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## ***FORMATIVE RESEARCH ON NUTRITION, PHYSICAL ACTIVITY, AND ELECTRONIC MEDIA USE IN THE CHILD AND ADULT CARE FOOD PROGRAM***

### **Appendix 1: Environmental Scan**

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## **I. OPINION RESEARCH REVIEW**

### **i. INTRODUCTION AND METHODOLOGY**

The Child and Adult Care Food Program (CACFP) commissioned Draftfcb, Weber Shandwick and KRC Research (“Research Team”) to conduct original formative research to inform the development and implementation of its training, technical assistance, guidance, and education materials related to nutritional requirements and wellness recommendations in three technical areas: nutrition, physical activity and electronic media use. In advance of conducting formative research, the research team conducted an environmental scan. This scan includes three components:

- Literature review of current opinion research;
- Wellness education review and evaluation; and
- Communication channel review.

The purpose of the environmental scan is to inform development of the content of the formative research, both by providing a foundation to build upon with new research and also by identifying key research gaps.

This document reflects the first component, the literature review: a comprehensive scan of recent opinion research on nutrition, physical activity and electronic media guidelines and practices among young children, 0 to 5 years old. For this review, the research team examined opinion research conducted from 2006 to present. Whenever possible, our focus is on the target age range (0 to 5). However, as there is a limited amount of original research conducted among this age range, we also examined relevant research which encompassed a wider age range (for example, 0 to 8) or an older age range.

## ii. KEY FINDINGS

This review is intended to profile provider perceptions, policies, and practices in child care centers and family day care homes for children age 5 and under that may either promote or inhibit successful implementation of federal nutritional requirements and wellness recommendations in nutrition, physical activity, and electronic media use. An important but perhaps obvious finding from our review is there is a dearth of information on this topic and original information is needed.

Given the limited information available, this review focuses on any available information from a variety of audiences (the general public, parents and guardians, teachers, etc.), both quantitative and qualitative, that may provide context and content for development of original formative research on the topic. Importantly, the three areas of focus – nutrition, physical activity and electronic media use – are interrelated, so a great deal of research we uncovered often touches upon more than one of the three topics. Following is what we learned from recent published and unpublished literature:

### **Attitudes on Children and Weight**

- 1. There is a perception gap between the proportion of parents or guardians of children ages 2 to 17 who say their child is overweight and statistics from the Centers for Disease Control and Prevention. Parents or guardians tend to overlook or underestimate the problem.**

The CDC reports that about a third of children are overweight or obese. According to those surveyed in a recent NPR/Robert Wood Johnson Foundation/Harvard School of Public Health survey, far fewer than one-third say their child is overweight or obese.

- 2. When a child's height and weight are used to calculate if they are at a healthy weight, overweight or obese, the proportion of children that are overweight or obese more closely matches the CDC figures.**

This raises questions about not just parents' perceptions of their child's weight but also their perceptions of a "healthy weight" compared to being overweight or obese.

## Nutrition

- 3. Parents are aware of the importance of healthy eating and physical activity and its relationship to healthy weight. They are also aware of the rising risks of childhood obesity.**

Lack of exercise and childhood obesity surpass parents' other health concerns for children in a recent survey. At the same time, though, parents (and moms, in particular) do not always recognize or acknowledge that their own child is overweight or obese. This suggests that parents' knowledge of the importance of healthy behaviors does not regularly extend to actually promoting those healthy behaviors. In fact, parents often find it challenging to get their children to eat more fruits and vegetables as well as to keep children physically active during the school year.

- 4. The public believes that educational institutions can play a positive role in fostering healthy eating but they may not perceive meals in these locations as a source of the problem.**

Policies targeted at promoting healthy eating in schools are popular. For children ages 0 to 5, this widespread support could mean similar attitudes on promoting healthy eating in child care settings.

- 5. Conversely, obstacles to healthy behaviors include the high cost of healthy food and sedentary activities.**

In addition to these obstacles, there are also negative influences from institutions such as the media and food industry. However, schools are not seen as a major negative influence, further underscoring the value of this setting to promote healthy behaviors.

## Physical Activity

- 6. As with healthy eating, parents acknowledge the connection between physical activity and being at a healthy weight.**

Still, these values are not always consistent with their behaviors, with a significant minority of parents reporting that it is difficult to make sure their children get enough physical activity each day.

- 7. Many child care providers appear to recognize that a child care setting may be the only opportunity children have to play outside each day.**

Still, few child care centers report that children meet the Academy of Pediatrics' recommended levels of physical activity—and 4 in 10 do not provide any physical activity.

### **Electronic Media Use**

- 8. The study of electronic media use among children is a fast-moving target. Guidelines may be more vulnerable to criticism or rejection because technology is not seen as a negative influence in the way sedentary activity and high-fat/high-sugar foods are perceived.**

For years, electronic media use was confined to a few types of technology, namely television and video/DVD, and eventually, computers. Today, electronic media is diverse and evolving quickly. The diversity of and constant changes in technology as well as mixed messages about the possible educational benefits of electronic media use for children make this topic more difficult to navigate than nutrition and physical activity guidelines. While nutrition and physical activity guidelines may vary by a child's age, there is greater clarity around best practices and recommendations with respect to these two topics. By contrast, parents see benefits to technology, going as far as to classify apps as educational and thinking technology is important for success in school and the future. As a result, encouraging and integrating guidelines on electronic media use may prove more difficult.

- 9. Most parents say their children's pediatrician have not discussed the guidelines for electronic media use.**

Given the ubiquity of electronic media and the existing range of electronic media children are exposed to and how technology use is identified as a barrier to physical activity, it is instructive to learn that pediatricians are not engaging in a larger conversation with parents about healthy habits. It is also important to highlight this gap in communications exists even with *The Journal of Pediatrics'* 2010 article that concluded preschoolers' cumulative screen time exceeds recommendations for their age.

## **Barriers to Implementing Nutrition, Physical Activity and Electronic Media Use Recommendations**

### **10. Cost is a top barrier to integrating nutrition, physical activity and electronic media recommendations and guidelines in child care facilities.**

Previous research among state representatives related to Quality Rating and Improvement Systems (QRISs) identifies some challenges related to implementing nutrition, physical activity and electronic media guidelines in a child care setting. Importantly, cost is seen not just as a barrier to implementing healthy behavior recommendations but also to getting the appropriate training required prior to integration and implementation.

### **11. Looking specifically at Head Start programs, cost is a top barrier to promoting practices related to healthy eating and physical or gross motor activity.**

At the program level, Head Start providers rank lack of money to cover the cost of healthier meals and snacks ahead of other challenges. This audience also sees cost as a barrier to healthy eating at the parent level. Lack of money for additional equipment tops the list of barriers to gross motor activity for Head Start children at the program level.

## **Target Audience Profiles**

### **12. Providers are primarily women and have low levels of education.**

Even though some states require child care workers to have at a minimum a high school diploma or GED, the education level of child care center workers is similar to family day care home workers. In both settings, only a minority of child care workers have an associate's degree or higher.

### **13. There are over 800 sponsoring organizations across the 50 states and the District of Columbia.** While detailed information concerning organizational structure of the sponsoring organizations is limited, the highest concentration of sponsoring organizations is in the South with the smallest number in the Midwest.

### iii. IMPLICATIONS

Following are implications for the upcoming formative research:

- 1. There is a clear need for formative research.** The planned formative research, once completed, will fill a gap and be the most current as well as comprehensive single study of the target age range about nutrition, physical activity and electronic media use from the perspective of child care providers.
- 2. Currently, child care stakeholders often approach recommended practices related to nutrition, physical activity and electronic media use through the prism of child obesity, but more research is needed to understand attitudes on obesity as well as attitudes on each of the focus areas.** Existing research documents parents and also the general public's views on childhood obesity as a health concern. Past studies also explore parents' awareness of the interplay of nutrition, physical activity and electronic media use relative to childhood obesity, but there is no data explicitly connecting these topics from the perspective of child care stakeholders as a group. There is also no research showing the importance of promoting healthy habits independent of the discussion around childhood obesity, so the formative research is an opportunity to understand perceptions and general values related to these topic areas individually.
- 3. Parents perceive educational institutions as playing an important role in fostering good habits among children, so they would not seem to be a major barrier to promoting healthier eating or physical activity in child care settings.** On the other hand, parental attitudes on food or cultural norms related to food could present challenges to child care providers. In addition, parental fear of childhood accidents may be a serious barrier to fostering greater levels of physical activity.
- 4. Child care providers modeling healthy habits can be integral to promoting these habits in young children, but it is unclear from current research if providers understand the role they can play.** Recognizing the value and long-term benefits of promoting healthier behaviors among children at an early age, there is a need to understand child care providers' views on just how important integrating and modeling these behaviors is in child care settings. There is no existing research that shows child care providers' awareness of how what children ages 0 to 5 are exposed to can impact them as they get older, namely with respect to childhood obesity. Similarly, the formative research can also

determine how aware state agencies and sponsoring organizations are of this link between exposure to healthy behaviors at an early age and longer-term health.

5. **Promoting physical activity at home and in child care settings at an early age is likely to have long-term health benefits, but it is unclear the extent to which parents' pressure to focus on academics may impact child care providers' behaviors.** Research has been conducted to look more closely at physical activity and organized team sports among third through 12<sup>th</sup> grades. However, while this research provides a snapshot of exercise and sports among a certain age group, it does not explore when these children became more engaged in consistent physical activity and the importance, if any, in their views or their parents' or other adults' views of encouraging physical activity in children at a very early age (the report does look at age of first involvement in organized or team sports, though). This is not necessarily a limitation of the report, as the goals were "to help policymakers assess the current state of U.S. girls' and boys' physical activity and sports."<sup>1</sup> Still, it raises questions about the need to study attitudes on physical activity at an even earlier age to make sure children are exposed to behaviors that promote their health and well-being even before they are old enough to engage in team sports.
6. **The research points to both educational and entertainment motivations to expose children to electronic media, both in a school setting and at home.** It will be important to better understand the balance of these motivations, specifically how often electronic media is used as a babysitter, compared to how often it is justified as having educational value. Importantly, it will help to further evaluate how the latter affects attitudes (among both child care providers and parents) as to when and how often child care centers are employing electronic media.
7. **Recognizing that electronic media continues to evolve, the right and wrong practices here are harder to untangle than with nutrition and physical activity. In addition, since both parents and teachers may see benefits to electronic media, child care providers could be unclear about best or recommended practices.** Formative research should look more closely at specific types of electronic media and might help untangle opinions about the use and benefits of technology.

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<sup>1</sup> Sabo, Don and Phil Veliz, "Go Out and Play: Youth Sports in America," October 2008.

**8. Training and technical assistance for child care providers is needed for greater adoption of nutrition, physical activity and electronic media use recommendations.**

This assistance can include a range of topics, but the formative research should explore this in as much detail as possible, including what types of training generate the greatest interest (from what are the recommended best practices to how to read nutrition labels to how to encourage healthier habits in children who might be uninterested in vegetables) and also how to make this assistance most accessible to the target audiences.

#### iv. DETAILED FINDINGS

##### Attitudes on Children and Weight

###### Attitudes on Children and Weight: At a Glance

- Americans are concerned about a range of issues related to children’s health, but their top concerns focus on inadequate exercise and obesity.
- Still, parents may not necessarily equate a child’s weight with their physical health. In fact, only a minority of parents describe physical health as a top concern for their own children.
- Importantly, there is also a disconnect between perceptions of a child’s weight and the Centers for Disease Control and Prevention’s assessment of childhood obesity: 15 percent of parents or guardians of children ages 2 to 17 say their child is overweight while the CDC reports that a third of children are overweight or obese.
- In another study, researchers used mothers’ reports of their child’s height and weight to determine whether a child was at a healthy weight, overweight or obese. This analysis, rather than a parent’s self-report, classifies 34 percent of children as overweight or obese, which is more in line with the CDC figures than parent’s perceptions of their child’s weight.

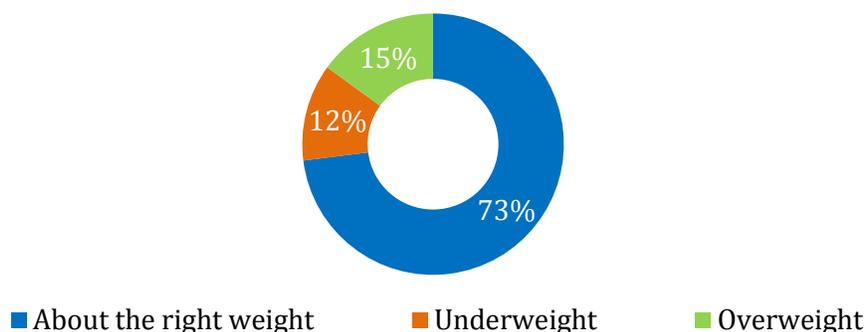
The relationship of nutrition and exercise to obesity is well known. Yet, in recent years, the media and other organizations have emphasized—even fixated on—childhood obesity as central to the narrative. Although the national increase in obesity warrants a great deal of attention, it has in some ways limited or framed the scope of recent research. Thus, many recent research studies we uncovered on nutrition and exercise have looked at these topics through the lens of childhood obesity. For example, last summer, the C.S. Mott Children’s Hospital released the results of its sixth annual survey on children’s health.<sup>2</sup> The survey is conducted yearly among the general public (adults 18 and older), thus, the findings extend beyond just parents. The latest research revealed that, when it comes to children’s health, U.S. adults are most concerned about inadequate exercise and obesity. Thirty-nine percent and 38 percent, respectively rate these as “big problems” for children today. Among Caucasians, African Americans and Hispanics, inadequate exercise and obesity among children are considered two of the top three big problems today.

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<sup>2</sup> “C.S. Mott Children’s Hospital National Poll on Children’s Health,” August 2012.

