

# Healthy Family Challenge



## Final Report

May 2010

## **HEALTHY FAMILY CHALLENGE EXECUTIVE SUMMARY**

Four Head Start schools participated in a Healthy Family Challenge in which parents completed six weekly calendars focusing on 5 specific health behaviors including: 1) eating MORE fruits and vegetables; 2) eating MORE low-fat dairy; 3) drinking LESS soda/sweetened beverages; 4) eating LESS fast food; and 5) being MORE physically active. At week 0, parents completed the calendar only. From weeks 1 through 5 parents received a calendar and a healthy newsletter along with an incentive for returning their completed calendar. At the conclusion of the program, parents who returned all six of the completed calendars were invited to participate in a group discussion. Site directors and teachers were also asked to complete a brief survey evaluating their experiences with the program.

### **Challenge Calendars**

Data from the challenge calendars indicate:

- Clymer, Hawthorne, and Little Scholars all showed slight improvements with consumption of fruit and vegetable consumption.
- Hawthorne and Metro decreased consumption of servings of soda/sweetened beverages.
- Decreases in fast food visits for Little Scholars and Metro were also observed.

### **Group Discussions**

Group discussions with 20 parents were conducted at three of the Head Start schools. A content analysis of the notes taken from the group discussion revealed the following five themes:

1. The challenge calendars were easy to complete and parents became more aware of what they were eating as a family.
2. Fast food and soda/sweetened beverage consumption was the most difficult change for the families to maintain.
3. Parents enjoyed the newsletters, incentives, and family fun nights and found them to be helpful.
4. Parents reported some challenges with participating in the program and offered suggestions for improvement.
5. Despite some of the challenges, all parents agreed they would participate in a future, similar program and would recommend the program to other families.

### **Director and Teacher Survey**

Overall, staff members agreed that the program was beneficial to the families who participated. The newsletters and recipes were popular and staff reported they would overhear parents talking about the program. Although parents and staff were slow to catch on, everyone agreed that the program made a positive impact.

### **Recommendations**

In conclusion, the Healthy Family Challenge was beneficial for almost all of the families and helped them in recognizing and changing some of their negative health habits. The group discussions with the parents gave additional insight into how the parents perceived the program. Overall, they viewed their participation as positive and helpful. Parents suggested that future programs should include more sample menus and recipes. Furthermore, parents view ideas and suggestions from other parents as valuable resources and suggested that programs should encourage parental feedback.

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>I</b>
<b>LIST OF TABLES</b>	<b>III</b>
<b>INTRODUCTION</b>	<b>1</b>
WHAT IS THE HEALTHY FAMILY CHALLENGE?	2
<b>METHODS</b>	<b>3</b>
ANALYSIS OF DATA	5
<b>RESULTS</b>	<b>5</b>
CALENDAR DATA RESULTS	5
CLYMER HEAD START	5
HAWTHORNE HEAD START	6
LITTLE SCHOLARS HEAD START	7
METRO HEAD START	8
ALL HEAD START SITES COMBINED	9
GROUP DISCUSSION RESULTS	9
THEME #1	10
THEME #2	10
THEME #3	11
THEME #4	11
THEME #5	12
SITE DIRECTOR AND TEACHER SURVEY RESULTS	12
<b>DISCUSSION</b>	<b>14</b>
<b>CONCLUSIONS AND RECOMMENDATIONS</b>	<b>15</b>
<b>REFERENCES</b>	<b>17</b>
<b>APPENDIX A: DIRECTOR AND TEACHER SURVEY</b>	<b>19</b>

**LIST OF TABLES**

<b>CLYMER HEALTHY CHALLENGE CALENDAR RESULTS</b>	<b>6</b>
<b>HAWTHORNE HEALTHY CHALLENGE CALENDAR RESULTS</b>	<b>6</b>
<b>LITTLE SCHOLARS HEALTHY CHALLENGE CALENDAR RESULTS</b>	<b>7</b>
<b>METRO HEALTHY CHALLENGE CALENDAR RESULTS</b>	<b>8</b>
<b>ALL SITES COMBINED CHALLENGE CALENDAR RESULTS</b>	<b>9</b>

## INTRODUCTION

Although rates are leveling off (Ogden et al., 2008), overweight and obesity among preschool children continues to remain a public health concern, particularly among low-income children. One in seven low-income, preschool-aged children in the United States is classified as obese (Sharama et al., 2009). Among the several health risks associated with obesity, such as high blood pressure and Type 2 diabetes (Freedman et al., 2007), obese children and adolescents are more likely to remain obese into adulthood (Serdula et al., 1993; Whitaker et al., 1997).

Parents and primary caregivers serve as powerful role models and can strongly influence and reinforce healthy behaviors in children. The home environment plays a large role in a child's dietary and physical activity habits. Parents can pass on eating and physical activity behaviors to their children. For example, a sedentary family with poor dietary habits who stocks the fridge and cupboard with high-fat snacks and rewards their children with fast food is creating an unhealthy environment and is therefore more likely to pass on these negative habits to their children. Likewise, a family who stocks their fridge with fresh fruits and vegetables, limits screen time, and engages in family activities is creating a healthy home environment that is likely to be passed on to their children. Because children spend a majority of their early years of life with their parents and adult caregivers, it is essential for these role models to reinforce and foster positive eating and physical activity habits through modeling. Children who observe their parents partaking in regular physical activity and eating a healthy diet will be more likely to model these same healthy behaviors.

