do not do		Seldom		Sometimes		Most of the Time		Almost Always	
			Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct

Figure 3

5/27/14 9:15 AM

11. Do you offer 5 fruits/vegetables?	Entry	6	0	0%	2	33%	4	67%	0	0%	0	0%	0	0%
	Exit	6	0	0%	5	83%	1	17%	0	0%	0	0%	0	0%
12. Do you eat 3 or more servings of vegetables?	Entry	6	0	0%	0	0%	3	50%	2	33%	1	17%	0	0%
	Exit	6	0	0%	1	17%	3	50%	2	33%	0	0%	0	0%
13. Do you serve a variety of fruits/vegetables?	Entry	6	0	0%	0	0%	4	67%	2	33%	0	0%	0	0%
	Exit	6	0	0%	1	17%	5	83%	0	0%	0	0%	0	0%
14. Do you eat more than one kind of vegetable?	Entry	6	0	0%	0	0%	0	0%	4	67%	1	17%	1	17%
	Exit	6	0	0%	0	0%	1	17%	3	50%	2	33%	0	0%
15. Do you eat 2 or more servings of fruit?	Entry	6	0	0%	2	33%	2	33%	2	33%	0	0%	0	0%
	Exit	6	0	0%	3	50%	2	33%	1	17%	0	0%	0	0%

I. Distribution of Responses (2014 California EFNEP Supplemental Checklist Questions)

Question	Type	Number of Participants	No Response		Do not do		Seldom		Sometimes		Most of the Time		Almost Always	
			Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct	Nbr	Pct
11. children drink regular soda	Entry	66	0	0%	39	59%	19	29%	8	12%	0	0%	0	0%
	Exit	66	1	2%	48	73%	14	21%	3	5%	0	0%	0	0%
12. Drink regular soda	Entry	66	0	0%	18	27%	26	39%	14	21%	6	9%	2	3%
	Exit	66	1	2%	27	41%	32	48%	6	9%	0	0%	0	0%
13. Children eat take out	Entry	66	0	0%	14	21%	47	71%	5	8%	0	0%	0	0%
	Exit	66	1	2%	18	27%	47	71%	0	0%	0	0%	0	0%
14. Children screen time	Entry	66	0	0%	5	8%	13	20%	30	45%	14	21%	4	6%
	Exit	66	1	2%	6	9%	26	39%	26	39%	6	9%	1	2%
15. High fat/sugar snacks available	Entry	66	0	0%	36	55%	17	26%	7	11%	3	5%	3	5%
	Exit	66	1	2%	35	53%	25	38%	2	3%	2	3%	0	0%

II. Behavior Change by Question (Core Questions)

Question	Number of Responses	Improved		Unchanged		Decreased	
		Nbr	Pct	Nbr	Pct	Nbr	Pct
1. Plan meals ahead	72	35	49%	28	39%	9	13%
2. Compare prices before you buy food	72	31	43%	32	44%	9	13%
3. Run out of food before the end of the month	72	28	39%	37	51%	7	10%
4. Shop with a grocery list	72	42	58%	26	36%	4	6%
5. Let foods sit out for more than two hours	72	12	17%	58	81%	2	3%
6. Thaw frozen foods at room temperature	72	50	69%	17	24%	5	7%
7. Think about healthy food choices	72	41	57%	26	36%	5	7%
8. Prepare foods without adding salt	72	36	50%	30	42%	6	8%

Figure 3

9. Use 'Nutrition Facts' on the label to make food choices	72	58	81%	13	18%	1	1%
10. Children eat within 2 hours of waking up	71	18	25%	43	61%	10	14%

Note: The number of responses varies by question due to missing data.

II. Behavior Change by Question (California EFNEP Supplemental Checklist Questions, 2013)

Question	Number of Responses	Improved		Unchanged		Decreased	
		Nbr	Pct	Nbr	Pct	Nbr	Pct
11. Do you offer 5 fruits/vegetables?	6	0	0%	3	50%	3	50%
12. Do you eat 3 or more servings of vegetables?	6	1	17%	3	50%	2	33%
13. Do you serve a variety of fruits/vegetables?	6	0	0%	3	50%	3	50%
14. Do you eat more than one kind of vegetable?	6	0	0%	4	67%	2	33%
15. Do you eat 2 or more servings of fruit?	6	0	0%	5	83%	1	17%

Note: The number of responses varies by question due to missing data.

II. Behavior Change by Question (2014 California EFNEP Supplemental Checklist Questions)

Question	Number of Responses	Improved		Unchanged		Decreased	
		Nbr	Pct	Nbr	Pct	Nbr	Pct
11. children drink regular soda	65	19	29%	42	65%	4	6%
12. Drink regular soda	65	29	45%	29	45%	7	11%
13. Children eat take out	65	11	17%	53	82%	1	2%
14. Children screen time	65	27	42%	33	51%	5	8%
15. High fat/sugar snacks available	64	15	23%	42	66%	7	11%

Note: The number of responses varies by question due to missing data.

III. Improvement by Cluster of Behavior

Food Resource Management Practices of participants improved as indicated by the following:

- 49% (35 of 72) more often planned meals in advance.
- 43% (31 of 72) more often compared prices when shopping.
- 39% (28 of 72) less often ran out of food before the end of the month.
- 58% (42 of 72) more often used a list for grocery shopping.

Nutrition Practices of participants improved as indicated by the following:

- 49% (35 of 72) more often planned meals in advance.
- 57% (41 of 72) more often thought about healthy food choices when deciding what to feed their families.
- 50% (36 of 72) more often prepared foods without adding salt.
- 81% (58 of 72) more often used the "Nutrition Facts" on food labels to make food choices.
- 25% (18 of 71) reported their children ate breakfast more often.

Food Safety Practices of participants improved as indicated by the following:

17% (12 of 72) more often followed the recommended practices of not allowing meat and dairy foods to sit out for more than two hours.

Furthermore 0% (0 of 72) ALWAYS follow the recommended practice.

69% (50 of 72) more often followed the recommended practices of not thawing foods at room temperature. Furthermore 0% (0 of 72) ALWAYS follow the recommended practice.

Note: The number of responses may vary by question due to missing data.