Among parents, most do not see physical health as a top concern for their children. Only 21 percent see overall physical health as a top concern for their children.<sup>3</sup> Parents' inaccurate assessment of their children's appropriate weight may compound or be directly correlated to this lower prioritization of physical health. They may also not equate physical health with a healthy weight. The majority of parents believe that their child is about the right weight. Specifically, according to an NPR/Robert Wood Johnson Foundation/Harvard School of Public Health survey among parents or guardians of children ages 2 through 17, 73 percent say their child is the right weight.<sup>4</sup> The rest of those surveyed split between saying their child is underweight (12 percent) or overweight (15 percent). Those surveyed are also unlikely to be concerned that their child will be overweight when he or she is an adult. The vast majority of parents or guardians are either not very or not at all concerned about their child being overweight in the future (80 percent). One in five are concerned (20 percent), though only 7 percent are very concerned.

### ***Parents' Assessment of Child's Weight***



This self-reported assessment of a child's weight reveals a disconnect between parents' or guardians' perceptions of weight and the Centers for Disease Control and Prevention's statistics on childhood obesity. The CDC website, citing a 2010 article from the *Journal of the American Medical Association*, states that more than one-third of children and adolescents are overweight or obese.<sup>5</sup> This is twice as high as the number of parents or guardians in the NPR/Robert Wood Johnson Foundation/Harvard School of Public Health survey who said their child is overweight.

<sup>3</sup> "YMCA's Family Health Snapshot," April 2012.

<sup>4</sup> "A Poll About Children and Weight: Crunch Time During the American Work and School Week – 3pm to Bed," February 2013.

<sup>5</sup> "Childhood Obesity Facts," 2013.

An earlier study among mothers looked more closely at this disconnect, asking survey respondents to provide information about their child’s health and weight.<sup>6</sup> Using this information, a child’s BMI was calculated. Consistent with the CDC statistic, a third of children were classified as overweight or obese (34 percent). However, most of the mothers with children who met the criteria for being overweight report that their child is at a healthy weight (76 percent). Among the mothers whose child is classified as obese, 59 percent say their child is overweight, and another 36 percent believe their child is at a healthy weight.

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<sup>6</sup> “How American Moms Perceive Childhood Obesity: A Survey of the Obstacles Keeping Moms from Improving their Children’s Weight Status,” March 2011.

## Nutrition

### Nutrition: At a Glance

- Adults and parents understand the value of good childhood nutrition, recognize the relationship between diet and weight, but find it difficult to implement health and wellness best practices for themselves and their children.
- Adults and parents believe schools should play an important role in childhood health and nutrition.
- Among parents, the biggest perceived obstacles to healthy behaviors are the higher cost of healthy foods, easy access to unhealthy but appealing food, and sedentary activity including televisions and computers.
- Among parents, the biggest perceived negative institutional influences are the media and the food industry. Schools are not perceived as a major negative influence.
- Behaviors and knowledge gaps among teachers may also be a barrier to fostering healthy eating habits in schools.
- Most parents or guardians prepare personalized meals for their children, rather than using pre-packaged food, without involvement from their child on what food is served.

#### *Attitudes on Nutrition: Importance of Healthy Eating and Role of Schools in Promoting It*

On the whole, most parents recognize the importance of how their child eats, though some find it especially challenging to ensure their child eats in a healthy way. Parents or guardians of children ages 2 to 17 believe it is important to them that their child eats in a way that helps him or her maintain or achieve a healthy weight (95 percent important, 82 percent very important). At the same time, a significant number of this audience find it difficult to make sure their child eats in a way that helps him or her maintain or achieve a healthy weight (44 percent difficult).<sup>7</sup> One in six find it *very difficult* for them to make sure their child eats in a way that is aligned with a healthy weight (16 percent).

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<sup>7</sup> “A Poll About Children and Weight: Crunch Time During the American Work and School Week – 3pm to Bed,” February 2013.

A YMCA study sheds some light on what might be proving difficult, with 45 percent of parents with children ages 5 to 12 reporting that they have a hard time getting their children to eat the recommended daily serving of eight fruits and vegetables. Parents are not modeling healthy habits either; only one in 10 say they eat at least the recommended daily serving of fruits and vegetables themselves (9 percent).<sup>8</sup>

Current research confirms that the majority of Americans see schools as contributing to the larger effort to promote healthy eating among children. In particular, Americans say schools play an important role in protecting children's health and have a responsibility to make sure children are eating properly throughout the day (82 percent).<sup>9</sup> Similarly, the public agrees that strong and well-funded child nutrition programs in America's schools are essential for promoting children's health and fighting obesity. Going one step further and thinking about a federal law that regulated what school districts could serve for meals and snacks on school grounds, about six in 10 believe that school-wide nutritional standards would be effective in the larger effort to reduce childhood obesity (59 percent).<sup>10</sup>

When comparing support for different actions to promote healthy eating habits, policies that impact schools find higher levels of support than other policies. In fact, the majority of parents surveyed in a recent study by The Rudd Center for Food Policy & Obesity at Yale University support strengthening nutrition standards for school lunches and all school foods.<sup>11</sup> There is also strong support for only supplying healthy foods in school vending machines and restricting some types of food marketing, including a ban on food-related school bus advertisements. The research does not provide insights about this prioritization among parents, but some variables influencing greater support for school-related activities may include the amount of time children spend at school as well as the feasibility and responsibility of an institution like schools to promote healthier habits in children. Parents may not hold the advertising or fast food industries to a similar standard or think that policies targeting these groups will actually take effect.

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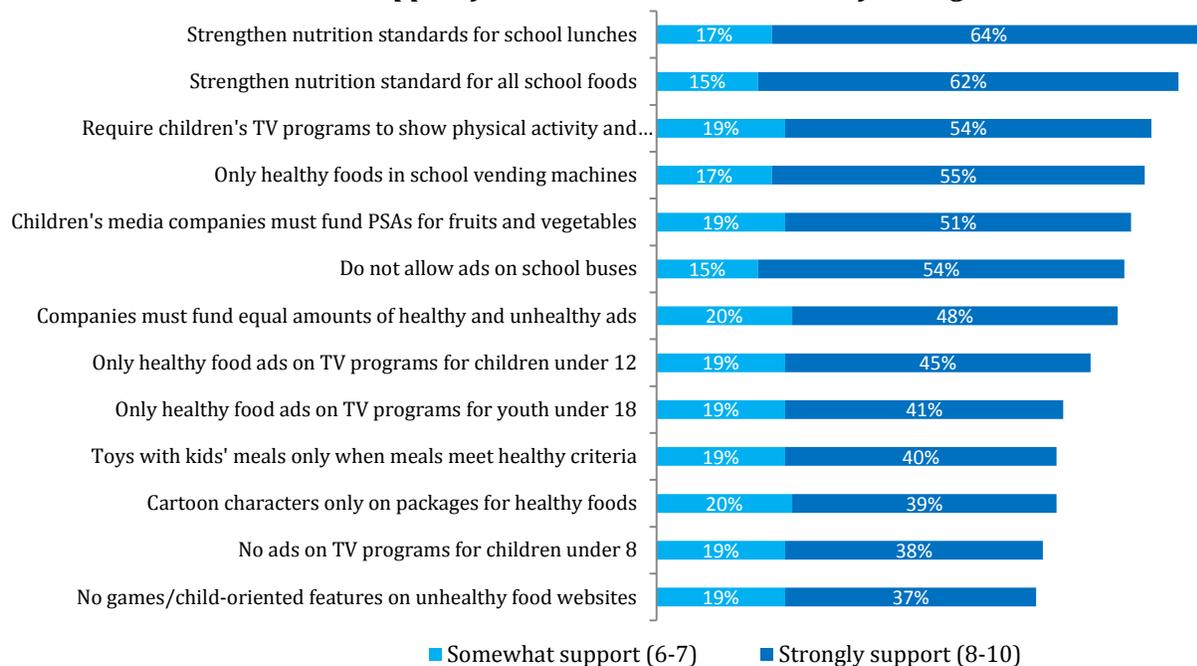
<sup>8</sup> "YMCA's Family Health Snapshot," April 2012.

<sup>9</sup> "Child Nutrition Initiative," February 2010.

<sup>10</sup> "Americans Favor Limiting Sale of Unhealthy Food in Schools," March 2013.

<sup>11</sup> "Harris, Jennifer L. et al., Food Marketing to Children and Adolescents: What Do Parents Think?," October 2012.

### Support for Actions to Promote Healthy Eating Habits

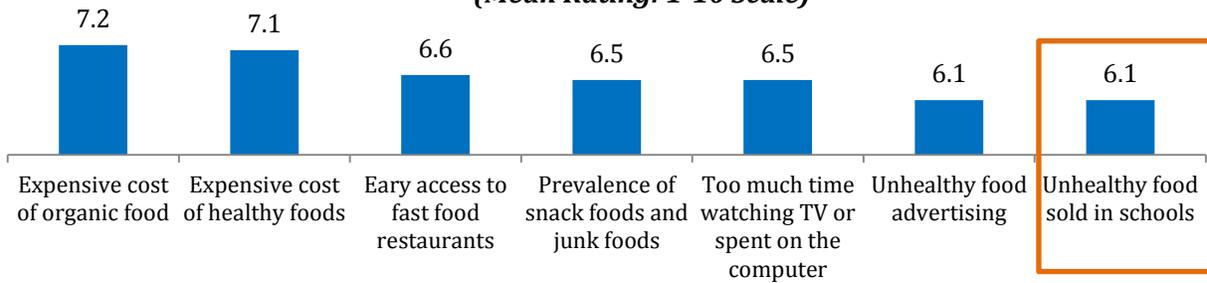


Unhealthy food sold in schools is not perceived to be one of the biggest obstacles to ensuring healthy eating habits in children. According to The Rudd Center for Food Policy & Obesity report, parents with children ages 2 to 17 rank the expensive cost of organic and healthy foods, easy access to fast food restaurants, the prevalence of snack and junk foods, and too much sedentary activity (watching TV or time spent on the computer) as the biggest obstacles to ensuring healthy eating habits in children.<sup>12</sup> On a scale from 1 to 10, where 1 means not at all an obstacle and 10 means very much an obstacle, the average rating for the cost of organic food and healthy foods as an obstacle are 7.2 and 7.1, respectively. Unhealthy food sold in schools is lower, with a mean rating of 6.1.<sup>13</sup> The option of unhealthy food served in schools was not even included on the list of potential obstacles.

<sup>12</sup> “Harris, Jennifer L. et al., Food Marketing to Children and Adolescents: What Do Parents Think?,” October 2012.

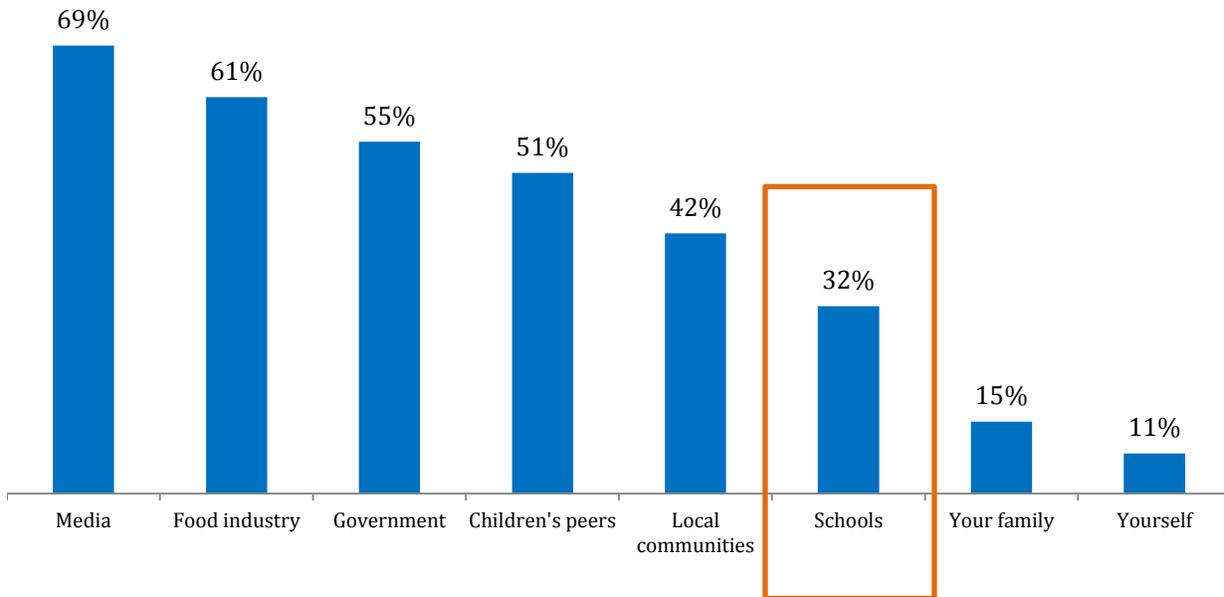
<sup>13</sup> “Food Marketing to Children and Adolescents: What Do Parents Think?,” October 2012.

**Obstacles to Ensuring Healthy Eating Habits in Children  
(Mean Rating: 1-10 Scale)**



There is even more of a gap in how parents view schools compared to other choices when asked to rate the negative influence different institutions have on promoting healthy eating habits. The media and food industry are the worst offenders, with 60 percent or more saying they have a negative influence. The majority of parents also believe the government and their children’s peers are a negative influence. Approximately one-third believe schools are a negative influence.<sup>14</sup>

**Negative Influence of Different Institutions  
(% 1-5 Rating: 1-10 Scale)**



<sup>14</sup> “Food Marketing to Children and Adolescents: What Do Parents Think?,” October 2012.