Although many different variables contribute to the current obesity epidemic, poor dietary habits and physical inactivity are some of the strongest indicators of the development of obesity. Over the past couple of decades, total energy intake of U.S. children has increased (American Dietetic Association, 2004; Nielson et al., 2002), however, consumption of nutrient-rich foods such as fruits and vegetables, low-fat dairy products, and whole grains has decreased (ADA, 2004; Borrud et al., 1997). Soda, fruit juices, and other sweetened beverages have replaced important nutrients found in low-fat milk (Allen & Myers, 2006; American Academy of Pediatrics, 2001; O'Connor et al., 2006). Furthermore, the convenience of fast food meals has quickly taken the place of the traditional family meal (American Academy of Pediatrics, 2003; Gable et al., 2007). Despite these dietary trends, energy expenditure has decreased as physical activity has been replaced with television and video games (Dennison et al., 2004; Robinson, 1999; Robinson, 1999).

In an effort to boost awareness of specific nutrition and physical activity behaviors, faculty and staff from the Mid America Regional Council (MARC), in conjunction with several individuals from agencies including Nutra-Net, Inc., the University of Kansas Medical Center, and the University of Missouri Extension FNEP, developed a program aimed at improving the health and wellness of Head Start families. This coalition, comprised of dietitians and physical activity specialists, worked with Head Start family advocates, teachers, and parents in devising a simple and fun tool to create family awareness of current dietary and physical activity habits. With funding from BlueCross Blue Shield of Kansas City, the "Healthy Family Challenge" was produced.

### ***What is the Healthy Family Challenge?***

The Healthy Family Challenge is a 6-week program for Head Start families to track their child's dietary and physical activity behaviors based on 5 specific goals:

1. Eat MORE fruits and vegetables
2. Eat MORE low-fat dairy
3. Drink LESS soda/sweetened beverages
4. Eat LESS fast food
5. Be MORE active

Children are eligible to participate in Head Start if they are from low-income families (gross incomes not more than 130% of the Federal Poverty Guidelines) or if families are eligible for public assistance (National Head Start Association, 2008).

Four Head Start schools were targeted to complete a 6-week challenge in which families would receive incentives for returning completed calendars tracking their child's nutrition and physical activity habits within the home setting. These schools included Clymer Head Start in Kansas City, MO; Hawthorne Head Start in Independence, MO; Little Scholars Head Start in Kansas City, MO; and Metro Head Start in Kansas City, MO.

Each week a child returned a completed calendar, prizes were awarded. To kick-start the challenge, families were encouraged to participate by receiving a magnetic clip to post their calendars on their refrigerator as a reminder to track their child's progress each day. Other incentives that were given included:

- Insulated grocery totes
- Cutting boards
- Measuring cups
- Measuring spoons
- Water bottles
- Placemats
- Cookbooks

In addition to the challenge calendar, each Head Start school hosted a "Family Fun Night" in which fun activities, healthy snacks, free resources, and prizes were given out to everyone who attended. At the conclusion of the program, parents who completed and returned all six calendars were invited to participate in a group discussion to talk about their perceptions about the program. Because the site directors and teachers were also an integral part of the program, they were asked to complete a brief survey to obtain critical feedback regarding their perceptions of the program.

This report summarizes the results of this 6-week program.

### METHODS

In January of 2010, the challenge calendars, newsletters, and incentives were delivered to each Head Start school along with directions on distribution of the materials. The first week (Week 0), parents were given a challenge calendar along with the magnetic refrigerator clip to encourage participation. The directions explained the behaviors of interest, how to track them, and when the calendar needed to be returned in order to receive a prize. An example of the challenge calendar is below:

HEALTHY CHALLENGE CALENDAR					
	Child's Name _____				
<b>Eat MORE Fruits and Veggies</b>	<b>Eat MORE Low-Fat Dairy</b>	<b>Drink LESS Soda/Sweetened Beverages</b>	<b>Eat LESS Fast Food</b>	<b>Be MORE Active</b>	
Today's Date: _____	Circle how many servings	Circle how many servings	Circle how many servings	Circle how many visits for meals or snacks	Circle how many minutes of activity (outside of school)
<b>Friday</b>	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 15 30 45 60
<b>Saturday</b>	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 15 30 45 60
<b>Sunday</b>	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 15 30 45 60
<b>Monday</b>	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 15 30 45 60
<b>Tuesday</b>	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 15 30 45 60
<b>Wednesday</b>	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 15 30 45 60
<b>Thursday</b>	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 15 30 45 60
<div style="border: 2px solid green; border-radius: 50%; padding: 10px; width: fit-content; margin: 0 auto;"> <p style="color: white; text-align: center; font-weight: bold;">Make family time an active time! Walk, bike and play together.</p> </div> <p>Includes fresh, frozen, dried and canned fruits and vegetables. Does NOT include potato chips, French fries, fried potatoes or ketchup. <b>Sample serving sizes:</b>  <ul style="list-style-type: none"> <li>• 1 small to medium piece of fruit or melon wedge</li> <li>• 3/4 cup of juice</li> <li>• 1/2 cup canned fruit</li> <li>• 1/4 cup dried fruit</li> <li>• 1/2 cup chopped raw or cooked vegetables</li> <li>• 1 cup raw, leafy greens</li> </ul> </p>	<p>Includes low-fat milk, low-fat yogurt, and low-fat cheese. <b>Sample serving sizes:</b>  <ul style="list-style-type: none"> <li>• 1 cup of low-fat milk or yogurt</li> <li>• 2 ounces of cheese (2 one-inch cubes, 3 tablespoons grated cheese, 3 slices of wrapped cheese)</li> </ul> </p>	<p>Includes all carbonated beverages (diet and regular, flavored sodas and root beer), all sweetened beverages (like Sunny D, Capri Sun, Kool-Aid, lemonade, fruit juice drinks) and all sport drinks (Gatorade, Powerade, Capri Sun Sport, etc.) <b>Sample serving size:</b>  <ul style="list-style-type: none"> <li>• 8 ounces of soda</li> </ul> </p>	<p>Includes all fast food chains (like McDonald's, KFC, Hardee's, Domino's, Pizza, Taco Bell, etc.) Includes other fast-food restaurants that provide quick service, inexpensive food, have the option of eating in, carrying out or driving through, and have no wait staff.</p>	<p>Includes all moderate physical activity (such as walking, dancing, biking and skating) and vigorous physical activity (such as jogging, running, swimming and jumping rope) that is done continuously for at least 15 minutes.</p>	
					<p>Funding provided by:</p> <p>BlueCross BlueShield of Kansas City An Independent Member of the Blue Cross and Blue Shield Association</p>