IV. Summary of the Number of Practices Improved Within Clusters of Questions**Food Resource Management Practices:**

88% (63 of 72) of participants showed improvement in one or more food resource management practice (i.e. plan meals, compare prices, does not run out of food or uses grocery lists).

61% (44 of 72) of participants showed improvement in two or more food resource management practices (i.e. plan meals, compare prices, does not run out of food or uses grocery lists).

33% (24 of 72) of participants showed improvement in three or more food resource management practices (i.e. plan meals, compare prices, does not run out of food or uses grocery lists).

7% (5 of 72) of participants showed improvement in all four food resource management practices (i.e. plan meals, compare prices, does not run out of food and uses grocery lists).

Nutrition Practices:

92% (66 of 72) of participants showed improvement in one or more nutrition practice (i.e. plans meals, makes healthy food choices, prepares food without adding salt, reads nutrition labels or has children eat breakfast).

82% (59 of 72) of participants showed improvement in two or more nutrition practices (i.e. plans meals, makes healthy food choices, prepares food without adding salt, reads nutrition labels or has children eat breakfast).

53% (38 of 72) of participants showed improvement in three or more nutrition practices (i.e. plans meals, makes healthy food choices, prepares food without adding salt, reads nutrition labels or has children eat breakfast).

28% (20 of 72) of participants showed improvement in four or more nutrition practices (i.e. plans meals, makes healthy food choices, prepares food without adding salt, reads nutrition labels or has children eat breakfast)

6% (4 of 72) of participants showed improvement in all five nutrition practices (i.e. plans meals, makes healthy food choices, prepares food without adding salt, reads nutrition labels and has children eat breakfast)

Food Safety Practices:

71% (51 of 72) of participants showed improvement in one or more food safety practice (i.e. thawing and storing foods correctly).

15% (11 of 72) of participants showed improvement in both food safety practices (i.e. thawing and storing foods correctly).

Note: The number of responses varies by cluster due to missing data

V. Participants with Acceptable Food-Related Practices

10% (7 of 72) at ENTRY demonstrated acceptable practices in food resource management (i.e. plan meals, compare prices, does not run out of food and uses grocery lists).

36% (26 of 72) at EXIT demonstrated acceptable practices in food resource management (i.e. plan meals, compare prices, does not run out of food and uses grocery lists).

6% (4 of 71) at ENTRY demonstrated acceptable nutrition practices (i.e. plans meals, makes healthy food choices, prepares food without adding salt reads nutrition labels and has children eat breakfast).

17% (12 of 71) at EXIT demonstrated acceptable nutrition practices (i.e. plans meals, makes healthy food choices, prepares food without adding salt reads nutrition labels and has children eat breakfast).

Families and Communities Educating Together (FACET-Train the Trainers):

This program provides parent and/or care provider nutrition education in the High and Low Desert areas, which are not covered by EFNEP, within San Bernardino County. The nutritional curriculum for FACET was created by PSD and CHDP Registered Dietitians in 2004 and updated on a yearly basis. PSD and CHDP Registered Dietitians train selected Head Start parents from each school site on the curriculum.

In order to strengthen childhood obesity-prevention efforts, PSD developed FACET. Head Start/State Preschool parent volunteers are trained at selected locations, where they learn how to conduct nutrition classes for other parents. The FACET program runs for four weeks (see Figure 4) with one two-hour class per week. Parent and family Nutrition Education Trainers will teach four lessons on the consumption of fruits and vegetables, family physical activities, “My Plate”, healthy food choices, healthy cooking demonstrations, anemia prevention and tips for picky eaters. Participants will stay motivated and involved by participating in food demonstrations, and trivia games. Participants will submit food diary and activity logs to enforce behavior modification.

The acquired skills will be assessed by pre- and post-tests. The Nutrition Education program is successful and provides dual advantages. First, it increases parents’ and parent trainers’ awareness and knowledge about the importance and nutritional benefits of consuming more fruits and vegetables, including benefits of eating healthy and being physically active for the family. Second, parents and families seem to be more receptive to the information provided by peer trainers, because it reduces cultural and language barriers between learners and the presenter.

The annual goals for FACET:

- Recruitment of Parent Trainers at selected sites and training the trainers.
- The implementation of FACET program by conducting four nutrition education classes for parents by Parent Trainers.
- PSD Nutritionist to report on outcomes.

During the 2013-2014 program year a total of 87 families within the Desert Regions completed all four workshop sessions at four different Head Start sites. PSD encourages participation by families with children identified at risk based on BMI measures.

FACET Nutrition 2014 Classes

High Desert Training: January 21 from 8:00-10:00 AM- Admin office

East Desert Training: Feb 18 from 8:00-10:00 AM- Admin office

Site	Class Dates	Participants total
		87
Yucca Valley	3/11, 3/18, 4/1, 4/8 10:30-12:30	35
Newberry	1/28, 2/4, 3/4, 3/11 12:30-2:30 PM	21
Barstow	4/3,4/10, 4/17, 4/24 1:00-3:00 PM	9
Hesperia	2/18, 2/25, 3/4, 3/11 9:00-11:00 AM	22