## *Attitudes on Nutrition: Head Start Providers in Harris County, TX*

A recent article in the *Journal of the Academy of Nutrition and Dietetics* provides some insights about knowledge and attitudes related to healthy eating among Head Start teachers in one urban area of Texas (Harris County). Though the scope of the research is limited to Head Start teachers in one county in Texas, the findings offer a snapshot of the eating habits and perceptions among a group of adults that are regularly interacting and influencing young children. According to the research conducted among the Harris

*“[B]ecause we focused on Head Start teachers in an inner-city area in Harris County, TX, our results may not be generalizable to Head Start teachers in rural or suburban areas. Nonetheless, this study is the first to describe the nutrition related attitudes and behaviors of Head Start teachers, who are responsible for education children at increased risk of obesity.”*

- “Nutrition-Related Knowledge, Attitudes, and Dietary Behaviors among Head Start Teachers in Texas: A Cross-Sectional Study”

County Head Start teachers, a significant minority of those surveyed said they had not eaten fruits or vegetables the previous day (26 percent and 23 percent, respectively). Conversely, roughly four in 10 had eaten more unhealthy foods and beverages the day before, including French fries (49 percent), doughnuts, cookies or brownies (38 percent) and soda (44 percent).<sup>15</sup>

These teachers’ reported unhealthy eating habits are compounded by the lack of knowledge or confusion about healthier eating choices: 54 percent said it is hard to know what nutrition information to believe. Still, this select group of Head Start teachers in Texas recognize the importance of learning the relationship between health and nutrition (93 percent). The authors of this article conclude there is a lag between Head Start teachers’ value of nutrition education and nutrition knowledge, adding that “greater emphasis on appropriate and adequate nutrition education and training, include providing teachers with credible resource materials for Head Start teachers, is needed.”<sup>16</sup>

### *Eating Behaviors*

According to parents, children tend to be eating generally well at home, both before dinner and at dinner. The NPR/Robert Wood Johnson Foundation/Harvard School of Public Health survey

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<sup>15</sup> Sharma, Shreela et al., “Nutrition-Related Knowledge, Attitudes, and Dietary Behaviors among Head Start Teachers in Texas: A Cross-Sectional Study,” 2013.

<sup>16</sup> “Nutrition-Related Knowledge, Attitudes, and Dietary Behaviors among Head Start Teachers in Texas: A Cross-Sectional Study,” 2013.

among parents or guardians of children ages 2 to 17 looked closely at eating habits after school and before dinner. During this time period, parents reported on the previous day's behavior for their child, and nearly all of those surveyed said their child ate about the right amount (92 percent). Very few said their child ate too much (3 percent).

Reflecting not on a particular time period but rather on the type of food that their child ate for dinner the previous night, a small number of all parents or guardians surveyed say their child ate a large or moderate amount of foods with high fat or sugar content (9 percent).<sup>17</sup> Importantly, two-thirds of these parents or guardians said their child did not eat any foods with a high fat or sugar content at dinner the night before (66 percent). Similarly, most parents provide a favorable report about what their child drank at dinner, with 75 percent saying their child did not have any drinks that can lead to unhealthy weight gain.<sup>18</sup>

When assessing the previous night's dinner as a whole, most parents or guardians who ate dinner at home that night with their child (approximately two-thirds of those surveyed) offered a picture of personalized and not pre-packaged meal preparation. Sixty-six percent of this subgroup of parents or guardians of children ages 2 to 17 say that all or almost all of the previous night's dinner was made "from scratch." Another 27 percent say it was made all or almost all from packaged, frozen or prepared foods purchased at the grocery store. The remaining parents or guardians in this subgroup say that the previous night's dinner was all or almost all take out (6 percent).

Only a minority said that their child was actually involved in the decision about what foods went into the previous night's meal. Thirty-eight percent of parents or guardians who ate dinner with their child the night before reported that their child was part of the decision-making process for this meal. Six in 10, however, said their child was not involved in the decision about what foods were part of dinner.<sup>19</sup> (Note: In reviewing current opinion research there does not seem to be information on how parents think a child's involvement in food-related decisions can impact healthy behaviors or habits.)

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<sup>17</sup> The survey defines these foods as chips, fried foods, fast foods, or sweets.

<sup>18</sup> The survey defines these drinks as sweetened drinks like non-diet soda and sports drinks.

<sup>19</sup> "A Poll About Children and Weight: Crunch Time During the American Work and School Week – 3pm to Bed," February 2013.

## Physical Activity

### Physical Activity: At a Glance

- Parents recognize the connection between physical activity and being at a healthy weight, and most parents say it is important to them that their child exercises in a way that helps them toward the goal of maintaining a healthy weight.
- Beliefs are not always consistent with daily habits, though, with a sizeable number of parents saying it is difficult to make sure their child gets enough physical activity.
- Technology is identified as a barrier to getting children to engage in healthy behaviors, parents raise technology as a distraction and also underestimate the amount of time children spend on sedentary activities.
- Child care providers, in particular, express concern that the time children spend in their care may be the only time they get to play outside each day. Providers, however, may be inhibited from encouraging physical activity because of parents' expectations of how time in child care should be spent, namely that the focus should be on academics.
- There is a relationship between exposure to and participation in sports and frequency of exercise, with children who exercise more frequently having a lower mean age of sports entry than those who exercise infrequently.
- Proximity to a park or gym and exposure to physical education at school also affect overall physical activity.

### *Attitudes on Physical Activity*

Parents' opinions on the importance of physical activity mirror their views on promoting healthy eating. They see the link between physical activity and being at a healthy weight. Parents or guardians of children ages 2 to 17 say it is important to them that their child exercises in a way that helps him or her achieve or maintain a healthy weight (95 percent important, 76 percent very important).<sup>20</sup> Notwithstanding the value most place on exercise, fewer parents say they are engaging their children in physical activity (58 percent). A significant minority of parents say it is difficult to make sure their child exercises in a way to achieve or maintain a healthy weight (36

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<sup>20</sup> "A Poll About Children and Weight: Crunch Time During the American Work and School Week – 3pm to Bed," February 2013.

percent). The same proportion of parents or guardians who say it is very difficult to make sure their child eats in a way that aligns with a healthy weight also find it challenging to ensure their child exercises in a way that matches healthy weight goals (16 percent).<sup>21</sup>

### *Physical Activity Behaviors*

Keeping children active during the school year is a challenge for many parents. Even though the NPR/Robert Wood Johnson Foundation/Harvard School of Public Health research shows parents value exercise, a sizeable minority of parents or guardians with children ages 2 to 17 say that between 3pm and bedtime, their children do not get enough physical activity that helps him or her maintain and achieve a healthy weight (28 percent).<sup>22</sup> Moreover, according to the YMCA Family Health Snapshot, only one in five children play outside and get a minimum of 60 minutes of physical activity seven days a week. Technology is identified as a primary barrier to getting children to engage in healthy behaviors, with 50 percent of parents citing technological distractions as an issue.<sup>23</sup> Technology as a barrier is further compounded by mothers underestimating the amount of time their children spend on sedentary activities.<sup>24</sup> *JAMA Pediatrics* echoes these findings about the imbalance around physical activity, concluding that less than 40 percent of school-aged children (ages 6 to 11) met both physical activity and screen time recommendations concurrently.<sup>25</sup>

The importance of physical activity at school is underscored by a qualitative study among child care providers from 2012. The research found that providers are worried that the time children spend at child care facilities might be the only opportunity they have for playing outside. They are also worried that parents' attitudes may inhibit physical activity. This concern is related to several factors, including the extensive number of hours young children spend in child care

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<sup>21</sup> "A Poll About Children and Weight: Crunch Time During the American Work and School Week – 3pm to Bed," February 2013.

<sup>22</sup> "A Poll About Children and Weight: Crunch Time During the American Work and School Week – 3pm to Bed," February 2013.

<sup>23</sup> "YMCA's Family Health Snapshot," April 2012.

<sup>24</sup> "How American Moms Perceive Childhood Obesity: A Survey of the Obstacles Keeping Moms from Improving their Children's Weight Status," March 2011.

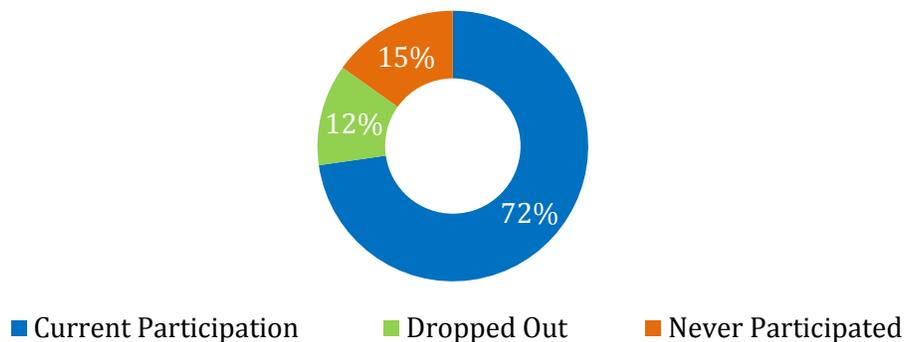
<sup>25</sup> Fakhouri, Tala et al., "Physical Activity and Screen-Time Viewing Among Elementary School-Aged Children in the United States From 2009 to 2010," March 2013.

settings, safety concerns related to playing outside where they live, lack of affordability of extracurricular activities, and, lastly, that physical activity is not valued by some parents.<sup>26</sup>

Even though time spent with a child care provider may be the only opportunity for a young child to engage in physical activity, existing research raises questions about parents' expectations for how time is spent in this setting. Providers are concerned that parents want child care to be focused on academics, rather than on physical activities and other gross motor play offerings noting that time spent in the classroom and curricular activities "took precedence over gross motor play offerings."<sup>27</sup> Further, though providers may recognize that children can and do learn through play, some reported feeling pressured to prioritize classroom or more traditionally viewed educational offerings over time devoted to physical activity.<sup>28</sup>

#### *Access and/or Exposure to Physical Activity*

#### ***Third-12th Graders: Participation in Organized and Team Sports***



In 2008, the Women's Sports Foundation released a report about youth sports in America. The report examines participation in exercise and organized team sports among third through 12<sup>th</sup> graders and includes research among children and youth in this grade range as well as parents with children in these grades. Though the focus of the report is on an older age cohort, the research offers some insights about what exercise and participation in team sports looks like for U.S. children and youth. At a glance, this report reveals that the majority of children in grades

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<sup>26</sup> Copeland, Kristen et al., "Societal Values and Policies May Curtail Preschool Children's Physical Activity in Child Care Centers," January 2012.

<sup>27</sup> Gross motor skills are defined as abilities required in order to control the large muscles of the body for walking, running, sitting, crawling, and other activities.

<sup>28</sup> "Societal Values and Policies May Curtail Preschool Children's Physical Activity in Child Care Centers," January 2012.

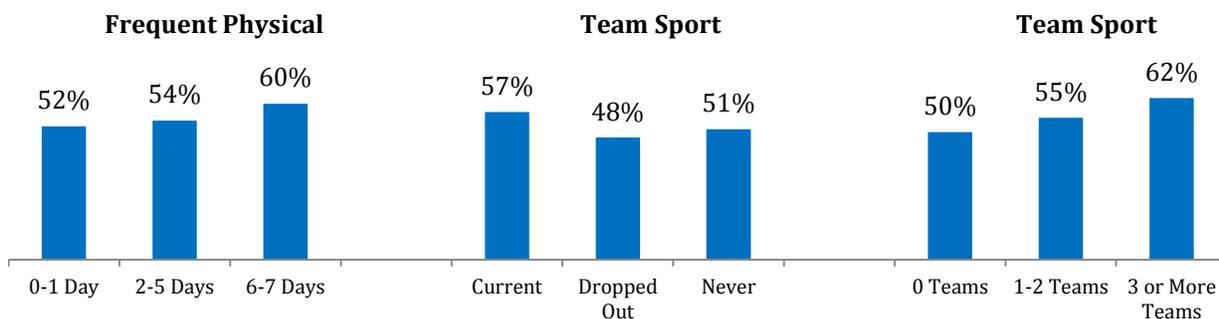
three through 12 are participating in organized and team sports. Seventy-two percent of this grade range report having played on one or more organized or team sports in the past 12 months. Another 12 percent have played on one or more teams in the past but not in the past 12 months. The rest – 15 percent – have never played on an organized or team sport.<sup>29</sup>

*“Sports are a health and educational asset for U.S. girls and boys. Organized sports are associated with children’s general health and body esteem, healthy weight, popularity, quality of life and educational achievement.”*  
 - “Go Out and Play: Youth Sports in America”

Parents were also asked about the age their child was when he or she first got involved with sports. On average, boys are 6.8 years old, and girls are 7.4 year old. There is a relationship between frequency of exercise and age of entry into sports as well. The mean age of sports entry for those who exercise daily is 6.8. By contrast, the mean age of sports entry for children who exercise less than one time per week on average is almost nine years old (8.9), showing that children who exercise more frequently entered sports at an earlier age.<sup>30</sup>

In addition, the Women’s Sports Foundation report asked the children surveyed about how far they lived from a park or gym. Half say they live five blocks or less from a park or gym, with a third saying that a park or gym is only one to two blocks away (32 percent 1-2 blocks, 21 percent 3-5 blocks). Among the rest of the children, 28 percent are one to two miles away from a park or gym, and 17 percent say there is not park or gym anywhere where they live. This research also concluded that children who are more active (exercised more often, played a team sport or on multiple teams) were more likely to live close to a park or gym than those who were more than five blocks away.<sup>31</sup>

**Percentage of Students Who Live within 5 Blocks of Park or Gym, by Physical Activity Level**



### *What Influences Physical Activity and Sports Participation*

Parents are the top sources of encouragement for children who are engaged in sports and exercise. There is an interesting gender difference: girls surveyed by the Women’s Sports Foundation said that mothers are at the top of the list of who encourage them a lot while fathers top the list for boys. The report does not look at the age which parents, or other sources, began to encourage their children to participate specifically in team sports and, more generally, in physical activity. Similarly, the research did not go into sources – other than parents – who might influence children at an earlier age.<sup>32</sup>

Exercise embedded in school has an impact on the frequency of being physically active. A third of the children and youth surveyed by the Women’s Sports Foundation said they either have physical education only once a week (17 percent) or never (17 percent). Importantly, though, exposure to physical education at school is also a factor influencing weekly physical activity among third to 12<sup>th</sup> graders. Those who have P.E. at least four times a week at school are more than three times as likely to say they have been physically active six or more days in the past week.