For weeks 1 through 5 parents continued to receive a weekly challenge calendar and a newsletter that focused on each of the five health behaviors. These included a fun recipe for families to make together and ideas for healthy snacks. Each Friday, parents who returned completed calendars received a prize, a new calendar, and newsletter.

At the conclusion of the 6 week program, parents who completed all of the calendars were invited to participate in a group discussion. Ten to twelve parents from each school were invited to discuss their perceptions of the program and any challenges they may have encountered while completing the weekly calendars. Parents who participated in the group discussion received a \$25 gift card to Wal-Mart to compensate for their time and travel. Predetermined questions were developed during a coalition meeting. Questions regarding participation in the program included:

1. What did you like best about the Healthy Family Challenge calendars?
2. What did you like least about the Healthy Challenge calendars?
3. When you think about the Healthy Family Challenge what was the most difficult behavior to change?
4. Tell me about things that would help make tracking your progress towards each of these behaviors easier or less of a burden to you.
5. How about physical activity? What are some of the significant barriers to getting physical activity minutes each day for your child?
6. What additional information and/or training would help to improve the nutritional quality of your pre-K child's diet?
7. How about information or training to improve the number of minutes of physical activity?
8. What particular topics in the newsletters helped you the most to increase healthy behaviors in your home?
9. What other information would you have liked to have seen included in your weekly packets?
10. From what sources do you currently get your nutrition information?
11. How has the Healthy Family Challenge helped to promote long-lasting changes within your family?
12. What incentives were the most helpful or useful to you? What other kinds of incentives would you have liked to have seen?
13. What did you think about the Family Fun Night? If your site had another even would you attend? Why or why not?
14. Would you consider doing another Healthy Family Challenge program in the future? Why or why not?

During each group discussion at least two members from the coalition team were present to take detailed notes of participant responses.

Surveys were also distributed to site directors and staff responsible for distributing and tracking returned calendars. This survey included questions regarding:

- How helpful they felt the Healthy Family Challenge was in motivating the families to improve in the targeted healthy behaviors
- How helpful they felt the weekly newsletters and recipes were to the families
- How difficult it was for the staff to distribute the weekly calendars and newsletters to the families
- What they liked best/least about the Healthy Family Challenge

A copy of this survey can be found in Appendix A of this report.

### ***Analysis of Data***

Quantitative calendar data was entered into Excel and descriptive statistics were tabulated to determine the means and standard deviations for each health behavior. Notes from the group discussions were content analyzed and categorized according to theme. For the Director and Teacher Survey, answer frequencies were calculated for questions 1 through 4. The remainder of the survey was content analyzed within and between each school to look for similarities and differences in responses to open ended questions.

## **RESULTS**

### ***Calendar Data***

#### **Clymer Head Start**

While several children returned completed calendars at least once during the program, only two families completed and returned all six calendars. Data was entered and analyzed for 49 completed calendars with 18 families completing at least one calendar. Table 1 summarizes the means and standard deviations for each health behavior from week 0 through week 5 of the program.

**Table 1. Clymer Healthy Challenge Calendar Results**

	Servings of Fruit & Vegetables	Servings of Low-Fat Dairy	Servings of Soda/Sweetened Beverages	Fast Food Visits	Minutes of Physical Activity
<b>Week 0</b>	19.1 <sub>±</sub> 5.0	22.0 <sub>±</sub> 8.8	6.0 <sub>±</sub> 7.6	5.1 <sub>±</sub> 6.9	259.3 <sub>±</sub> 138.2
<b>Week 1</b>	25.5 <sub>±</sub> 6.4	27.0 <sub>±</sub> 2.8	3.5 <sub>±</sub> 4.9	3.0 <sub>±</sub> 2.8	330.0 <sub>±</sub> 42.4
<b>Week 2</b>	17.5 <sub>±</sub> 5.5	20.0 <sub>±</sub> 7.0	2.7 <sub>±</sub> 3.3	2.4 <sub>±</sub> 2.9	213.8 <sub>±</sub> 112.7
<b>Week 3</b>	17.1 <sub>±</sub> 8.1	15.4 <sub>±</sub> 10.3	4.1 <sub>±</sub> 5.3	1.7 <sub>±</sub> 2.1	201.7 <sub>±</sub> 107.9
<b>Week 4</b>	18.2 <sub>±</sub> 7.4	20.2 <sub>±</sub> 7.0	7.3 <sub>±</sub> 5.8	5.0 <sub>±</sub> 4.8	238.8 <sub>±</sub> 96.1
<b>Week 5</b>	20.3 <sub>±</sub> 7.1	20.9 <sub>±</sub> 5.3	5.0 <sub>±</sub> 3.5	4.0 <sub>±</sub> 3.4	266.7 <sub>±</sub> 115.7