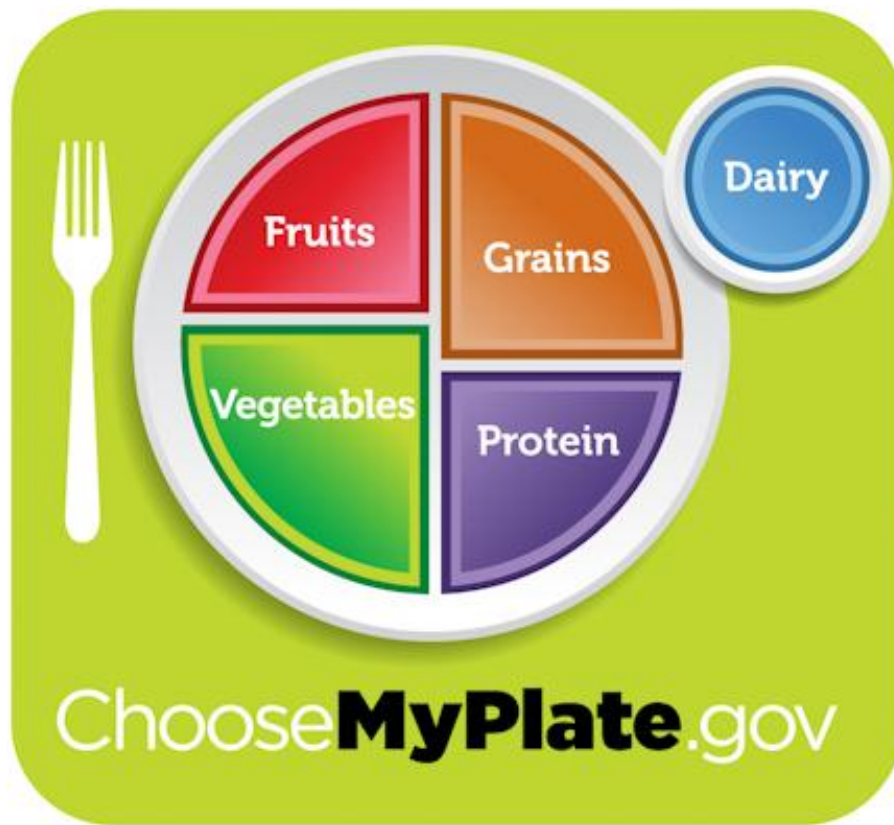


Figure 4

Agenda

Class 1: MyPlate

Introduction

My Plate and Food Groups

- MyPlate Plan individualized based on age, activity level
- Food Group equivalents to one ounce, one cup

Portion Size

Importance of Fruits and Vegetables

- Benefits and cookbook
- Fruits & vegetables

Food Demo: Tangerine Variety Salad

Trivia Game

Class 2: Nutrition Facts Label and Healthy Fats

Introduction

How to Read Nutrition Facts Label

- Use the nutrition label to eat healthier

Judge if it is right for you

- "READ IT before you EAT IT!", Spot the Block!

Good Fats vs. Bad Fats

Trivia Game

Food Demo: Calcium Rich Sweet Maple Syrup Fruit Dip

Class 3: Family Meal Time

Introduction

Division of responsibility

- What, when, where?
- Parents' and children's responsibilities
- Involving children in meal preparation
- Importance of 3 meals and snacks

Picky Eater

Iron Rich Foods and Lead Poisoning Prevention

- Tips for Parents
- Well Fed=Less Lead

Trivia Game

Food Demo: Iron Rich Black Bean Salad

Class 4: Breakfast=Power Brain and Family Fit Families

Introduction

Breakfast = Brain Power

Healthy Weight for Toddlers

- Family Fit Activities and playtime

Calcium Rich Foods

Dental Hygiene

Be Sugar Savvy!

Food Demo: Yogurt Parfait

Trivia Game and Conclusion/Evaluation

Healthy 4 Life Program:

In 2012, St. Joseph Health St. Mary Hospital established an MOU with PSD to implement a Regional Program, partially funded through First 5 San Bernardino, to target low income children and parents whose health status is disproportionately impacted by income and circumstance. St. Joseph St Mary purchased classroom curricula and trained Head Start teachers on SPARK, a program that addresses obesity (www.sparkpe.org/early-childhood), to be used in the classroom in coordination with *Color Me Healthy*. The PSD Registered Dietitian along with the St. Joseph St. Mary Registered Dietitian as well as hospital volunteers conducted initial, mid-year, and end of year assessments to 260 children in High Desert Head Start classrooms and Hesperia School District preschool sites.

The Healthy 4 Life program was developed by a pediatrician as a school based childhood obesity intervention whereby teachers are trained to incorporate increased levels of playtime and nutrition education to improve the health of their students while also influencing parents to adopt healthier lifestyles at home.

During the PY 2013-2014 PSD and St. Joseph St. Mary expanded this program to include nine center based Head Start classrooms as well as the Early Head Start Home Base program in the High Desert areas. Again, assessments were conducted on all SPARK participants at beginning, mid, and end of PY 2013-2014 allowing to develop baseline anthropometric measures, nutrition/physical activity knowledge and to identify at-risk children. Parents/care providers, children, and teachers are contacted by the St. Joseph St. Mary Registered Dietitian monthly and provided nutritional education as well as on going follow-up on the child and families nutritional life choice progress. BMI and a 12 question healthy habit survey, see Figure 5, are conducted at the beginning of the year and at the end of the year. At risk children specific to underweight, overweight and obese were provided with monthly contact by the Registered Dietitian and provided nutritional education and counseling related to the 12 question Healthy Habit Survey; for results see Figure 6.

During the PY 2013-2014 69 children were identified as at risk based on BMI measures, see figure 6, reduction from obese to overweight and overweight to the healthy weight category.



Figure 5

Survey questions:

- 1. How many hours per day does your child participate in screen time?**
- 2. How many days per week does your child eat fast food?**
- 3. How many days per week does your child eat breakfast?**
- 4. How many days per week does your child participate in 60 minutes or more activity?**
- 5. How many days per week does your child eat 5 or more fruits and vegetables in a day?**
- 6. How many days per week does your child eat junk food?**
- 7. How many days per week do your child drink 2-3 8oz cups of milk in a day?**
- 8. How many days per week does your child eat healthy snacks?**
- 9. What kind of milk does your child drink most often?**
- 10. Does your child typically eat healthy snacks while watching TV, video games or computer?**
- 11. How important is it for your child to improve his physical activity?**
- 12. How important is it for your child to improve his nutritional habits?**

Figure 6

OVERWEIGHT/OBESITY SCREENING – END OF YEAR RESULTS

Summary: End of year results report thirteen 17.5%at-risk children (13) of the baseline population of at-risk children--74), dropped one weight classification by year end. The program continues to achieve the Healthy People 2020 goal of reducing child obesity by 10% year end. However, year end results also indicate that 16 children increased their weight classification from the healthy weight into either the overweight or obese categories. Additionally, 56 children either dropped from the program or were absent from school when end of year BMI measures were completed. The data related to the increased number of at-risk children at year end suggests stronger nutrition education campaigns target parents of children with Body Mass Index measures in the upper ranges of the healthy weight range. If healthy living campaigns are not reaching these parents, their children gain weight at a rate placing them into at-risk. To adjust for this observation, families of healthy weight children (who have higher BMI measures) will be targeted for counseling along with families of overweight and obese children in FY15. A detailed presentation of data is presented below.