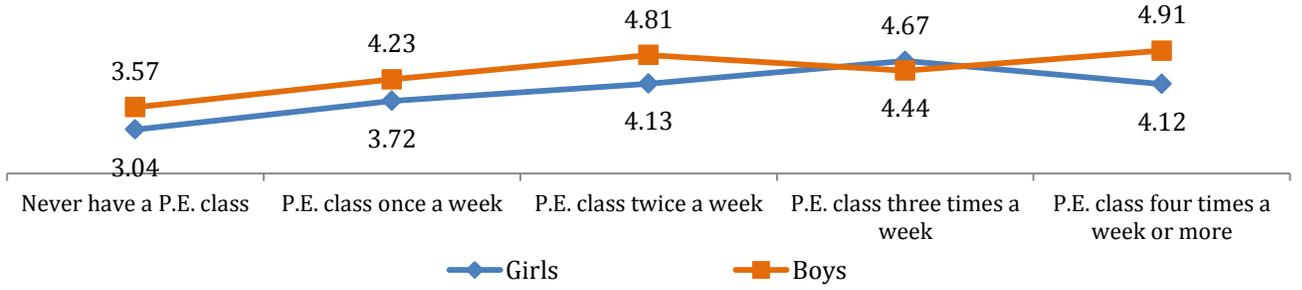
Frequency of physical education also affects the reported vigorousness of physical activity, and this is true for both boys and girls. Specifically, on average, those who have P.E. two times a week have a higher number of days that they report being physically active for at least 60 minutes than those with only one day or no P.E. each week.<sup>33</sup>

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<sup>32</sup> “Go Out and Play: Youth Sports in America,” October 2008.

<sup>33</sup> “Go Out and Play: Youth Sports in America,” October 2008.

**Average Number of Days Per Week with 60+ Minutes of Physical Activity, by Frequency of P.E. at School**



## Electronic Media Use

### Electronic Media Use: At a Glance

- Parents tend to view technology use as integral to both academic and future success.
- Even parents of very young children – ages 2 to 24 months – think media can teach their child something that is good for his or her brain.
- Technology is not a “free for all,” though, and most parents tend to set at least some parameters around the use of technology for their children. The top reason for these rules is that parents think technology use prevents their child from getting physical activity and exercise, underscoring the interconnectedness of these habits.
- Reflecting on time spent in the classroom with electronic media, many teachers see digital games in the classroom as beneficial to students, including fostering collaboration and allowing students to keep focus on specific tasks. Interestingly, opposition from parents and administrators are not identified as a key barrier to greater adoption of digital games in the classroom. Rather, cost and access to resources are the top barriers.
- A report focused on preschoolers’ total daily screen time found that, on average, cumulative screen time for children in this age range is greater than the American Academy of Pediatrics’ recommendations for this age range. Screen time in the home exceeds time spent with screens in a child care setting, though child care screen time can be different for children in home-based care settings.
- Children are being exposed to a range of electronic media at very young ages. On average, the age of first use of a computer, for example, is about age 3.5. The average age of first use of devices like cell phones, iPods and iPads is unreported, but it is evident that parents are allowing their children to use these devices for apps deemed as educational.

### *Parent Attitudes about Electronic Media Use*

In a survey of parents with children ages 3 to 10, parents report they enjoy watching television with their child more than other activities—and they do it more regularly than reading books or playing board games. To a lesser extent, some report enjoying reading books and playing board games. Fewer say they enjoy playing games on a TV-based console, the computer/Internet or a mobile device or phone. While few parents say they enjoy this latter category of electronic

media-focused activities, a significant number of parents report regularly doing these activities with their child.<sup>34</sup> Physical activity or sports was not included on the list of activities, so there is no direct comparison of electronic media use to activities that require movement.

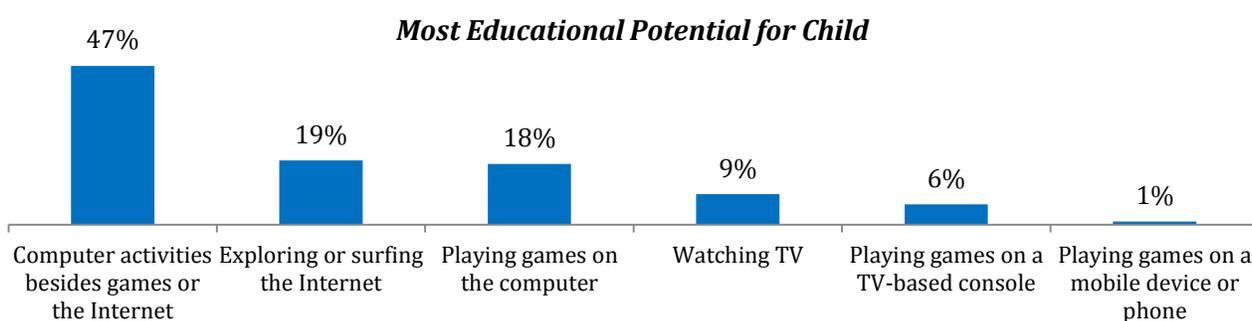
Activities Done Regularly versus Activities Enjoyed Most with Child		
	% Done Regularly	% Enjoy Doing Most
Watch television	89	41
Read books	79	23
Play board games (non-electronic)	73	18
Play games on TV-based console	52	8
Play games on the computer or Internet	44	4
Surf the Internet or visit websites of interest	36	2
Create art or other items on the computer	28	2
Play games on a mobile device or phone	13	2
None of these	2	1

The majority of parents surveyed see technology use as both complementary to and important for academic and future success. Almost three-fourths of these parents agree that computers and technology in general are important to their child’s success in school (73%). Sixty-nine percent believe that certain types of video games can help a child develop skills important to their academic success. Going past success in school, 65 percent think computers and technology in general are important to their child’s future career choices. Finally, to a lesser extent though still

<sup>34</sup> Takeuchi, Lori M., “Families Matter: Designing Media for the Digital Age,” June 2011.

with the majority of parents agreeing, parents believe certain types of video games give children practice in cooperating, negotiating, and other people skills (57 percent).<sup>35</sup>

While TV is both the electronic media activity done regularly by most parents and the one they report enjoying the most with their child, few think watching TV has the most educational potential for their child. Rather, almost half think computer activities excluding games or surfing the Internet have the most educational potential (47 percent). By a wide margin, parents select this over other types of technology-based activity as the most educational, over surfing the Internet, playing games on the computer and watching TV, among other technology-based activities.<sup>36</sup>



An earlier study looked at attitudes about TV and video/DVD viewing among parents with much younger children (2 to 24 months) in two states, Minnesota and Washington. While the geographic scope of this research is limited to two states, as is the type of electronic media evaluated, it does provide some perspective on why parents with younger children might expose them to electronic media very early in life. The top reason parents give for being the most important in explaining why their children watch TV or videos/DVDs is that this media could teach their child something that is good for his or her brain (29 percent). Other reasons include the child enjoying this type of media and that it provides some time to get things done (23 percent and 21 percent, respectively).<sup>37</sup>

Parents tend to set at least some technology rules for their children, with only 7 percent of parents with children ages 3 to 10 saying there are no rules when it comes to technology. Instead,

<sup>35</sup> “Families Matter: Designing Media for the Digital Age,” June 2011.

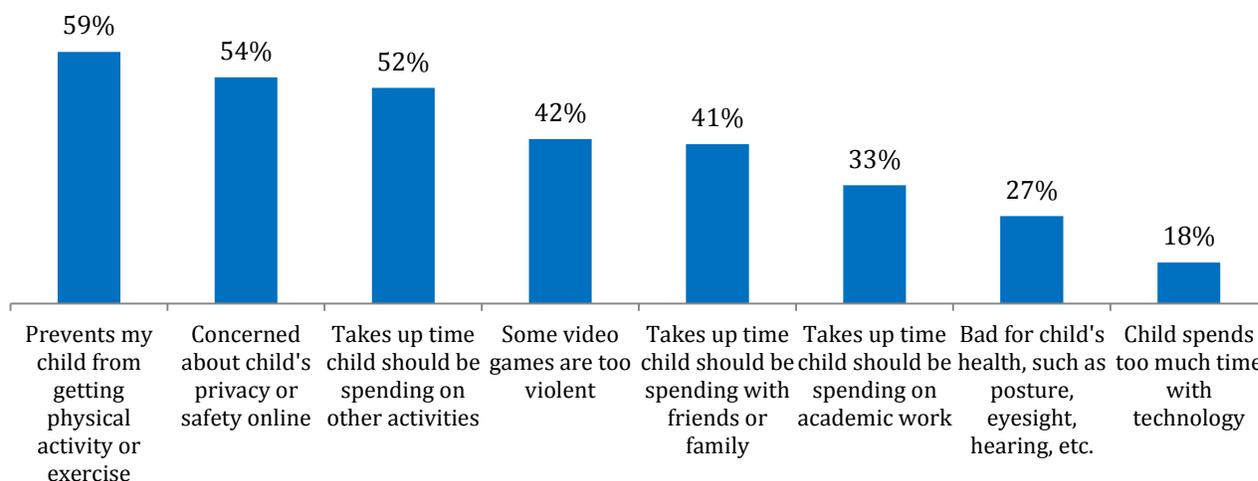
<sup>36</sup> “Families Matter: Designing Media for the Digital Age,” June 2011.

<sup>37</sup> Zimmerman, Frederick, “Television and DVD/Video Viewing in Children Younger Than 2 Years,” June 2007.

they hold a range of views about electronic media use and restrict or monitor their child’s use of technology for different reasons. The top reason for regulating their children’s electronic media use is because they believe it prevents their child from getting physical activity or exercise. (It should be noted that this opinion does not necessarily prevent technology from being a barrier to physical activity, as cited earlier in this report based on the 2012 YMCA Family Health Snapshot study.) After physical activity, parents show concern about protecting their child’s privacy and safety online as well as thinking that time spent on technology takes up time that should be spent on other activities. To a lesser extent, some parents limit technology use because they think some video games are too violent, they think technology time takes up time that should be spent with friends or family and/or they think it takes up time that should be spent on academic work.

Only 18 percent say they try to limit time on technology because they think their child spends too much time with it.<sup>38</sup>

***Reasons for Limiting Time Child Spends with Technology***



Thinking specifically about e-books, a recent Scholastic study looks at parents’ use and preference around e-books. Most parents of children ages 6 to 17 are at least somewhat interested in having their child read e-books (72 percent). Fifteen percent are extremely interested in having their child read e-books, and another 22 percent say they are very interested. Very few are not at all interested or not very interested (13 percent and 15 percent, respectively). Further, half of parents either do not have a preference whether their children reads print or e-books or prefers

<sup>38</sup> “Families Matter: Designing Media for the Digital Age,” June 2011.

e-books for their child (47 percent and 4 percent, respectively). The findings are slightly different by age of child, with parents who have younger children (6-8, in particular, but also 9-11) preferring print books for their child.<sup>39</sup>

### *Teacher Attitudes on Electronic Media in the Classroom Today*

Currently, the majority of K-8 teachers see value to offering digital games in their classrooms. According to a 2012 report by the Joan Ganz Cooney Center at Sesame Workshop, 60 percent of teachers surveyed say games “foster more collaboration” as well as allow students to “sustain focus on specific tasks.” Only 10 percent of teachers report some type of negative experience, including delayed content delivery (8 percent), behavioral issues with lower-performing students (8 percent) and/or an increase in conflict between students (5 percent). Moreover, even fewer teachers (less than 5 percent) say that parents and administrators are not at all supportive of digital game use at their schools.<sup>40 41</sup>

Recognizing the favorable opinion of digital games in the classroom among many K-8 teachers and seemingly low levels of opposition from parents and administrators, there are other barriers to adopting digital games in this setting. The top two barriers are cost (50 percent) and access to technology resources (46 percent). The emphasis on standardized testing comes in at a lower tier as the third most common barrier, with 38 percent of those surveyed identifying it as such. (Note: The results publicly available for this study do not elaborate on how standardized testing creates a barrier to increased adoption of digital games in the classroom.)

Looking more closely at the type of digital games those surveyed are using, the perception is that the games they are using are educational. Nearly all say the digital games in their classrooms were created with educational use in mind (95 percent). The games are most likely to have a literacy/reading component (50 percent), followed by math (35 percent).<sup>42</sup>

### *Electronic Media Use and Behavior among Children and Youth*

The *Journal of Pediatrics* published an article in the fall of 2010 that reported on preschoolers’ total daily screen time, both at home and by type of child care. The authors estimate that

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<sup>39</sup> “Kids and Family Reading Report,” January 2013.

<sup>40</sup> Millstone, Jessica, “Teacher Attitudes about Digital Games in the Classroom,” May 2012.

<sup>41</sup> “Teacher Attitudes about Digital Games in the Classroom,” May 2012.