Hawthorne Head Start

A total of 166 calendars were completed and returned for Hawthorne Head Start. Fifty-two parents completed at least one calendar. Table 2 summarizes the means and standard deviations for each health behavior. Although a few calendars were returned for week 0, each calendar only had one to two days of data filled out. Because of this lack of data for week 0 the results are summarized for weeks one through five only.

**Table 2. Hawthorne Healthy Challenge Calendar Results**

	Servings of Fruit & Vegetables	Servings of Low-Fat Dairy	Servings of Soda/Sweetened Beverages	Fast Food Visits	Minutes of Physical Activity
<b>Week 1</b>	16.5 <sub>±</sub> 7.3	17.2 <sub>±</sub> 6.3	4.5 <sub>±</sub> 5.1	1.6 <sub>±</sub> 2.3	210.6 <sub>±</sub> 115.3
<b>Week 2</b>	18.2 <sub>±</sub> 7.8	19.9 <sub>±</sub> 6.4	3.8 <sub>±</sub> 3.5	1.6 <sub>±</sub> 1.9	229.5 <sub>±</sub> 109.9
<b>Week 3</b>	17.5 <sub>±</sub> 7.9	17.4 <sub>±</sub> 7.0	2.9 <sub>±</sub> 3.2	1.9 <sub>±</sub> 2.1	225.0 <sub>±</sub> 121.1
<b>Week 4</b>	18.2 <sub>±</sub> 7.5	19.7 <sub>±</sub> 7.1	3.0 <sub>±</sub> 3.5	1.4 <sub>±</sub> 1.1	247.2 <sub>±</sub> 131.9
<b>Week 5</b>	20.1 <sub>±</sub> 8.6	21.2 <sub>±</sub> 7.7	3.3 <sub>±</sub> 4.0	1.6 <sub>±</sub> 2.4	250.4 <sub>±</sub> 148.0

### Little Scholars Head Start

Although this was the smallest Head Start site to participate, many families took the challenge and completed all six calendars. Data was entered and analyzed for 79 completed calendars, with 17 families returning at least one calendar. Table 3 summarizes the results for Little Scholars.

**Table 3. Little Scholars Healthy Challenge Calendar Results**

	<b>Servings of Fruit &amp; Vegetables</b>	<b>Servings of Low-Fat Dairy</b>	<b>Servings of Soda/Sweetened Beverages</b>	<b>Fast Food Visits</b>	<b>Minutes of Physical Activity</b>
<b>Week 0</b>	16.8 <sub>-</sub> 7.4	20.1 <sub>-</sub> 7.7	3.8 <sub>-</sub> 3.7	3.5 <sub>-</sub> 2.6	189.4 <sub>-</sub> 124.2
<b>Week 1</b>	17.6 <sub>-</sub> 8.0	20.7 <sub>-</sub> 8.0	3.1 <sub>-</sub> 3.3	3.9 <sub>-</sub> 4.1	193.1 <sub>-</sub> 115.0
<b>Week 2</b>	22.9 <sub>-</sub> 5.1	20.5 <sub>-</sub> 5.7	2.5 <sub>-</sub> 2.2	3.7 <sub>-</sub> 4.4	197.1 <sub>-</sub> 130.0
<b>Week 3</b>	19.3 <sub>-</sub> 4.6	20.5 <sub>-</sub> 5.7	2.1 <sub>-</sub> 2.3	3.1 <sub>-</sub> 2.5	125.0 <sub>-</sub> 98.1
<b>Week 4</b>	21.3 <sub>-</sub> 6.2	21.0 <sub>-</sub> 8.4	3.7 <sub>-</sub> 4.3	2.7 <sub>-</sub> 2.5	159.0 <sub>-</sub> 95.4
<b>Week 5</b>	20.7 <sub>-</sub> 6.0	20.8 <sub>-</sub> 9.4	2.3 <sub>-</sub> 2.4	2.9 <sub>-</sub> 2.2	178.9 <sub>-</sub> 125.4

### Metro Head Start

Nineteen families from Metro Head Start returned all six of the challenge calendars, and a total of 162 calendars with 31 families returning at least one calendar were analyzed. Table 4 summarizes the results for Metro Head Start.