Table 1. Healthy for Life Screens Baseline Results

Baseline #Healthy Weight Children (<85%BMI)	Baseline # Overweight Children (≥ 85- 95%)	Baseline # Obese Children (≥95%)	Baseline Total # Children Screened
70.7%	15.8%	13.4%	100%

Baseline data collected in September/October, 2013: total number children screened, total number obese, overweight and healthy weight status

Table 2. Healthy for Life Screens Mid-Year Results

Mid- Year # Healthy Children (<85%BMI)	Mid-Year #Overweight Children (≥ 85- 95%)	Mid Year # Obese Children (≥95%)	Total # Children Screened	# Children Dropped 1 Weight Category
64%	13.7%	15.3%	100%	20%

Mid-year data collected in January/February, 2014: total # children screened, total numbers obese, overweight and healthy weight status

Table 3. Healthy for Life Screens End of Year Results

End of Year # Healthy Children (<85 %BMI)	End of Year #Overweight Children (≥ 85- 95% BMI)	End of Year # Obese Children (≥95% BMI)	Total # Children Screened	# Children Dropped 1 Weight Category
133 (67.5%)	33 (16.7%)	31 (15.7%)	197 (100%)	17.5%

End of year data collected April/May, 2014: total number children, total obese, overweight and health weight status

HEALTHY HABITS QUESTIONNAIRE

Summary: The program fell short of a new program goal that at least 50% of families self-report the improvement in adopting healthier eating habits. End of year data reports that 34% of families report improvements in play and physical activity time and 21% of families self-report adopting a diet of 5 fruits and vegetables per day and consuming healthy snacks. The program estimates that a minimum of 27 and a maximum of 38 families adopted healthy habits. The program will continue to use the healthy habit survey in FY15 and has set a goal that 40% of families self-report improvements in healthy habits.

Adopting Healthy Habits as a Family

Four important key messages the Registered Dietitian educates families on:

- Fruits and vegetables: 5 or more servings daily help control weight and aids in digestion.
- Less screen time: 2 hours or less sitting and watching television, computers, or video games.
- Physical Activity—free play or structured: 60 minutes or more a day aids in healthy weight status, greater concentration skills, and less depression.
- More water and less sugary drinks: avoiding concentrated calories such as soda, juice, sports drinks and juice drinks will help slow weight gain.

The Healthy Habit 12 question Survey helps us assess if families are making eating and physical activity changes. Healthy for Life Jr. Program goal: 50% of families will show improvement in eating habits.

This fourth quarter, parents self reported responses to the health habits survey. Between 126 and 177 completed the end of year health habits survey. Results indicate the program goal 50% of families reported improvement in healthy eating and physical activity in physical activity (34%), eating more fruits and vegetables (21%), eating less junk food (6.4%) and more healthy snacks (21%). Refer to table below.

Table 3. 2014 Final Healthy Habit Survey Results

<p>How many days per week does your child participate for 60 minutes or more in physical activity?</p> <p>0-2 days? 3-5 days? 6+ days?</p> <ul style="list-style-type: none">▪ 34 % reported improved physical activity.
<p>How many days per week does your child eat 5 or more fruits and vegetables in a day?</p> <p>0-2 days? 3-5 days? 6+ days</p> <ul style="list-style-type: none">▪ 21% improved fruit and vegetable consumption.
<p>How many day per week does your child eat junk food?</p> <p>0-2 days? 3-5 days? 6+ days?</p> <ul style="list-style-type: none">▪ 6.4% reported decreased junk food intake.
<p>How many days per week does your child eat healthy snacks?</p> <p>0-2 days? 3-5 days? 6+ days?</p> <ul style="list-style-type: none">▪ 21% reported improved healthy snack intake.

Early Head Start Nutrition Intervention Education:

Starting with the 2012-2013 program year PSD included the High Desert area's Early Head Start Home Base program in an ongoing nutritional education and support program supported by the Registered Dietician from the St. Joseph St. Mary SPARK program.