<sup>42</sup> “Teacher Attitudes about Digital Games in the Classroom,” May 2012.

preschool children are exposed to about four hours of screen time on weekdays. In comparing screen time by child care categories to screen time in the home, the latter made a larger contribution to preschoolers' cumulative daily screen time than time spent with screens at child care. The article includes a disclaimer that child care screen time can be significant for children in home-based child care and efforts to decrease screen time in home-based child care are needed. (This was a concern raised among participants at one of the USDA Stakeholder sessions as part of the discussion around barriers to implementation of recommended electronic media use guidelines.) Overall and most notably, the authors conclude that cumulative screen time for children in this age range exceeds the American Academy of Pediatrics' recommendations for preschool-age children.<sup>43</sup>

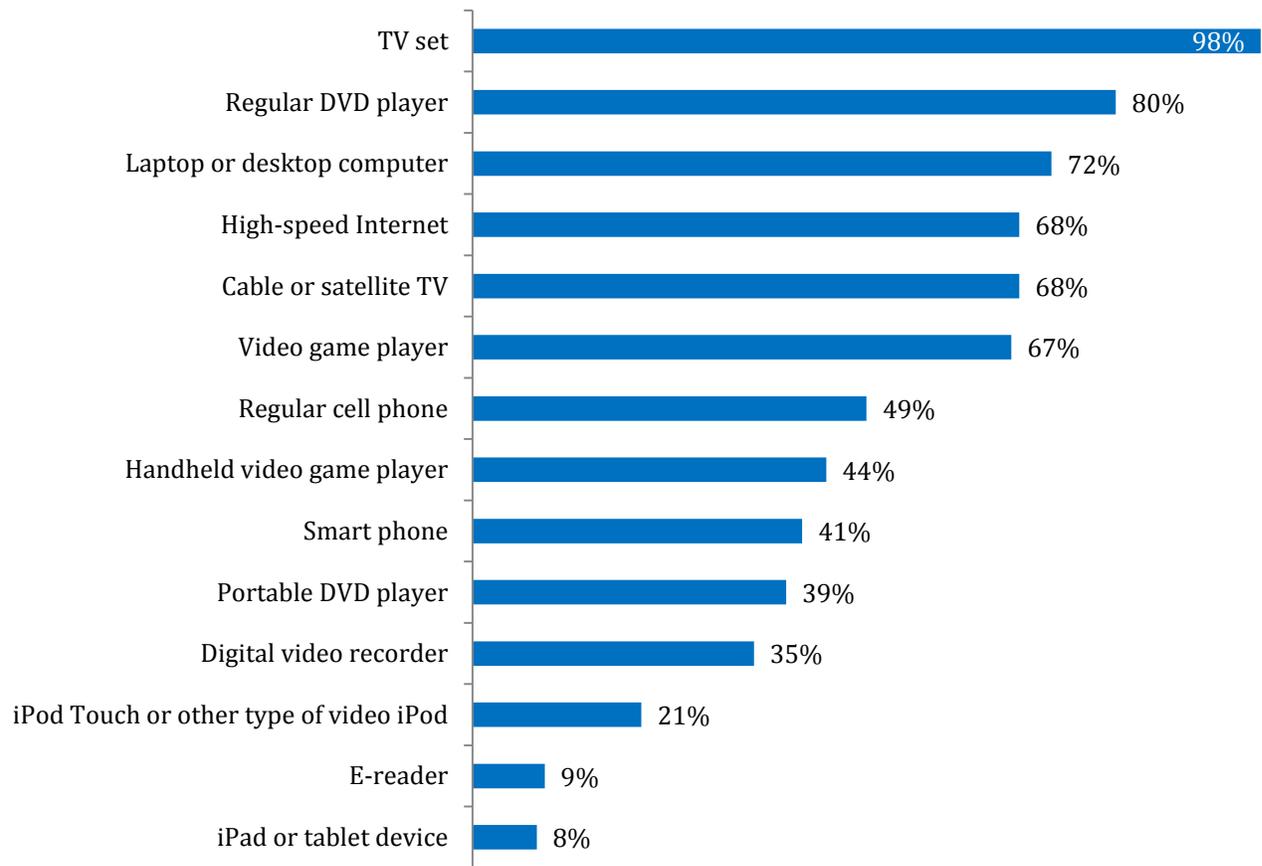
Two years ago, Common Sense Media conducted a survey among parents of children ages 0 to 8 about children's media use. The age range is wider than the upcoming formative research, but this study does provide a somewhat recent and comprehensive look at access and use of electronic media in the home among a younger group of children today. To start, the survey asked parents about the types of technology in their households. TVs were most common (98 percent), but two-thirds also reported having high-speed Internet access and a video game player like Xbox, PlayStation or Wii (68 percent and 67 percent, respectively).<sup>44</sup>

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<sup>43</sup> Tandon, Pooja et al., "Preschoolers' Total Daily Screen Time at Home and by Type of Child Care," October 2010.

<sup>44</sup> Rideout, Victoria, "Zero to Eight: Children's Media Use in America," Fall 2011.

### Household Technology



According to parents in the Common Sense Media study, TV is the electronic media children are exposed to at the youngest age (9 months). Other technology use, such as using a computer and playing video games, tends to occur after age 3. Despite widespread access to technology and the early age of exposure to a range of electronic media, few parents say their child’s pediatrician has talked to them about their child’s media use. Only 14 percent have had a discussion with their child’s pediatrician on this topic.<sup>45</sup>

<sup>45</sup> “Zero to Eight: Children’s Media Use in America,” Fall 2011.

## Age of First Exposure to and Percent Ever Using Electronic Media

	<u>Age First Did</u> <u>Activity</u>	<u>% Ever Done</u> <u>This Activity</u>
Was read to – <i>Among those who child reads or was read to</i>	5 months	90
Watched DVDs or videos – <i>Among those whose child has watched DVDs or videos</i>	11 months	85
Watched TV – <i>Among those who child has watched TV</i>	9 months	89
Used a computer – <i>Among those whose child has used a computer</i>	3 years, 6 months	59
Played video game on a console game player – <i>Among those whose child has played video games on a console player</i>	3 years, 11 months	51
Played games on a handheld gaming device – <i>Among those whose child has played handheld games</i>	3 years, 11 months	44
Used a cell phone, iPod or iPad-type device to play games or watch videos	*	*
Used apps on a cell phone, iPod, iPad, or similar device	*	*

\* Sample too small for analysis

Though the study does not provide information about the age of first playing games or using apps on a cell phone, iPod or iPad-type device, it does uncover some information about how these devices are used. A sizeable number of parents say their child has used a cell phone, iPod, iPad, or similar device for a range of activities, such as watching videos, TV shows or playing a game.

Playing games on these devices is the most commonly reported activity, with a third of parents saying their child has engaged in this activity. Very few say that their child has read books on such a device. Interestingly, among parents overall, Common Sense Media reports that 29 percent say they have downloaded apps for their children on devices like a cell phone, iPod or iPad.<sup>46</sup>

Types of Activities Done by Child on Cell Phone, iPod or iPad	
% Watch videos	20
% Watch TV shows or movies	11
% Play a game	33
% Use apps	16
% Read a book	4
<b>% Any of above activities</b>	<b>38</b>
None of these	61

The Common Sense Media survey asked parents about the frequency with which their child uses specific types of apps. The majority of parents who own a cell phone, iPod or iPad-type device say that their child has used apps that are educational games, like puzzles, memory games, math, or reading (53 percent). Almost six in 10 say their child has used apps that are games just for fun (58 percent). Use of creative apps and apps based on characters from TV shows prove less common.<sup>47</sup>

In 2006, the Kaiser Family Foundation released the results of a survey conducted the previous year among parents with children ages 6 months to 6 years old. While technology has changed considerably since 2006, the report is useful because it looks at electronic media use among a narrower age range than the Common Sense study, that is infants, toddlers and preschoolers.

<sup>46</sup> “Zero to Eight: Children’s Media Use in America,” Fall 2011.

<sup>47</sup> “Zero to Eight: Children’s Media Use in America,” Fall 2011.

Interestingly, in a typical day, the proportion of parents who say their child age six or under reads or is read to is identical to the proportion who say their child uses any screen media (83 percent). Screen media is inclusive of TV, videos/DVDs, video games, or computers. The study does not include technology such as tablets and smart phones among the types of electronic media that children might use in a typical day. Though reported reading and screen media in a typical day are on par, the average amount of time children six and under spend on screen time exceeds reading by almost 60 minutes (1:36 and 0:40, respectively). The gap in average time between these two categories of activities does vary somewhat by age, but, overall, average time on screen time always exceeds reading time.<sup>48</sup>

Time Spent Using Media and Reading, by Age								
	% Who did each in a typical day				Average time among all children age 6 and under			
	<u>Total</u>	<u>0-1</u>	<u>2-3</u>	<u>4-6</u>	<u>Total</u>	<u>0-1</u>	<u>2-3</u>	<u>4-6</u>
Reading or being read to	83	77	81	87	0:40	0:33	0:42	0:42
Any screen media	83	61	88	90	1:36	0:49	1:51	1:50

The Kaiser report also explores the relationship between parents’ media use and their children’s media use. Children of parents who use less than an hour of media in a typical day are less likely than children of parents who spend more time with media to watch TV on a typical day. Parents’ attitudes about the benefits of TV also impact a child’s likelihood of viewing TV. Among parents

<sup>48</sup> Rideout, Victoria and Elizabeth Hamel, “The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers and Their Parents,” May 2006.

who say TV mostly helps, 84 percent of children are watching TV, compared to 64 percent of children with parents who think TV mostly hurts.<sup>49</sup>

Relationship of Parental Media Use to Children’s TV Watching			
Child’s TV viewing	Total parent media use on a typical day		
	<u>&lt;1 hour</u>	<u>1-2 hours</u>	<u>&gt;2 hours</u>
% who watch TV on a typical day	64	78	81
	Parent attitudes towards TV		
	<u>Mostly helps</u>	<u>No effect</u>	<u>Mostly hurts</u>
	84	75	64

*Eating and Electronic Media Use*

The 2006 Kaiser Family Foundation study of younger children also explored the intersection of eating and television. Parents were asked how often the TV was on during meals for children ages 6 and under and also what children in this age range ate snacks or meals in front of the TV. Twenty-seven percent of parents surveyed say the TV is never on during meals, and another 18 percent say it is hardly ever on. At the other extreme, 16 percent say it is always on, and 14 percent report that the TV is on most of the time. Another quarter either indicate the TV is on half the time or less than half the time (13 percent and 12 percent, respectively). Breaking it down by meal or snack, parents are most likely to say that their child eats a snack in front of the TV (40 percent), that is, children snack in front of the TV more than they eat other meals in front of it. On the whole, 53 percent of parents report that their child eats any meal or snack in front of the TV.<sup>50</sup>

<sup>49</sup> “The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers and Their Parents,” May 2006.

<sup>50</sup> “The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers and Their Parents,” May 2006.

## Summary of Current Practices, Views and Barriers at Child Care Facilities

### Summary of Current Practices, Views and Barriers at Child Care Facilities: At a Glance

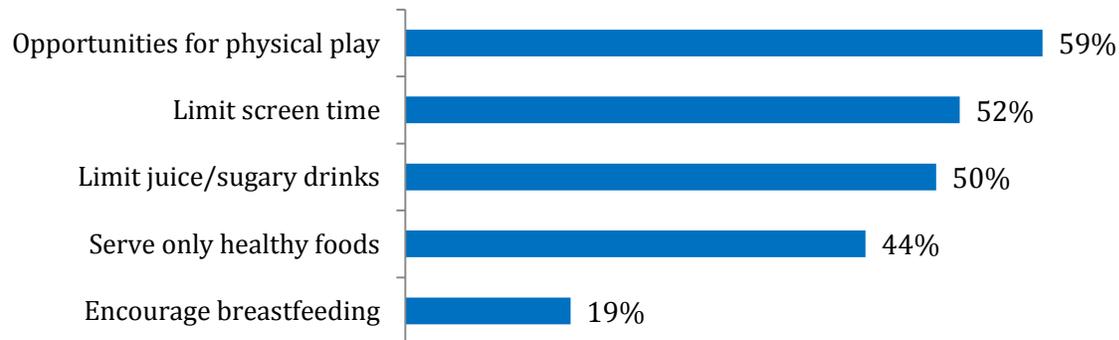
- Opportunities for physical play, limiting screen time and limited juice/sugary drinks are the most common obesity prevention practices in centers. These practices touch upon the three focus areas of the upcoming formative research but through the prism of preventing childhood obesity.
- Based on a study in California, child care providers participating in CACFP report serving more healthy food and beverage options to children under their care as compared to their non-CACFP counterparts. In a Kansas study of family child care homes, researchers concluded that the food served in this setting proves healthier than in child care centers.
- While opportunities for physical play are relatively common, most child care centers are not providing children with enough play time relative to the American Academy of Pediatrics' recommendations.
- Cost is a top barrier to child care providers' access to health-related trainings.
- For Head Start programs, in particular, cost is a top program level barrier to promoting healthy eating as well as to increasing gross motor activity. Financial barriers were also a barrier to promoting physical activity identified in qualitative research among child care providers in Cincinnati, Ohio.
- State representatives see the lack of staff training and capacity, costs and resistance from parents (among others) as challenges to implementing obesity prevention guidelines.

### *Current Child Obesity Practices in Child Care Centers, As Identified by Child Care Resource and Referral Agencies (CCR&Rs)*

Recognizing the importance of promoting healthy habits early on, the National Association of Child Care Resource and Referral Agencies (NACCRRA) commissioned a study among Child Care Resource and Referral Agencies (CCR&Rs) in 2011. CCR&Rs confirm that child care centers are

an important place to prevent and address childhood obesity. Eighty percent of those surveyed strongly agree with this assessment, and another 19 percent agree somewhat.<sup>51</sup>

### ***Childhood Obesity Prevention Practices Regularly Done in Centers***



This research among CCR&Rs was not only an opportunity to explore attitudes about promoting healthy habits among this audience but also to explore their knowledge of existing obesity prevention practices at child care centers. According to CCR&Rs, the most common practice is providing time for physical play, followed by limiting screen time and limiting juice/sugary drinks. In a lower tier, less than half say it was common practice to serve only healthy foods and encourage breastfeeding.<sup>52</sup>

The majority of CCR&Rs say child care centers provide 30-60 minutes for physical play each day (62 percent). The NACCRRRA report emphasizes that this is less than the AAP's recommendation to provide 90-120 minutes of active physical play daily for preschool-aged children. Only 20 percent provide 60 minutes or more of time for physical play. Another 18 percent say they think the centers in their area offer less than 30 minutes of play time.<sup>53</sup>

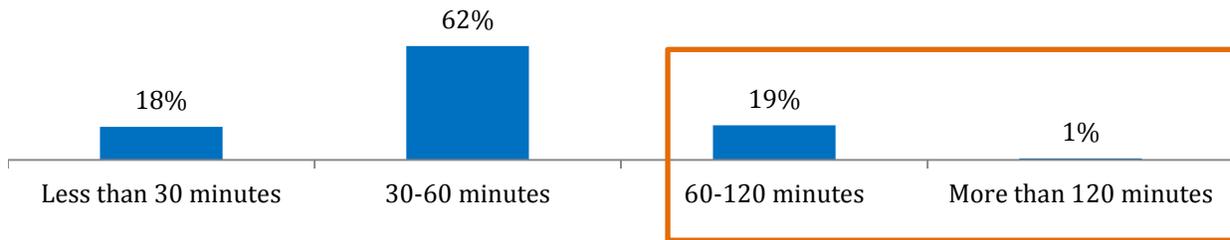
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<sup>51</sup> "Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies," August 2011.