**Table 4. Metro Healthy Challenge Calendar Results**

	Servings of Fruit & Vegetables	Servings of Low-Fat Dairy	Servings of Soda/Sweetened Beverages	Fast Food Visits	Minutes of Physical Activity
<b>Week 0</b>	19.5 <sub>±</sub> 7.5	19.8 <sub>±</sub> 7.2	6.3 <sub>±</sub> 6.6	6.5 <sub>±</sub> 7.1	306.2 <sub>±</sub> 119.1
<b>Week 1</b>	20.3 <sub>±</sub> 7.9	20.8 <sub>±</sub> 6.0	5.1 <sub>±</sub> 5.2	5.1 <sub>±</sub> 7.8	270.0 <sub>±</sub> 130.8
<b>Week 2</b>	20.9 <sub>±</sub> 7.2	21.7 <sub>±</sub> 7.1	3.2 <sub>±</sub> 4.5	3.3 <sub>±</sub> 5.2	287.5 <sub>±</sub> 108.6
<b>Week 3</b>	20.8 <sub>±</sub> 7.9	21.4 <sub>±</sub> 7.0	2.1 <sub>±</sub> 2.9	1.6 <sub>±</sub> 2.5	282.9 <sub>±</sub> 103.3
<b>Week 4</b>	20.9 <sub>±</sub> 8.4	19.4 <sub>±</sub> 7.9	3.9 <sub>±</sub> 5.0	3.8 <sub>±</sub> 4.4	283.4 <sub>±</sub> 106.2
<b>Week 5</b>	19.4 <sub>±</sub> 7.0	19.6 <sub>±</sub> 6.7	2.7 <sub>±</sub> 2.9	2.9 <sub>±</sub> 4.0	288.0 <sub>±</sub> 103.1

### All Head Start Sites Combined

Table 5 summarizes the results for all sites (n = 456) combined for each health behavior.

**Table 5. All Sites Combined Challenge Calendar Results**

	Servings of Fruit & Vegetables	Servings of Low-Fat Dairy	Servings of Soda/Sweetened Beverages	Fast Food Visits	Minutes of Physical Activity
<b>Week 0</b>	18.6 <sub>±</sub> 7.2	20.2 <sub>±</sub> 7.5	5.5 <sub>±</sub> 6.1	5.4 <sub>±</sub> 6.1	263.9 <sub>±</sub> 131.6
<b>Week 1</b>	18.1 <sub>±</sub> 7.8	19.1 <sub>±</sub> 6.7	4.4 <sub>±</sub> 4.8	3.1 <sub>±</sub> 5.1	228.5 <sub>±</sub> 122.6
<b>Week 2</b>	19.7 <sub>±</sub> 7.2	20.5 <sub>±</sub> 6.5	3.3 <sub>±</sub> 3.6	2.5 <sub>±</sub> 3.7	239.0 <sub>±</sub> 115.8
<b>Week 3</b>	18.7 <sub>±</sub> 7.6	18.6 <sub>±</sub> 7.6	2.7 <sub>±</sub> 3.3	1.9 <sub>±</sub> 2.3	226.5 <sub>±</sub> 119.7
<b>Week 4</b>	19.6 <sub>±</sub> 7.7	19.8 <sub>±</sub> 7.4	4.1 <sub>±</sub> 4.8	3.1 <sub>±</sub> 3.7	248.0 <sub>±</sub> 117.1
<b>Week 5</b>	20.0 <sub>±</sub> 7.2	20.5 <sub>±</sub> 7.3	3.0 <sub>±</sub> 3.3	2.7 <sub>±</sub> 3.3	254.0 <sub>±</sub> 127.4

### ***Group Discussion Results***

Four group discussions inviting 10 parents from each site were originally planned for this project. However, due to lack of participation at one site and time conflicts for parents, three group discussions with a total of 20 parents were conducted at Hawthorne, Little Scholars, and Metro Head Start schools. Overall, parents were very eager to share their thoughts and perceptions about the program and to provide suggestions for improvement for future, similar programs.

A content analysis of the notes taken from all three focus group discussions revealed five main themes:

1. The challenge calendars were easy to complete and parents became more aware of what they were eating as a family.
2. Fast food and soda/sweetened beverage consumption was the most difficult change for the families to maintain.
3. Parents enjoyed the newsletters, incentives, and family fun nights and found them to be helpful.
4. Parents reported some challenges with participating in the program and offered suggestions for improvement.

5. Despite some of the challenges, all parents agreed that they would participate in a future, similar program and would recommend the program to other families.

More detail for each theme is provided below.

**Theme #1: The challenge calendars were easy to complete and parents became more aware of what they were eating as a family.**

Overall, parents loved the Healthy Family Challenge and found the challenge calendar simple to complete. All of the parents agreed that the increased awareness of not only what they were feeding their children, but what they were eating as a family. Parents felt that, once they had to track what was being served at home on a daily basis, they were more "accountable" and "conscious" of what they decided to feed their families. Parents also felt that the calendar helped in "setting a better example for their children" in that they wanted to model positive eating habits. Some of the parents felt their children were more open to trying new and different foods once the challenge began. Parents also claimed their children "hassled" them on a daily basis to fill out the calendar because they liked the prizes received each week.

Parents also reported that because the calendar was so simple to complete, other family members, including older siblings, were able to help. Parents felt that the calendar and newsletter "stood out from our normal paperwork" which made it easier to prioritize. Overall, parents liked the layout of the calendar, which included the serving sizes, along with the weekly newsletters and recipes they received.

**Theme #2: Fast food and soda/sweetened beverage consumption was the most difficult change for the families to maintain.**

Almost all of the parents agreed that fast food was the most difficult behavior to change. While parents admitted that they continued to visit fast food restaurants, they became more conscious of what they were eating and opted for healthier options, such as fruit or yogurt, if available. Parents enjoyed the simple recipes included with each week's calendar and agreed that more recipes and "sample menus" would have been even more helpful in encouraging them to cook meals at home.