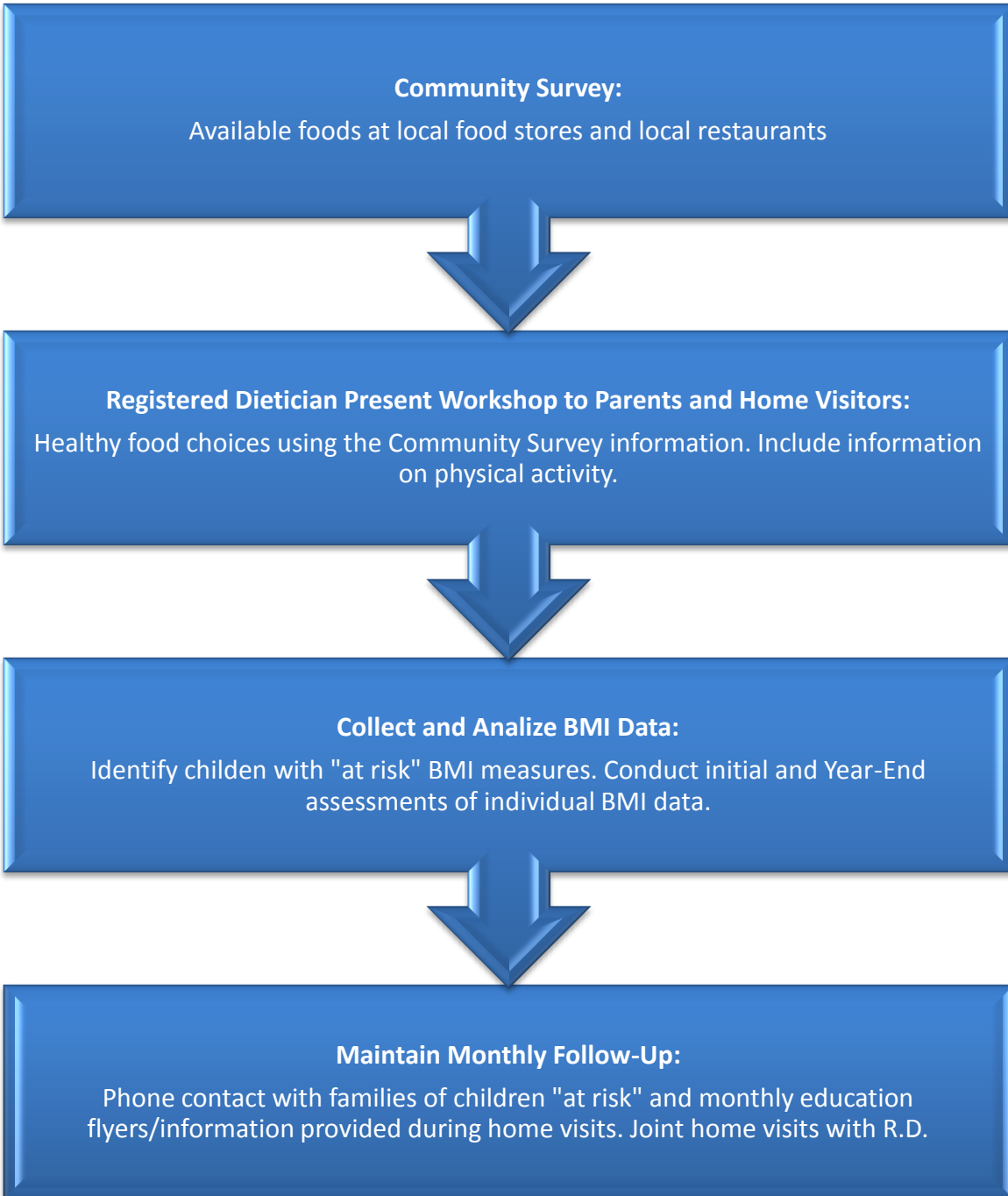
PSD's Registered Dietitian had identified about 50 two year old children participating in PSD's Early Head Start program during this 2012-2013 program year that based on BMI are considered at risk of overweight, obese, or underweight. This number of children represents about 27% of the two year old children enrolled in the PSD Early Head Start (EHS) program.

During the 2013-2014 program year, the PSD and St. Joseph St. Mary Registered Dietitian provided ongoing training to the EHS Home Base visitors. This training provides information and materials that the Home Base visitor will incorporate into their home base visits. This training's focus is: "busting nutrition myths (e.g. this is only baby fat, drinking fruit juice is as good as eating fruit, sport drinks are necessary after playing, etc.), education concerning foods that promote healthy body development vs. foods that inhibit healthy body development, food groups and nutritional values, healthy physical activity. The Registered Dietitian works with the home visitor to provide ongoing educational information as well as individual joint home visitations at the parent/ care provider's request. The same educational information is provided to the parent/ care providers by the Registered Dietitian before or after bi-weekly socialization days. PSD worked with St. Joseph St. Mary Registered Dietitian to develop and administer a Parent Healthy Habit Survey that was given to Early Head Start families at two points in the PY 2012-2013. See Figure 8 for the implementation plan.

During the 2013-2014 program year 42 two year old children were identified as "at risk" and overweight, obese, or underweight. This represented about 23% of the two year old children enrolled in PSD's EHS program.



Figure 8



San Bernardino County Superintendent of Schools Nutrition Education and Obesity Prevention Program (formerly Network for a Healthy California)

In the school program year 2013-2014 the San Bernardino County Superintendent of Schools provided PSD with over 200 *Color Me Healthy* Program Kits. Training was provided to all PSD classroom teachers (over 200). *Color Me Healthy* was implemented within all PSD preschool classrooms as the Agency's nutrition curriculum. PSD used a "Weekly Time Log", see Figure 9, to track each month the total number of hours each PSD classroom teacher spent teaching the children that healthy eating and physical activities are fun. The outcome data from 2013-2014 show a correlation between reduction in obesity, overweight, and underweight children and time spent teaching healthy nutritional practices, see Figure 9.



Figure 9

**San Bernardino County Superintendent of Schools
Network for a Healthy California WEEKLY TIME LOG**

Contract # 13-47	
Name: _____	Position: _____
Phone # _____	Location: _____
School District: SB County PSD/Head Start	

Month: _____				
Number of hours for the week				
Wk 1	Wk 2	Wk 3	Wk 4	Wk 5

Total Logged Hours for Month _____	
* I certify that documented time is from Allowable Activities listed on this page.	
Signature (required)*: _____	Date: _____
Supervisor (required)*: _____	Date: _____

Examples of Allowable Activities to log above:

<p><u>Children/Student Nutrition Education in a Classroom Setting:</u></p> <ul style="list-style-type: none"> • Conduct cooking classes and/or taste tests with healthy foods as part of a nutrition education lesson/activity. • Teaching lessons in the area of Nutrition, Food Safety, Health Benefits of Physical Activity. • Teach nutrition via CD ROM/Internet/Computer programs. Harvest of the Season/Month activities. • Reading books with a nutrition theme. • Bulletin boards/door murals that support good nutrition and increase physical activity. • <i>National Nutrition Month</i> (March) or other nutrition education promotion participation • Discussing breakfast and lunch menu choices in relation to the components of a healthy nutritious meal. • Discuss snack menu choices as part of a healthy, balanced food pattern. <p><u>Children/Student Nutrition Education outside a Classroom Setting (as a component of a structured curriculum:</u></p> <ul style="list-style-type: none"> • Taking nutrition education field trips (do not include travel time or costs) and/or having guest speakers in the areas of nutrition education and physical activity promotion. • Garden based nutrition education. 	<p><u>Adult Nutrition Education in Classroom, Group or Individual Settings:</u></p> <ul style="list-style-type: none"> • Talking with parents or passing out information about nutrition/physical activity promotion. (i.e. Back to School Night or during a conference) • Connecting students and their families with community resources that promote healthy eating and physical activity. <p><u>Nutrition Education at Special Events:</u></p> <ul style="list-style-type: none"> • Nutrition Education at special events- Health Fairs, Open House, Back to School Night, carnivals and other school activities. <p><u>Physical Activity Promotion (as a component of a broader Nutrition Education intervention):</u></p> <ul style="list-style-type: none"> • Present a one-time physical activity demonstration that educates and promotes physical activity as a component of a broader nutrition education intervention. • Promote increased physical activity as a component of a nutrition education intervention. <p><u>Staff Training/Professional Development:</u></p> <ul style="list-style-type: none"> • Nutrition Education Training- attending workshops, seminars and other training events that support nutrition education and physical activity promotion.
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Figure 9