<sup>52</sup> "Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies," August 2011.

<sup>53</sup> "Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies," August 2011.

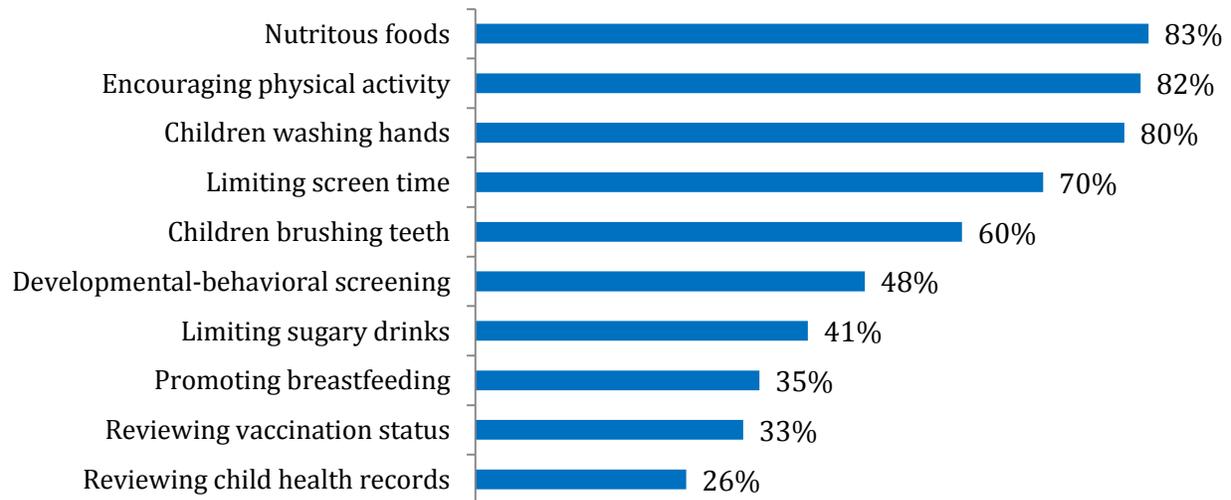
### Time Provided for Physical Play



### Training and Technical Assistance to Promote Healthy Practices, As Identified by CCR&Rs

CCR&Rs were asked about the availability of training and technical assistance that complemented Let’s Move! Child Care and other health-related early childhood initiatives. Most CCR&Rs report that training and technical assistance is offered around nutritious foods, encouraging physical activity, children washing hands, limiting screen time, and children brushing teeth. Assistance related to limiting sugary drinks, among other topics, is more limited.<sup>54</sup>

### Top 10 Training/Technical Assistance Topics Addressed by CCR&Rs



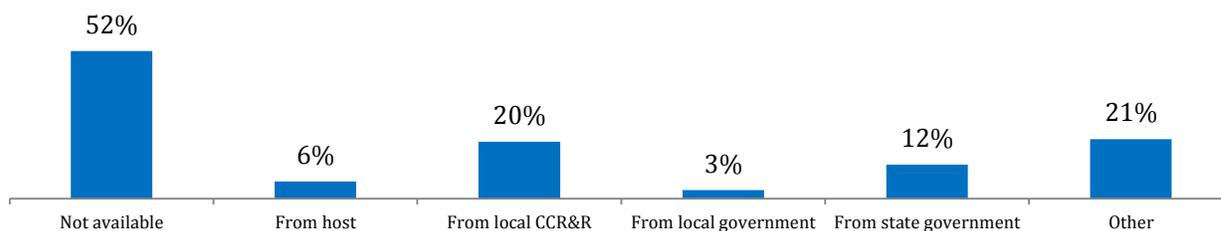
Even though a range of health-related trainings and technical assistance are currently offered, there is a gap in how some trainings are offered and what is preferred. The largest disconnect is around webinars or online training, with 73 percent expressing interest in this type of format, compared to 34 percent saying it is currently available. There are also gaps around conference

<sup>54</sup> “Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies,” August 2011.

calls and on-site visits to child care by health professionals (13 percent available versus 55 percent desired and 43 percent versus 65 percent, respectively).<sup>55</sup>

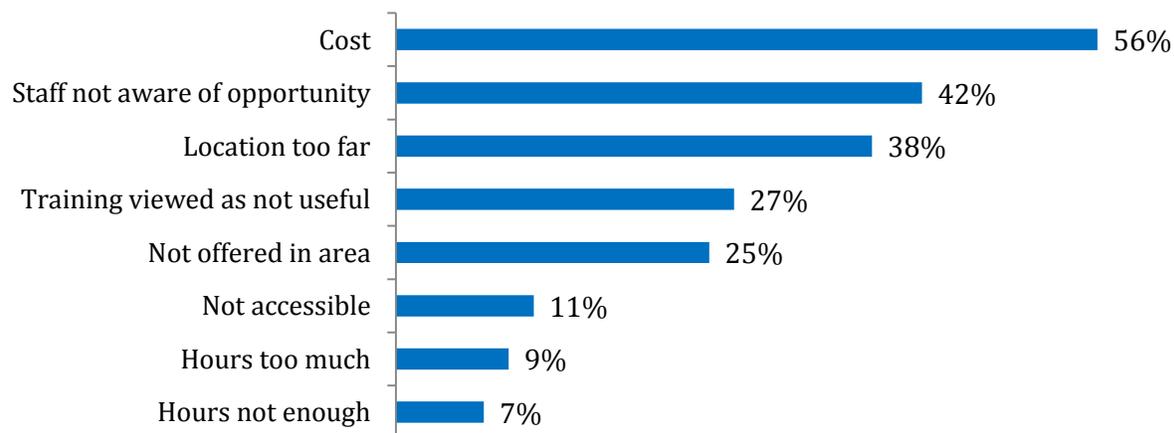
Financial support for health-related trainings comes up as a concern among CCR&Rs. Fifty-two percent say there is no available financial support for health-related trainings. A minority of those surveyed report having financial support from a local CCR&R, state government or another source.<sup>56</sup>

### ***Availability of Financial Support for Health-Related Trainings***



By a wide margin, cost leads as a barrier cited by CCR&Rs to accessing health-related training. Lack of awareness and location fall into a second tier, followed by attitudes that training is not useful and not enough trainings are offered in the area. The time involved – either too many hours or not enough hours – is less of a barrier.<sup>57</sup>

### ***Most Important Barriers to Accessing Health-Related Trainings***



<sup>55</sup> “Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies,” August 2011.

<sup>56</sup> “Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies,” August 2011.

<sup>57</sup> “Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies,” August 2011.

*Family Child Care Homes in Kansas: Assessment of Nutrition and Physical Activity Practices and Efficacy of Interventions to Improve These Practices*

A survey of family child care homes (FCCH) in Kansas asked providers in these settings to complete the Nutrition and Physical Activity Self Assessment for Child Care instrument (NAPSACC) to evaluate current FCCH practices. (The NAPSACC tool covers nine areas related to nutrition and six areas related to physical activity. Survey respondents were asked to focus on children ages 2 to 5.) The study provides useful baseline information about existing nutrition and physical activity practices in the state of Kansas.<sup>58</sup>

FCCHs in Kansas appear to be meeting or exceeding standards around fruits, vegetables, fried foods, and high-fat meats. While methodological differences make direct comparisons difficult, FCCHs' appear to do better at meeting guidelines in the aforementioned food categories than their child care center counterparts. Though a small majority say they have a comprehensive written policy on nutrition and food service (54 percent), nearly half of FCCHs do not have a policy to guide nutrition practices. And, while food practices appear to meet standards based on answers to specific survey questions, FCCHs do not meet beverage standards to the same degree: the majority reported they served 100% fruit juice daily (56 percent), but only a minority said they are serving low-fat or fat-free milk (14 percent). Further, nutrition-related training is not universal: less than half say they have gotten nutrition training at least yearly (48 percent).<sup>59</sup>

The evaluation of physical activity practices reveals mixed results. The majority of those surveyed say they provide 60 minutes or more of play time per day (78 percent). Nearly all report that outdoor active play is provided for all children daily (93 percent). However, over half restrict play time as punishment for children who misbehave (63 percent) and a sizeable minority say that children are seated (nap time excluded) for more than 30 minutes at a time each day (41 percent). Importantly, the proportion having a comprehensive written policy on physical activity is about half the number saying they have a formal nutrition policy (25 percent).<sup>60</sup>

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<sup>58</sup> Trost, Stewart G., et al, "Nutrition and Physical Activity Policies and Practices in Family Child Care Homes," December 2009.

<sup>59</sup> "Nutrition and Physical Activity Policies and Practices in Family Child Care Homes," December 2009.

<sup>60</sup> "Nutrition and Physical Activity Policies and Practices in Family Child Care Homes," December 2009.

The NAPSACC assessment also evaluated electronic media use as part of the larger evaluation of physical activity. Sixty-five percent say that the television is turned on every day for at least part of the day. Moreover, the majority of FCCHs indicate that children are allowed to watch TV or videos or play video games at least once a day (55 percent), and a third of FCCHs say children are allowed to use a computer for educational purposes or games at least once a day (33 percent). As with nutritional training, less than half have received training on this subject at least once annually (46 percent).<sup>61</sup>

In addition to the NAPSACC survey among FCCHs in Kansas, another study measured the effects of nutrition and physical activity interventions in these settings. The unit of analysis in this second study was also FCCHs in Kansas, and the interventions involved child care trainers and FCCHs. Child care trainers had to complete a total of eight technical assistance visits with FCCHs. As part of the on-site visits, FCCHs were taken through a four-step process, starting with self-evaluation and then including goal-setting, creating an action plan and evaluating progress towards established goals.<sup>62</sup>

Pre- and post-evaluations of FCCH show that the intervention was successful, with significant progress related to nutrition and physical activity policies and practices in FCCHs. The positive developments related to physical activity policies and practices seem to exceed nutrition-related improvements. For example, following training, FCCHs say they designated more time for play each day, which, in turn, cut down the time for TV watching and computer use. The authors say that the extent of progress around physical activity, as compared to changes related to nutrition, may at least be partly explained by several factors, including “high baseline scores” for the nutrition topics evaluated in this study, high levels of participation in the CACFP and historically low training related to physical activity. Nevertheless, the authors conclude that overall the impact of interventions aimed at improving nutrition and physical activity practices at FCCHs was favorable.<sup>63</sup>

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<sup>61</sup> “Nutrition and Physical Activity Policies and Practices in Family Child Care Homes,” December 2009.

<sup>62</sup> Trost, Stewart G., et al, “A Nutrition and Physical Activity Intervention for Family Child Care Homes,” October 2011.

<sup>63</sup> “A Nutrition and Physical Activity Intervention for Family Child Care Homes,” October 2011.

*Barriers to Obesity Prevention, As Identified by Head Start Program Providers and Head Start Program Specialists*

During the first part of 2008, a group of researchers fielded a survey to all Head Start programs as part of the Study of Healthy Activity and Eating Practices and Environments in Head Start. The survey was mailed to over 1,800 Head Start programs in partnership with HHS and the USDA. The survey was designed to focus on obesity-prevention practices and environments in Head Start, with a specific focus on healthy eating and physical activity. Respondents were asked about existing practices and barriers related to both healthy eating and physical activity that may exist at the program, staff and parent level.

The Head Start survey asked respondents about a total of 30 practices and environments related to healthy eating and physical or gross motor activity. Responses on these questions were then used to assign a healthy eating and gross motor activity score to Head Start Programs. This score is intended to rate programs relative to healthy eating and gross motor activities, with a higher score indicating that programs are performing well against measures for these two areas. The healthy eating scores ranged from 4 to 15, with a mean score of 11.8, which falls above the mid-point for the healthy eating scores range. The gross motor activity scores ranged from 2 to 15, with a mean score of 11.2. The table that follows outlines the 30 practices and environments and the percentage of respondents saying their Head Start programs adhered to these.<sup>64</sup>

Practices and Environments Related to Healthy Eating in Head Start Programs	
	%
Serve each day some fruit other than 100% fruit juice	94
Serve each day some vegetable other than French fries, tater tots, or hash browns	97
Prepare cooked vegetables without adding meat fat, margarine, lard, or butter	86
Milk served to most children is either skim (non-fat) or 1% fat	70
Celebrate holidays or special events, such as birthdays, with either healthy foods or	66

<sup>64</sup> Whitaker, Robert C. et al., "A National Survey of Obesity Prevention Practices in Head Start," December 2009.