Soda and sweetened beverage intake was also reported as a hard habit to break. As one parent reported "Soda is something I like, it's a hard habit to break." However, one mother stated that her son "called out his dad" for drinking too much Mountain Dew and told his father that it was "bad for him." Parents liked that children were learning to choose healthier options and reported that the weekly incentives helped to reinforce positive behaviors.

Although not listed as a major problem, some of the parents did agree that getting in physical activity during the winter months was difficult. Parents reported that it would have been helpful for each newsletter to include an indoor physical activity that could be done when it was too cold to go outside.

**Theme #3: Parents enjoyed the newsletters, incentives, and family fun nights and found them to be helpful.**

Parents found the weekly newsletters, especially the recipes, to be helpful. Many parents reported trying some of the recipes at home and that children were included in the preparation. The incentives were also extremely popular. Parents reported liked that they could use everything at home, especially the measuring cups and spoons. Parents at Little Scholars also reported that they enjoyed receiving the weekly produce, especially the blood oranges and asparagus, and that it encouraged them to try new foods.

The family fun nights at each school were also well-liked. All of the parents enjoyed the fun nights, which allowed for all family members to participate. Parents reported that they would love to have more family fun nights in the future and even expressed interested in other activities, such as a cooking class.

**Theme #4: Parents reported some challenges with participating in the program and offered suggestions for improvement.**

Although most of the parents found the calendar simple to complete, a couple of parents found it confusing, especially tracking physical activity. Parents reported that it was difficult to keep track of activity because "my kids are up and down, off and on, so it's hard to time that kind of stuff." Some of the parents would like to have written in what their children were doing as opposed to circling number of minutes. One parent also explained she would have preferred everything to be tracked on one document for the entire program, then turned in at the end of the six weeks.

Although fast food and soda consumption were listed as the biggest challenges for families, a few parents also had difficulty with changing some of the other behaviors. Some parents found that purchasing fresh fruit and vegetables was challenging due to cost and because produce often spoils. A couple of parents also indicated that they could not afford to purchase yogurt needed for some of the provided recipes, and would have liked different options. Furthermore, parents reported that they personally did not like to drink milk, so it was difficult to encourage their children to do so. Parents wanted additional suggestions for increasing low-fat dairy consumption without the worries of having to purchase costly items.

Although most parents enjoyed the newsletters, a few indicated that they did not even read them due to the amount of paperwork that is already sent home. A few parents also agreed that there was "too much" on the newsletters and the amount of information packed in them could be overwhelming. Parents suggested that the newsletters contained a "Suggestions from Other Parents" section because they were curious what other families were doing to promote healthy behaviors, and what they were cooking at home. For the most part, parents agreed that sample menu plans using relatively inexpensive ingredients commonly used at home would have been very helpful.

Finally, almost all of the parents agreed that one of the most difficult about the program was simply remembering to bring the completed calendars back to school. Parents explained that they eventually got into a rhythm of completing and returning the calendars, and that their children were very good at reminding them. However, by the time they got used to completing and returning them, the program was over.

**Theme #5: Despite some of the challenges, all parents agreed that they would participate in a future, similar program and would recommend the program to other families.**

All of the parents overwhelmingly agreed that, with a few changes, they would participate in future programs, and would encourage other families to take part as well. When asked how long they could continue with such a program, the results were mixed. Many parents thought that the length of the six week program was fine. Other parents agreed that they missed the calendars and that because it was so simple and they were seeing changes with how their families were eating they could have continued with the program for several more weeks.

Overall, parents agreed that they did see some changes with how their family was eating, particularly with trying to change their fast food and sugary beverage habits. Parents maintained that change was difficult to sustain but the weekly calendars were helpful with accountability. Parents agreed that by participating in the program, they gained successful tools and resources to make small steps to promoting positive changes in their family's health.

#### ***Site Director and Teacher Survey Results***

A total of eight Head Start directors and staff members returned completed surveys. Job titles for those returning surveys included:

- Director = 1
- Family Service Specialist = 1
- Family Advocate = 3

- Teacher Assistant = 2
- Head Start Instructor = 1

The first question of the survey asked staff members to rate how helpful the program was in motivating families to improve the targeted healthy behaviors. Six of the teachers (75%) reported that the program was very helpful or helpful in motivating the families. Only two people (25%) reported that the program was only somewhat helpful. Staff reported that decreasing soda consumption and fast food visits were the most difficult behaviors to improve.

All of the staff members reported that they read all or most of the newsletters. Four (50%) staff members felt that the newsletters and recipes were very helpful or helpful for the families participating in the program, while the remainder of the staff reported that the newsletters and recipes were only somewhat helpful.

Staff members offered suggestions for other topics that parents may have found useful in the newsletters including:

- Healthy eating on a budget
- Community events and activities targeted for families
- More information on fruits and vegetables
- Physical activities that families can do together

Staff members were asked to rate how easy it was to distribute the weekly challenge calendars and newsletters to the families. Seven staff members (88%) reported that it was very easy or easy to distribute the packets. Only one person reported that it was somewhat difficult, but attributed this to her busy schedule due to working at two other schools.