INSTRUCTIONS FOR COMPLETING SAN BERNARDINO COUNTY SUPERINTENDENT OF SCHOOLS (SBCSS) *Network for a Healthy California* NUTRITION EDUCATION TIME LOGS

Twelve Monthly Time Logs (October, 2013 through September 2014) have been provided to supervisors. Each log is a different color to help group each month's completed logs. Logs for each month should be provided to classroom staff (teachers and assistants) before the beginning of each month.

1. Plan classroom lessons according to the usual procedure. If a lesson plan book is used, simply highlight nutrition education and physical activity promotion activities.
2. Estimate the number of hours in decimal increments (to the 0.25 hour) spent on nutrition education and physical activity promotion activities, such as those listed on the time logs. Please include:
 - A. Preparation time (time spent copying, cutting, laminating, planning, putting up nutrition/physical activity themed bulletin boards, etc.)
 - B. Implementation time (time spent conducting the activities, including discussion)
 - C. Documentation time (time spent calculating nutrition education time for the logs, completing the logs, making notations regarding nutrition education in lesson plan books, etc.)
 - D. Time spent in "natural" unstructured nutrition education and physical activity promotion (lunch or snack time discussions about healthy eating, hand-washing, importance of being active for our health, etc.)**
 - E. Healthy food preparation activities
- 3. A conservative estimate of "log-able" time spent on the above activities is 0.5 hours per day or class session per staff person, to total 2.5 hours per class per week, or 5.0 hours if two class sessions are taught per day. Individual staff time may be considerably higher if structured nutrition education and/or physical activity promotion activities are also taking place (see example below). It is not necessary to circle or mark completed activities on the Time Log. Classroom lesson plans are sufficient back-up documentation in case of audit.**
4. Calculate each weekly time total by adding daily time in decimal increments (i.e., 0.25 hours, 0.5 hours, 0.75 hours, 1.0 hours) and write in time log for that week.
5. Calculate monthly time totals in hours or part of hour using decimal increments (i.e., 0.25 hours, 0.5 hours, 0.75 hours) by adding weekly time totals and write in time log for that month.
6. Complete the name (formal full name including last name), position, phone # and location section of the time log. Please do not leave any spaces blank. If you are a substitute, please note who you are substituting for. If you are new, please write "new" next to your name.
7. Staff sign and date the time log.
8. Supervisors will collect the completed time logs monthly, sign and return them to SBCSS (601 N. E Street, San Bernardino, CA 92410-0020, Education Support Services-Nutrition Grant).

EXAMPLE

Ms. Smiley teaches two classes per day. For each class she spends 30 minutes during meals discussing the food served, what food groups they belong to, the colors of the fruit, how milk helps bones grow strong, importance of hand washing, etc. She also spends 10 minutes doing a small group activity about the food pyramid and 5 minutes documenting in her lesson plan book. This would total to 45 minutes (0.75 hours) each class, or 1.5 hours for the day. If she spends a similar amount of time each day, her total for the week would be 7.5 hours spent on nutrition education/physical activity promotion. If she has a classroom assistant, they would log their time similarly on their own time log.

Rev. 11/4/13

Figure 10

(Color Me Healthy -Nutrition Curriculum Tracking sheet) Preschool Services Department 662 South Tippecanoe Avenue San Bernardino CA 92415-0630 PSD Website: <http://hss.sbcounty.gov/PSD/>

Site	Sept	Oct	November	Dec	January	Feb	March	April	May	June
Adelanto State FD PD HS F5FD										
Apple Valley EHS										
Apple Valley State FD PD HS										
Baker - Muscovy State F5FD										
Barstow EHS										
Barstow State FD PD										
Boys & Girls Club PD										
Chino PD										
Crestline State PD HS										
Cucamonga PD										
Del Rosa PD										
Fontana Citrus -EHS										
Fontana Citrus PD										
Hesperia -EHS										
Hesperia FD PD HS State										
Highland PD										
Mill Center State FD PD HS F5FD										
Newberry Springs PD HS										
Northgate HS F5FD										
Ontario Maple State FD PD HS F5FD										
City of SB Parks & Rec PD HS										
Phelan State PD HS										
Redlands South E HS										
Redlands South PD HS										
Rialto Eucalyptus FD PD HS State										
Rialto Renaissance PD HS										
San Bernardino West PD HS										
Twenty-nine Palms State PD HS										
Upland PD HS										
Victorville State FD PD HS										
Victor Valley College EHS HS										
Waterman Gardens PD HS										
Westminster PD HS										
Willow State FD HS										
Yucaipa EHS										
Yucaipa PD HS										
Yucca Valley PD HS										

California State University at San Bernardino (CSUSB)

The PSD Registered Dietitian worked with PSD staff and trained CSUSB students to track children at risk and provide classroom intervention strategies for not only supplemental nutritional education but also educational information about how movement can be used not only as a physical exercise activity but also as a strategy to re-direct overly active children.

THE kid's ACTIVITY PYRAMID

Each week you can have fun and be active by trying the following things...