### Practices and Environments Related to Healthy Eating in Head Start Programs

non-food treats, such as stickers	
Never serve or serve <1x/wk fried or pre-fried meats, such as chicken nuggets, corn dogs, or fish sticks	71
Never serve or serve <1x/wk high-fat meats, such as sausage, bacon, hot dogs, bologna, or ground beef	74
Never serve or serve <1x/wk sweets, such as cookies or cakes	86
Never serve sugary drinks, such as Kool-Aid, sports drinks, sweet tea, punches, or soda	99
Never serve juice drinks that are less than 100% fruit juice	95
Never serve flavored milk, such as chocolate or strawberry	59
Do not allow soda or other vending machines for staff use	54
Staff not allowed to consume foods or beverages in front of children that are different than those the children are served	94
Have written guidelines about feeding children	70
Use an available curriculum that focuses on nutrition	61

### Practices and Environments Related to Gross Motor Activity in Head Start Programs

	%
Children are given structured (adult-led or -guided) gross motor activity for at least 30 min per day	74

## Practices and Environments Related to Gross Motor Activity in Head Start Programs

Children are given the opportunity for unstructured gross motor activity for at least 60 min per day	73
Children are not kept sitting (excluding naps and meals) for more than 30 min at a time	96
Television and video use is limited to less than 60 min per day	90
Children take field trips at least once per month	43
Every center in the program has an on-site outdoor play area	89
Outdoor play areas have a large open area for group games	98
Outdoor play areas have natural elements (e.g., trees, shrubs, smooth rocks, or uneven terrain) which the children are free to use during play	58
Outdoor play areas have a shaded space that is large enough for group games	70
Outdoor play areas have enough fixed play equipment (e.g., slide, swing, or climbing structure) so that children can use it without too much competition	93
Outdoor play areas have enough portable play equipment (e.g., balls, hoops, or sand toys) so that children can use it without too much competition	94
Outdoor play areas have enough wheeled toys (e.g., wagons or tricycles) so that children can use them without too much competition	81
Have enough equipment that is appropriate for gross motor activity for children with physical disabilities	41
Have written guidelines about encouraging children's gross motor activity	62
Use an available curriculum that focuses on gross motor activity	54

In addition to assigning the healthy eating and gross motor score to Head Start programs, this article looked at the difference between different healthy eating practices based on whether or not meals were provided by the school or school district. On most measures, Head Start programs are similar regardless of whether or not the school or school district is providing meals.<sup>65</sup> The biggest differences were around banning flavored milk and staff use of vending machines as well as staff eating the same foods/beverages as children. Head Start programs where meals were provided by the school or school district are less likely than those with food from other sources to have these healthy eating practices in place.<sup>66</sup>

<b>Practices and Environments Related to Healthy Eating in Head Start by Whether Meals Are Provided by School or School District</b>		
<b>Healthy Eating Score Item</b>	<b>Meals Provided by School or School District, %</b>	
	<b>Yes (n=475)</b>	<b>No (n=1076)</b>
Daily fruit other than 100% fruit juice	91	95
Daily vegetable other than fried potatoes	94	98
Prepare cooked vegetables without adding fats	85	87
Serve only low-fat milk (skim or 1% fat)	77	68
Use healthy foods or non-food treats to celebrate	66	67

<sup>65</sup> Alternatives to school or school district-provided meals include cooks directly hired by the program, a food service company not associated with the school or school district and an “other” category, which is not defined in the article. However, only four percent of those surveyed fall into this last category.

<sup>66</sup> “A National Survey of Obesity Prevention Practices in Head Start,” December 2009.

**Practices and Environments Related to Healthy Eating in Head Start by Whether Meals Are Provided by School or School District**

Healthy Eating Score Item	Meals Provided by School or School District, %	
	Yes (n=475)	No (n=1076)
Never or <1x/wk serve fried or pre-fried meats	46	82
Never or <1x/wk serve high-fat meats	62	80
Never or <1x/wk serve sweets	82	87
No sugary drinks	98	99
No juice drinks less than 100% fruit juice	90	97
No flavored milk	45	65
Do not allow staff to use vending machines	42	59
Staff must eat same foods and beverages as children	87	97
Use an available curriculum on healthy eating	65	60
Written guidelines about feeding children	65	73

A separate article used the same Head Start survey to report on the barriers to healthy eating and gross motor activity at Head Start programs. According to this article, the most commonly identified program level barrier to healthy eating in Head Start environments was cost, with 51 percent saying there was not enough money to cover the cost of serving healthier meals and

snacks. This was also chosen as the most important barrier to healthy eating for Head Start children by the majority of those surveyed. Although 57 percent of those surveyed said staff do not generally have a problem encouraging healthy eating among children, staff aversion to healthy foods served at Head Start was cited as the top barrier (30 percent). At the parent level, there are a range of barriers cited, including not having enough money to purchase healthy foods (83 percent), limited knowledge about what foods and beverages are part of a healthy diet (78 percent), and the belief that children will not like the taste of healthy foods (68 percent). A plurality of those surveyed said that lack of money to purchase healthy foods is the “most important barrier” at the parent level. The majority of this audience also sees parents’ aversion to healthy foods (62 percent), cultural beliefs that may not be consistent with healthy eating (58 percent), and time constraints (56 percent) as barriers.<sup>67</sup>

Percentage Of Head Start Programs In Which Barriers To Healthy Eating By Children Are Perceived At The Levels Of Program, Staff, And Parents	
Program level	%
We would <u>not</u> experience any challenges in serving healthier meals and snacks	31
Not enough money to cover the cost of serving healthier meals and snacks	51
Lack of control over the types of meals and snacks that are delivered to us by our food service provider	25
Those preparing meals and snacks would lack the time to prepare healthier foods and beverages	22
Children would not like the taste of healthier meals and snacks	12
Those preparing meals and snacks would lack the knowledge to prepare healthier foods and beverages	11
Parents would not support the idea of serving children healthier meals and snacks	4

<sup>67</sup> Hughes, Cayce C. et al., “Barriers to Obesity Prevention in Head Start,” March 2010.

**Percentage Of Head Start Programs In Which Barriers To Healthy Eating By Children  
Are Perceived At The Levels Of Program, Staff, And Parents**

	Other	4
<b>Staff level</b>		<b>%</b>
Staff do <u>not</u> generally have a problem encouraging children’s healthy eating		57
Staff themselves do not like the taste of the healthy foods that are served at Head Start, so they have trouble encouraging children’s healthy eating		30
Staff have cultural beliefs about food that are not always consistent with healthy eating		25
Staff lack knowledge about how to encourage children’s healthy eating		20
Staff are uncomfortable with their own body weight, so they have trouble encouraging children’s healthy eating		20
Staff do not have time to focus on children’s health eating		7
	Other	2
<b>Parent level</b>		<b>%</b>
Parents or guardians do <u>not</u> generally have a problem encouraging children’s healthy eating at home		3
Not having enough money to purchase healthy foods		83
Limited knowledge about what foods and beverages are part of a healthy diet		78
Beliefs that children will not like the taste of healthy foods		68
Parents or guardians do not like the taste of healthy foods themselves		62

**Percentage Of Head Start Programs In Which Barriers To Healthy Eating By Children  
Are Perceived At The Levels Of Program, Staff, And Parents**

Cultural beliefs about food that are not always consistent with healthy eating	58
Not having enough time for healthy eating	56
Discomfort with their own body weight	29
Symptoms of depression that interfere with healthy eating	23
Other	5

**Most Important Barrier To Healthy Eating For Head Start Children At The Levels Of  
Program, Staff, And Parents**

<b>Program level</b>	<b>%</b>
Lack of money to cover the cost of healthier meals and snacks	56
Lack of control over meals and snacks served	20
Lack of time among those preparing meals and snacks	10
<b>Staff level</b>	<b>%</b>
Do not like taste of healthier foods	38
Lack of knowledge about how to encourage healthy eating	24
Cultural beliefs about food that are not always consistent with healthy eating	19
<b>Parent level</b>	<b>%</b>
Lack of money to purchase healthy foods	40
Lack of knowledge about what foods and beverages are part of healthy diet	19

**Percentage Of Head Start Programs In Which Barriers To Healthy Eating By Children  
Are Perceived At The Levels Of Program, Staff, And Parents**

Cultural beliefs about food that are not always consistent with healthy eating	13
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Reflecting on barriers to physical or gross motor activity, the top three barriers identified at the program level are lack of indoor space (44 percent), not enough money for additional equipment (42 percent), and lack of time to increase the amount of this type of activity (38 percent). Again, lack of money is the most important barrier at the program level. While almost half of those surveyed say that staff do not generally have a problem encouraging gross motor activity (48 percent), the top barriers at the staff level include children’s preferences for unstructured time (28 percent), staff discomfort with physical coordination (28 percent), and staff preferences for using unstructured play time as a break (26 percent). As with barriers to healthy eating, the majority of Head Start providers see a number of barriers at the parent level. This includes not having enough time to participate in these types of activities with their children (70 percent), lack of knowledge (60 percent), safety concerns (54 percent), and traffic concerns (54 percent). At the parent level, most of those surveyed split between saying the most important barrier to gross motor activity for Head Start Children is lack of time or lack of knowledge.<sup>68</sup>

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<sup>68</sup> “Barriers to Obesity Prevention in Head Start,” March 2010.

**Percentage Of Head Start Programs In Which Barriers To Increasing Gross Motor Activity For Children Are Perceived At The Levels Of Program, Staff, and Parents**

Program level	%
We would <u>not</u> experience any challenges in increasing the amount of gross motor activity during the school day	19
Lack of indoor space for gross motor activity	44
Not enough money to cover the cost of additional equipment to support gross motor activity	42
Lack of time in our schedule to increase the amount of gross motor activity	38
Lack of knowledge about how to integrate gross motor activity into our other regular activities	18
Other areas in our program have higher priority than increasing the amount of gross motor activity	16
Lack of outdoor space for gross motor activity	13
Parents do not send the children to school with enough warm clothing for outdoor play	13
Lack of expertise to train staff on gross motor activities	10
Other	4
Parents would not support the idea of children spending more time doing gross motor activities	3
Children would not be interested in spending more time doing gross motor activities	<1

**Percentage Of Head Start Programs In Which Barriers To Increasing Gross Motor Activity For Children Are Perceived At The Levels Of Program, Staff, and Parents**

<b>Staff level</b>	<b>%</b>
Staff do <u>not</u> generally have a problem encouraging children’s gross motor activity	48
Staff like to use children’s unstructured play time to socialize with each other	28
Staff are uncomfortable with their own level of physical coordination, so they have trouble encouraging children’s gross motor activity	28
Staff like to use children’s unstructured play time as a break from interacting with the children	26
Staff are uncomfortable with their own body weight	24
Staff lack knowledge about how to encourage children’s gross motor activity	23
Staff do not have time to focus on children’s gross motor activity	23
Staff are afraid the children will get hurt doing gross motor activities	8
Other	4
<b>Parent level</b>	<b>%</b>
Parents or guardians do <u>not</u> generally have a problem encouraging children’s gross motor activity at home	6
Not having enough time to participate in gross motor activities with their children	70
Not having enough knowledge about how to encourage children’s gross motor activity	60
Not thinking that their neighborhood is safe enough for children to play outdoors because of <u>crime</u>	54

**Percentage Of Head Start Programs In Which Barriers To Increasing Gross Motor Activity For Children Are Perceived At The Levels Of Program, Staff, and Parents**

Not thinking that their neighborhood is safe enough for children to play outdoors because of <u>traffic</u>	54
Discomfort with their own level of physical coordination	40
Discomfort with their own body weight	31
Symptoms of depression that interfere with encouraging their children’s gross motor activity	24
Being afraid the children will get injured while doing gross motor activities	22
Not thinking that their children will enjoy gross motor activity	13
Other	10

Most Important Barrier To Gross Motor Activity For Head Start Children At The Levels Of Program, Staff, And Parents	
<b>Program level</b>	<b>%</b>
Lack of money for additional equipment for gross motor activity	32
Lack of time in daily schedule for gross motor activity	24
Lack of indoor space for gross motor activity	23
<b>Staff level</b>	<b>%</b>
Lack of knowledge about how to encourage gross motor activity	22
Like to use children’s unstructured play time to socialize	19
Like to use children’s unstructured play time as break from interacting with children	18
<b>Parent level</b>	<b>%</b>
Lack of time to participate in gross motor activity with their children	34
Lack of knowledge about how to encourage gross motor activity	30
Not thinking neighborhood is safe enough to play outside due to <u>crime</u>	16

*Impact of CACFP Participation among Child Care Providers in California*

In 2008, child care providers in California received a survey in the mail that was designed to collect information about the types of food and beverages served to children in these settings. The study divided respondents based on type of home and CACFP participation. The authors hypothesized that the latter variable would have an effect on the nutritional value of food served in child care centers and homes. Results are based on self-reported answers to the mail survey, which creates an opportunity for over-reporting of favorable behaviors and, more generally, misreporting. While this survey focused on child care providers in California, the findings of the

study are instructive due to not just a stable sample size but also the diversity and size of the state. (Specifically, almost one in 10 children in child care settings in the U.S. lives in California.)<sup>69</sup>

The California survey asked child care providers to report about food and beverages served to children in these settings the previous day. The list of food and beverages included 21 items, ranging from more nutritious options (whole grains, vegetables, legumes) to other items (candy, potato chips, sweetened drinks). CACFP sites were then compared to non-CACFP sites to determine what, if any, differences there were between these two groups in the types of food and beverages served. While CACFP sites are not significantly different from non-CACFP sites in every food and beverage category, there is a pattern of sites participating in CACFP being more likely to have served nutritious options to children on the previous day than those not participating in CACFP.<sup>70</sup>

The authors say that CACFP requirements and reimbursements likely influence the higher reporting among CACFP sites in some of the more nutritious food and beverage categories. At the same time, they caution that this survey also confirms that “CACFP guidelines are so broad as to allow many foods that do not comply with the Dietary Guidelines for Americans.” They also encourage additional research to better discern differences in food and beverages served by type of child care and also whether increasing participation in CACFP can have a positive effect on improving nutrition and health outcomes in young children.<sup>71</sup>

#### *Child Care Centers in Oklahoma: Assessment of Nutrition and Physical Activity Practices*

A survey of Oklahoma child care centers was conducted in order to explore daily nutrition and physical activity practices in this environment and, more specifically, determine if unhealthy practices in all-day child care centers. Oklahoma developed a quality rating system for child care facilities that is based on compliance with licensing regulations, increased education of parents or guardians, parent involvement, learning environment for children, and participation in national accreditation systems. The quality rating system has four tiers; One Star programs, which meet

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<sup>69</sup> Lorrene D., et al. “Participation in the Child and Adult Care Food Program is Associated with More Nutritious Foods and Beverages in Child Care,” June 2012.