Staff members reported that parents were talking about the Healthy Family Challenge and how it was changing behaviors within the home. Some of the most commonly heard conversations about the program they overheard included:

- The realization of increased calories they were consuming from eating out
- The newsletters and recipes were helpful in changing negative health habits at home
- Parents were offering children healthier snacks
- The incentives were very popular and helpful
- Overall, the program was helpful and easy to follow

All of the staff members agreed that there were many positive benefits from the program. Some of the things they liked the best included the incentives, newsletters, recipes, and the fact that the program made families more aware of their health

habits. They further agreed that this program initiated more conversation between parents and children about food and exercise. Their only complaint was that it took some time for the program to catch on with both parents and staff members.

Staff members provided several suggestions for future programs targeting parents to adopt healthy behaviors within the home including:

- Continue to provide education for families and child care sites
- Incorporate cooking activities with the families
- Involve the community
- Ask for donations for healthy food items
- Include coupons or vouchers for parents to purchase healthy food items
- Provide more suggestions for healthy meals that would be easy and inexpensive to prepare at home

Overall, staff members agreed that the program was beneficial to the families who participated. The newsletters and recipes were popular and staff reported that they would overhear parents talking about the Healthy Family Challenge. Although parents and staff were slow to catch on, everyone agreed that the program made a positive impact.

## DISCUSSION

Behavior change is hard, and maintaining change is even more difficult, especially when hectic lifestyles are factored in. However, each site improved in at least one behavior change over the course of the program, and overall, parents had very positive perceptions of the program.

- Clymer made steady improvements in fruit and vegetable consumption
- Hawthorne increased consumption of fruit and vegetables and low-fat dairy and also showed some improvement by consuming less soda/sweetened beverages. Hawthorne students also increased their minutes of physical activity over the course of the program.
- Little Scholars showed improvement with fruit and vegetable intake and were also able to slightly decrease weekly fast food visits over time.
- Metro decreased servings of soda/sweetened beverages and fast food visits.
- All sites combined slightly improved in fruit and vegetable servings, servings of soda/sweetened beverages, and fast food visits.
- Overall, parents reported the program to be a positive experience and that they were able to make some positive dietary changes, especially in decreasing servings of soda/sweetened beverages and fast food visits.

- Parents enjoyed the newsletters, incentives, and attending the family fun night events and indicated that they would participate in future family nights if offered.
- All parents agreed they would participate in a future, similar program if made available and would recommend the program to other families.
- Staff members felt the program was a positive experience and found it easy to deliver.

### CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this six-week program the following conclusions can be made:

- Positive findings were observed in some of the targeted health behaviors at each Head Start site.
- Families enjoyed participating in the program and gained tools and resources to use to continue promoting positive dietary and physical activity in the household.
- The children served as messengers of change by insisting that the calendars be completed and by making other family members aware of healthy and unhealthy food and beverages.
- Parents realized they serve as powerful role models in their own dietary and physical activity behaviors and worked on trying to change some of the negative family health habits.
- The program was beneficial for the parents who participated in the program.
- The newsletters, recipes, and incentives were helpful to the families in making positive dietary changes within the home setting.
- The program was simple for Head Start staff to deliver and for families to participate in.

Based on the results of challenge calendar data and group discussions, the following recommendations can be made for future, similar programs:

- More emphasis needs to be placed on fruit and vegetable consumption. While slight increases were observed in servings of fruits and vegetables, the servings reported were still far below the recommended 5 to 9 servings of fruits and vegetables. More information on how to increase fruit and vegetable consumption needs to be provided to parents.
- Servings for soda/sweetened beverages were also reported to be high among many of the sites. Again, more information should be provided to parents on how to encourage consumption of low-fat milk and water.
- All sites agreed that decreasing fast food was a problem throughout the program. Head Start schools should consider providing sample menu plans and cooking classes for parents and children to increase home-cooked family meals.

- The National Association for Sport and Physical Education recommends that preschoolers engage in at least two hours of moderate to vigorous physical activity most days of the week. However, even with physical activity at school, children were still falling below these recommendations. More information about community events that promote physical activity and what parents can do at home to boost physical activity levels must be made a priority to promote lifelong involvement in regular physical activity.
- To foster more parent involvement, promotion of similar programs is needed. Additional collaborations with site directors, teachers, family advocates, and parents need to be established in order to encourage participation.
- While most parents agreed that the calendar was simple to complete, some of them also reported that they are bombarded with paperwork from school and other programs, such as WIC, and that a more efficient method of tracking health behaviors should be considered.
- Encourage parents to bring their own ideas and suggestions to the table and to create opportunities at the school for parents to get together and share their own experiences and ideas.
- Efforts should be made to provide continuing education to the parents that involve hands-on activities, such as cooking classes, which involve the entire family.

Based on the positive results of the program Head Start schools should consider more applied programs to address the health of children and families. It is critical to develop programs that take into account hectic family schedules and to not overwhelm parents with information. The results of this program may be beneficial to other Head Start programs who must offer nutrition and other health programs to families.