With Friends

- Dance to music
- Play games like tag and hopscotch
- Join a sports team at school or the park

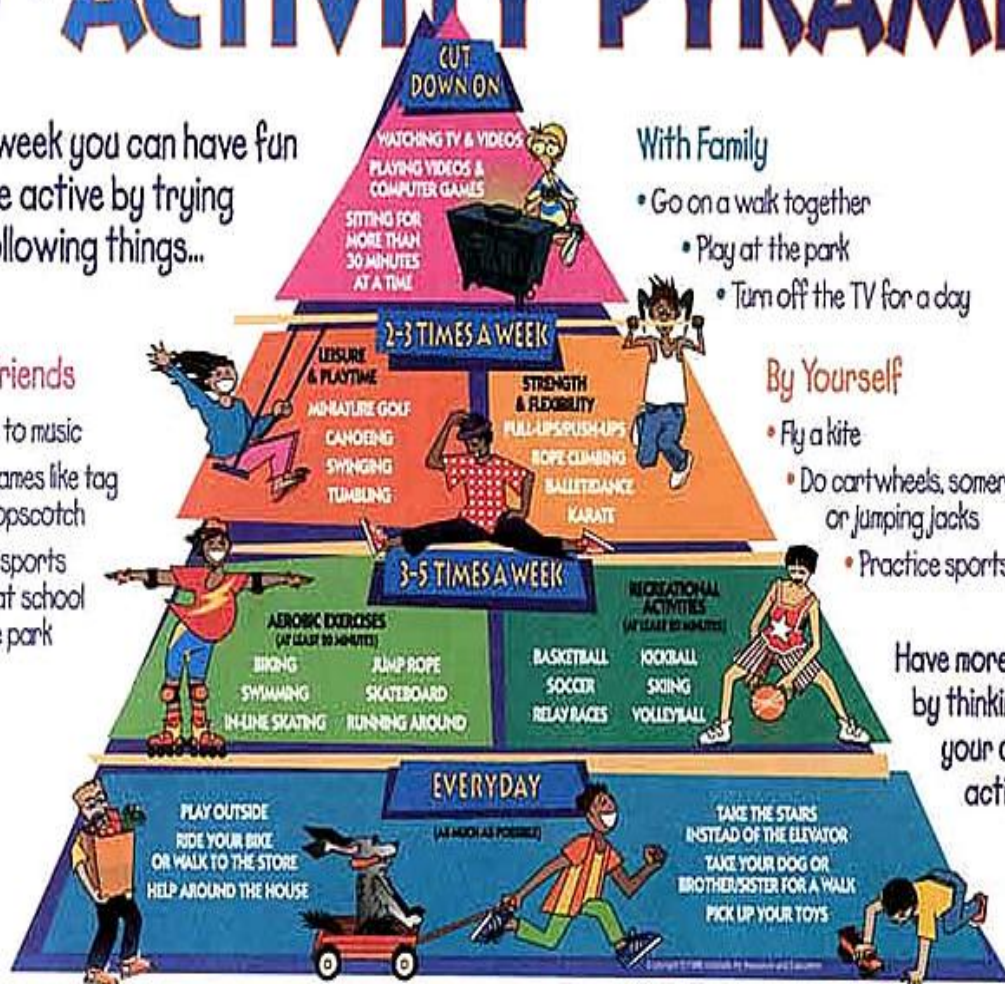
With Family

- Go on a walk together
- Play at the park
- Turn off the TV for a day

By Yourself

- Fly a kite
- Do cartwheels, somersaults or jumping jacks
- Practice sports skills

Have more fun by thinking up your own activities!



For additional copies, call 1-800-372-7776.

Azusa- Pacific University:

Azusa-Pacific University (APU) offers a Bachelor of Science in Nursing (BSN) Degree at facilities located in Hesperia and San Bernardino City. PSD has an MOU with the University in which each program year about 60 BSN students assist PSD staff obtain height, weights, and vision screenings. Many of these students are Registered Nurses and are working towards a BSN degree. PSD utilizes this community resource to ensure BMI data is collected throughout the County.

APU students assisted PSD in collecting pre and post BMI's on PSD preschool children and the students provided parent nutrition classes at various PSD preschool Sites throughout the County.



Outcome Data

The 2013-2014 program year was the first year PSD decided to implement a nutritional intervention program for all the agency's children ages 2-5. PSD operates over 40 preschool Sites throughout the County of San Bernardino and each year enrolls about 4,500 preschool children ages 2-5. BMI Measures taken within the initial 45 days of the 2013-2014 program year indicated that 1,394 children ages 2 – 5 were underweight, overweight, or obese which means that they are considered “at risk”. This represents 32% of the children enrolled.

The original goal set by PSD was to achieve a measurable impact on the weight of children identified as “at risk” defined by BMI measures taken at the beginning and end of the 2013-2014 program year. “At risk” BMI measures were identified as following:

BMI measure of 95% and above	-	obese
BMI measure of 85% - 94%	-	overweight
BMI measure of 5% - 84%	-	healthy weight
BMI measure below 5%	-	underweight

PSD focused intervention services on all children identified as “at risk”. Tracking services were specific to the 1394 children that began the 2013-2014 program year identified by BMI's as “at risk”. Children that began preschool services after the beginning of the school year were provided services but not tracked because of the shorter time these children were enrolled and thus available for nutritional intervention services. Figure 11 gives details on the children identified as “at risk”, which are highlighted in yellow.

Figure 11

Nutrition Report FY2013-14 - (October 2013) Head Start 0-5

No	Sites	Obese	Overweight	Under Weight	Low HGB	Allergies	Preferences
1	Adelanto	18	13	4	2	8	4
2	Apple Valley EHS	2	4	1	1		
3	Apple Valley	24	15	11	5	21	5
4	Baker (USD) CP	6	2				
5	Baker (FLC)		2	1	1	3	
6	Barstow	15	19	3	8	12	4
7	Barstow-EHS- HB						
8	Boys & Girls Club	22	20	2	5	5	
9	Chino	33	29	5	6	9	7
10	Chino HS- HB	2					
11	Colton-Bloominton (JUSD) (CP)	14	7	1	1		
12	Colton-San Salvador (JUSD)(CP)	25	25	6	4	10	7
13	Crestline	1	2	5		3	1
14	Cucamonga HB	3		1			1
15	Cucamonga	24	19	4	9	15	13
16	Del Rosa	14	13	5	16	10	2
17	Easter Seals - Ontario (DA)	6	9		3	7	
18	Easter Seals- Ontario- EHS		1		1	2	2
19	Easter Seals - Upland (DA)HS-HB	36	15		8	11	8
20	Easter Seals - Upland (DA)	20	27	7	5	18	4
21	Easter Seals -Montclair	3	9		1	2	2
22	Easter Seals Valley View-EHS FD		2	1	2	5	
23	Easter Seals Valley View-EHS -HB	1		4	1	3	2
24	Fontana Citrus -EHS		3	1	1	3	
25	Fontana Citrus	29	28	7	5	11	8
26	Fontana Citrus - HB-HS	2			1		
27	Fontana USD(CP)-- EHS	2	1	2	1	1	
28	Fontana (USD) (CP) --H S	3	3	2		1	
29	Hesperia-HB-EHS	1			1	1	
30	Hesperia	16	28	4		19	9
31	Highland	8	3	1	7	8	3
32	Mill Child Development	20	15	23	13	13	9
33	Needles (USD) (CP)	7	4	11	1	9	2

Figure 11

No	Sites	Obese	Overweight	Under Weight	Low HGB	Allergies	Preferences
34	Needles Big River (USD) (CP)		1	1			
35	Northgate	6	4	4	1	2	
36	Newberry Springs	2	6	2	2	3	1
37	Ontario Maple	44	34	9	7	15	5
38	Ontario Westminster	22	21	5	5	9	3
39	Ontario MontclairUSD	5	2		2		
40	Phelan	4	4	1		4	2
41	Redlands South-HB-EHS					1	4
42	Redlands South-HB-HS	2		2		1	1
43	Redlands South-	6	11	24	2	13	15
44	Rialto Eucalyptus-HB-HS		1	2	1		
45	Rialto Eucalyptus	33	21	7	22	17	4
46	Rialto Renaissance	24	25	10	12	14	3
47	Rialto Willow	3	3		3	6	1
48	SB Parks & Rec	11	6		2	2	1
49	SB West	8	2	6		2	2
50	Twenty-Nine Palms	6	8	2		6	5
51	Upland	2	28	6		6	6
52	Victorville	23	18	8	2	23	5
53	Victor Valley Comm College -HB- EHS	2	3		3	7	2
54	Victor Valley Comm College -FD- EHS	1	2	2		4	1
55	Victor Valley Comm College - HS	3	5	1		9	2
56	Victor Valley Comm College - HS-HB	4				1	
57	Waterman Gardens	9	1		5	7	3
58	Yucaipa-HB-EHS	1	1	2	1	4	1
59	Yucaipa-HB- HS	3	1			2	1
60	Yucaipa	21	14	3	3	7	4
61	Yucca Valley-HB-HS	3	1	2		2	1
62	Yucca Valley	12	21	4	2	10	2
	Total	617	562	215	184	387	168

Out of 1394 children identified as “at risk” during the beginning of the program year, 695 changed at least one weight category towards a more healthy weight category as highlighted in yellow, see figure 12. This represents an overall improvement of 49%.

Individual weight category changes are:

Underweight to healthy weight - 165 children (11%)

Overweight to healthy weight - 286 children (20%)

Obese to overweight - 113 children (8%)

Obese to healthy weight - 131 children (9%)

Figure 12

2013-2014 YEAR END CHANGES IN BMI MEASURES SPECIFIC TO THE 1394 “AT RISK” BMI’s	
NO CHANGE IN BMI MEASURE	342
OVERWEIGHT TO HEALTHY WEIGHT	286
UNDERWEIGHT TO HEALTHY WEIGHT	165
OBESE TO HEALTHY WEIGHT	131
OBESE TO OVERWEIGHT	113
UNDERWEIGHT TO OVERWEIGHT	6
UNDERWEIGHT TO OBESE	4
HEALTHY WEIGHT TO UNDERWEIGHT	17
HEALTHY WEIGHT TO OVERWEIGHT	44
HEALTHY WEIGHT TO OBESE	18
OVERWEIGHT TO OBESE	20
OBESE TO UNDERWIGHT	2
CHILDREN DROPPING OUT PRIOR TO END OF YEAR	246

These positive outcomes showed PSD that nutrition intervention involving educational opportunities for both children ages 2-5 and their parents/care providers does result in a reduction of preschool children “at risk” by being obese, overweight, and underweight.

The pre/post BMI charts below also show that at some individual preschool Sites the number of obese, overweight, or underweight children participating actually increased. PSD found a correlation between these Sites and the lack of time spent in these classrooms engaging the children in the *Color Me Healthy* curriculum (based from the documentation on the Weekly Time Log”). Additional challenges at these Sites involved lack of participation in the nutrition parent training programs offered. Success in reduction of children starting the program year with BMI’s indicating obesity, overweight, or underweight are the direct result of parents/ care providers and their children being provided with nutrition education. During the 2013-2014 program year the registered dietitian from St. Mary’s Hospital and the PSD Registered Dietitian indicated that families with obese and/or overweight children that accepted their monthly nutritional counseling were families in which their children showed the most reduction in “at risk” weight. These two Registered Dietitians also indicated that families of “at risk” children that did not accept their monthly nutritional counseling were families in which their children actually showed unhealthy weight gains.

The program data from the EFNEP report shows improvement in parent understanding of healthy food choices and their changed nutrition activities. The Healthy 4 Life and FACET programs provided parents/ care providers with direct nutrition education and support and the results were again a better understanding of healthy food choices and their changes in nutrition activities for their children. This combined with a strong nutrition curriculum (*Color Me Healthy*) brings children and their parents/ care providers to a common understanding of what healthy food choices and physical activity means to their overall health.

Next Step

During the 2014-2015 program year PSD will focus on lessons learned during the 2013-2014 program year. Sites that actually showed an increase in the number of obese and overweight children lacked parent participation and nutritional curriculum time in their classrooms. PSD will utilize our community partners to focus on these two concerns.

PSD will expand their partnership with the San Bernardino County Superintendent of Schools- Nutrition education and Obesity prevention Program to provide quarterly trainings for teaching staff to ensure proper implementation of the curriculum. The San Bernardino County Superintendent of Schools will provide additional parent trainings and will introduce school gardening. We are looking for more parent involvement and site staff team efforts to expand school gardening throughout most of the sites. PSD will also seek additional funding to allow for additional support from registered dietitians.