## REFERENCES

- Allen, R. E., & Myers, A. L. (2006). Nutrition in toddlers. *American Family Physician, 74*, 1527-1532.
- American Academy of Pediatrics Committee on Nutrition. (2001). The use and misuse of fruit juice in pediatrics. *Pediatrics, 107*, 1210-1213.
- American Academy of Pediatrics. (2003). Prevention of pediatric overweight and obesity. *Pediatrics, 112*, 424-430.
- American Dietetics Association Reports. (2004). Position of the American Dietetic Association: Dietary guidance for healthy children ages 2 to 11 years. *Journal of the American Dietetic Association, 104*, 660-677.
- Borud, L., Enns, C. W., & Mickle, S. (1997). What we are: USDA surveys food consumption changes. *Nutrition Weekly, 27*, 4-5.
- Dennison, B. A., Russo, T. J., Burdick, P. A., & Jenkins, L. (2004). An intervention to reduce television viewing by preschool children. *Archives of Pediatric and Adolescent Medicine, 158*, 170-176.
- Freedman, D. S., Mei, Z., Srinivasan, S. R., Berenson, G. S., & Dietz, W. H. (2007). Cardiovascular risk factors and excess adiposity among overweight children and adolescents: The Bogalusa Heart Study. *Journal of Pediatrics, 150*(1), 12-17.
- Gable, S., Chang, Y., & Krull, J. L. (2007). Television watching and frequency of family meals are predictive of overweight and onset of persistence in a national sample of school-aged children. *Journal of the American Dietetic Association, 107*, 53-61.
- National Head Start Association. (2008). Annual Report 2007. Retrieved September 3, 2007 from the National Head Start Association. Web site: <http://www.nhsa.org/download/about/AnnualReport2007.pdf>.
- Nielson, S. J., Siega-Riz, A. M., & Popkin, B. M. (2002). Trends in energy intake in U.S. Between 1977 and 1996: Similar shifts seen across age groups. *Obesity Research, 10*, 370-378.

- O'Connor, T. M., Yang, S., & Nicklas, T. A. (2006). Beverage intake among preschool children and its effect on weight status. *Pediatrics, 118*, 1010-1018.
- Ogden, C. L., Carroll, M. D., & Flegal, K. M. (2008). High body mass index for age among U.S. children and adolescents, 2003-2006. *Journal of the American Medical Association, 299*, 2401-2405.
- Robinson, T. N. (1999). Reducing children's television viewing to prevent obesity. *Journal of the American Medical Association, 282*, 1561-1567.
- Robinson, T. N. (2001). Television viewing and childhood obesity. *Pediatric Clinics of North America, 48*, 1017-1025.
- Serdula, M. K., Ivery, D., Coates, R. J., Freedman, D. S., Williamson, D. F., & Byers, T. (1993). Do obese children become obese adults? A review of the literature. *Preventive Medicine, 22*, 167-177.
- Sharma, A. J., Grummer-Strawn, A. J., Daenius, K., Galuska, D., Ananduppa, M., Borland, E., Mackintosh, H., & Smith, R. (2009). Obesity prevalence among low-income, preschool-aged children—United States, 1998-2008. *Morbidity and Mortality Weekly Report, 58*(28), 769-770.
- Whitaker, R. C., Wright, J. A., Pepe, M. S., Seidel, K.D., & Dietz, W. H. (1997). Predicting obesity in young adulthood from childhood and parental obesity. *New England Journal of Medicine, 37*(13), 869-873.

**APPENDIX A:**  
**DIRECTOR AND TEACHER SURVEY**

## HEALTHY FAMILY CHALLENGE

*Please complete both sides of this evaluation about the Healthy Family Fun Challenge that was completely recently at your school. Your comments and suggestions are very important to us.*

Please indicate your job title: \_\_\_\_\_

Date: \_\_\_\_\_

1. Overall, how helpful was the Healthy Family Challenge to motivate families to improve the targeted healthy behaviors?

\_\_\_\_\_ Very helpful  
\_\_\_\_\_ Helpful  
\_\_\_\_\_ Somewhat helpful  
\_\_\_\_\_ Not helpful  
\_\_\_\_\_ I'm not sure

2. What do you believe was the most difficult behavior for families to improve?

\_\_\_\_\_ Increase fruits and vegetables  
\_\_\_\_\_ Decrease soda consumption  
\_\_\_\_\_ Increase physical activity  
\_\_\_\_\_ Decrease fast food visits  
\_\_\_\_\_ Increase low-fat dairy  
\_\_\_\_\_ Not sure

3. How helpful were the weekly newsletters and recipes that were shared with families attending your center?

\_\_\_\_\_ Very helpful  
\_\_\_\_\_ Helpful  
\_\_\_\_\_ Somewhat helpful  
\_\_\_\_\_ Not helpful  
\_\_\_\_\_ Not sure

**3a. Did you get a chance to read the weekly newsletters?**

- Yes
- Some newsletters, but not all
- No

**3b. If yes, did the newsletters provide good tips and resources for parents? Why or why not?**

**3c. What other kind of nutrition and physical activity topics would you have liked to see in the newsletters?**

**4. How difficult was it for you and your staff to distribute weekly the challenge calendars and newsletters to the families at your center?**

- Very easy
- Easy
- Somewhat difficult
- Very difficult

**4a. If you answered "Somewhat difficult" or "Very difficult" please explain the type of difficulties encountered.**

**4b. What would you do to make the distribution easier for future programs?**

5. What were parents at your center sharing with you about the challenge calendar and newsletters?
  
6. Overall, what did you like BEST about the Healthy Family Challenge?
  
7. What did you not like about the Healthy Family Challenge?
  
8. What suggestions can you provide us to help motivate parents to adopt healthy behaviors for their families?

Thank you for your time and effort.  
We appreciate your feedback!