<sup>70</sup> “Participation in the Child and Adult Care Food Program is Associated with More Nutritious Foods and Beverages in Child Care,” June 2012.

<sup>71</sup> “Participation in the Child and Adult Care Food Program is Associated with More Nutritious Foods and Beverages in Child Care,” June 2012.

minimum licensing requirements; One Star Plus programs, which meet additional quality criteria including additional training, reading to children daily, parent involvement and program assessment; Two Star programs, which meet additional quality criteria or are nationally accredited; and Three Star programs, which meeting additional quality criteria and are nationally accredited.<sup>72</sup> The Oklahoma child care survey examines the association that child care centers with a higher star rating have a higher measure of quality and in turn would have more nutritious food as well as physical activity equipment. While the survey is limited to one state, the intersection of the center’s quality rating with the daily nutrition and physical activity practices for children 2 to 5 years old is not frequently examined.<sup>73</sup>

The differences in nutrition practices at child care centers with different star ratings prove less varied than the differences in physical activity practices. Findings show that Three Star centers have the highest frequency of best practices when it comes to physical activity-related practices. Three Star centers are more likely than those with lower star ratings to rarely or ever use television (75 percent), have a wide variety of portable play equipment available for children to use at the same time (77 percent), have outdoor portable equipment freely available at all times (79 percent), and have outdoor play space that includes lots of space for toys (88 percent). Additionally, in child care centers with this highest rating, during active play time, staff often encourage children to be active and join (80 percent) and every room in the center has visible support for physical activity (42 percent).<sup>74</sup>

In addition to identifying Three Star centers having the highest frequency of best physical activity practices, the survey also found that in many cases the frequency of best practices in One or One Star Plus Star centers and Three Star centers were higher than Two Star centers. Researchers postulate this could be due to CACFP and accreditation standards; however this was not proven from survey results. Overall, the results of this research study identified how the star-ranking of centers perform and, perhaps more importantly, identified weak areas for Oklahoma centers to

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<sup>72</sup> “Star Ratings/Oklahoma Child Care.” 2013.

<sup>73</sup> Sisson, Susan B., et al, “Assessment of Food, Nutrition, and Physical Activity Practices in Oklahoma Child-Care Centers,” August 2012.

<sup>74</sup> “Assessment of Food, Nutrition, and Physical Activity Practices in Oklahoma Child-Care Centers,” August 2012.

improve on for health and physical activity among 2 to 5 year olds in an effort to develop sustainable strategies related to reducing child obesity.<sup>75</sup>

### *Challenges to Prioritizing Physical Activity, as Identified by Child Care Providers*

The American Academy of Pediatrics (AAP) sponsored research in 2012 among child care providers to better understand what values and policies were influencing physical activity in child care centers. As part of this study, nine focus groups were conducted among child care providers in Cincinnati, Ohio. Due to the qualitative nature of this research and also the limited geographic representation, findings should be viewed as directional.

The AAP study identified three potential barriers to children engaging in physical activity in child care settings: safety and injury concerns; financial limitations; and the focus on “academics,” even among younger children. Parents’ attitudes intersect with all three of these barriers.

Specifically, parents may prefer their child refrain from any activities that might result in an injury, asking that their child “read a book” instead of engaging in play time. The emphasis on academics, even among such young children, also created obstacles for

*“For example, a center’s tight budget limited its ability to offer expensive outdoor equipment, thus centers prioritized things they felt mattered most to the parents: more time, space, and materials in the classroom. Unless parents valued and prioritized outdoor time (and several participants felt many parents did not), children would not have opportunities to be physically active.”*

-“Societal Values and Policies May Curtail

child care providers. As such, with limited resources, child care providers are likely to allocate resources at the expense of physical activity.<sup>76</sup> Engaging parents in an obesity prevention curriculum may help mitigate some of these obstacles, but, according to the NACCRRRA study, less than a third of CCR&Rs report that centers in their area are engaging parents around childhood obesity prevention efforts.<sup>77</sup>

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<sup>75</sup> “Assessment of Food, Nutrition, and Physical Activity Practices in Oklahoma Child-Care Centers,” August 2012.

<sup>76</sup> “Societal Values and Policies May Curtail Preschool Children’s Physical Activity in Child Care Centers,” January 2012.

<sup>77</sup> “Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies,” August 2011.

### *Challenges to Implementing Guidelines, As Identified by Select State Representatives*

Last year, the Altarum Institute released a report that took a closer look at state activities related to obesity prevention among younger children. Entitled “State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems,” this research was largely qualitative in nature and included interviews among 20 representatives from 10 states. The Altarum report confirms that health is an important factor in assessing the quality of early child care programs. Child care settings are also an opportunity to promote and reinforce healthy behaviors. Still, the report acknowledges that efforts to promote nutrition, physical activity and electronic media use guidelines in child care settings come with challenges. These include:

- Lack of staff training and capacity – Existing staff who provide technical assistance and training to child care providers may not have training specific to nutrition, physical activity and electronic media use.
- Costs – There are concerns around the costs of integrating nutrition, physical activity and electronic media use guidelines at child care facilities. For providers, state representatives say that the cost or perceived cost of healthier food options present a challenge to adoption of better nutrition practices. In other research and also at the second USDA Stakeholder Session, costs of equipment and the cost to secure the physical space needed to play are cited as barriers.<sup>78</sup>
- Resistance from parents, providers and other stakeholders – There are several audiences that might present barriers to adoption of nutrition, physical activity and electronic media use guidelines among child care providers.
  - Parents may not always support or act in ways that support nutrition, physical activity and electronic media use guidelines. For example, they could send food to a child care facility that is not perceived as healthy. In other research, only a small number of mothers who report packing their child’s lunch say they regularly pack fruit, vegetables and salad items in their in their child’s school lunch (23

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<sup>78</sup> “Societal Values and Policies May Curtail Preschool Children’s Physical Activity in Child Care Centers,” January 2012.

percent).<sup>79</sup> Even more recently, a Gallup survey revealed that most parents with children in public school opposed banning home-packed lunches brought into public schools, so there may be similar resistance in a child care setting – even if it means unhealthy foods are brought to child care facilities (79 percent).<sup>80</sup>

- Parents may resist having children play outdoors based on the weather.
- Parents and providers may resist guidelines based on anti-government sentiments, either based on anti-government views in general or just push-back on government regulations and the perception that government is overstepping its role.<sup>81</sup>

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<sup>79</sup> “How American Moms Perceive Childhood Obesity: A Survey of the Obstacles Keeping Moms from Improving their Children’s Weight Status,” March 2011.

<sup>80</sup> “Americans Favor Limiting Sale of Unhealthy Food in Schools,” March 2013.

<sup>81</sup> Gabor, Vivian and Karah Mantinan, “State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems,” January 2012.

## Target Audience Profiles<sup>82</sup>

### Target Audience Profiles: At a Glance

- Older children, specifically those between the ages of 4 and 5, are more likely than those ages 3 and younger to be in a child care center.
- Nearly all child care workers are female, and these workers have a range of education backgrounds. Interestingly, there is not a difference in the education distribution between those working in a child care center and those working in a family child care home.
- According to counts from 2011, there are over 800 sponsoring organizations for family child care homes across the 50 states and the District of Columbia.
- Across the country, there are a range of departments responsible for administering CACFP, with the Department of Education or a division of this department the most common for this type of work.

### *Profile of Children in Child Care Settings*

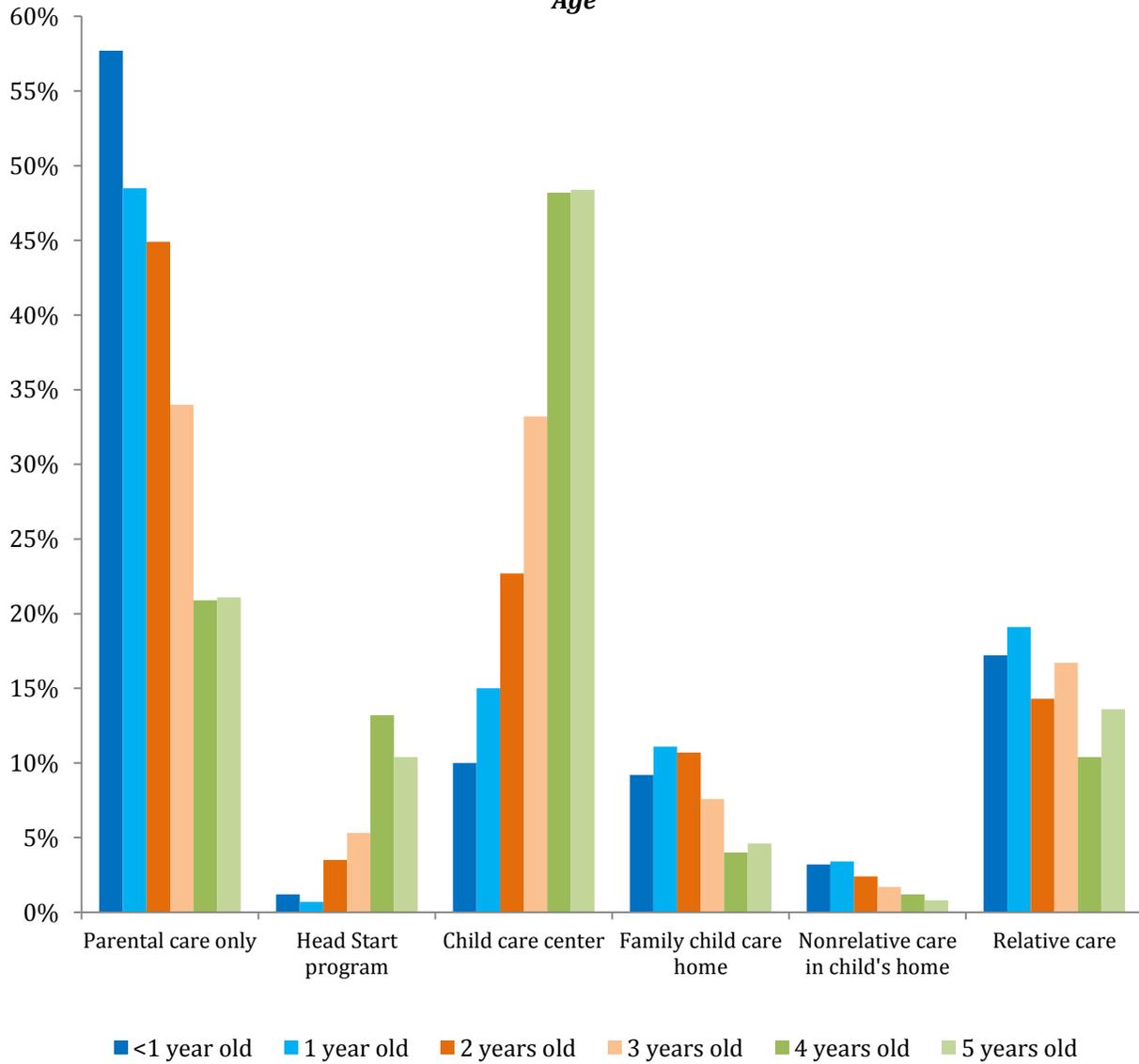
The National Center for Education Statistics provides details about the child care arrangement for children five and under by age and race, among other demographic variables. However, the most current available data by age for this age range dates back to 2005.<sup>83</sup> Data show that up through the age of 2 years old, the majority of children are under parent or relative care. On the upper end, most children ages 4 and 5 are in a child care center. Most three year olds are either in a child care center or under parental care.

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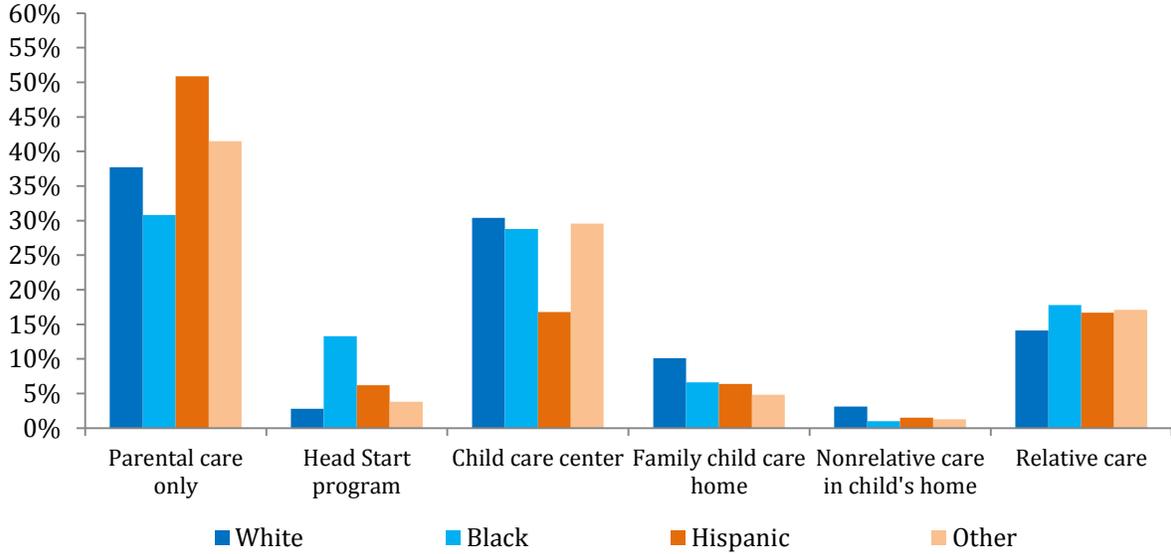
<sup>82</sup> Target audiences are defined as those included in the formative research (state agency staff administering CACFP, sponsoring organizations and child care providers).

<sup>83</sup> National Center for Education Statistics, 2005.

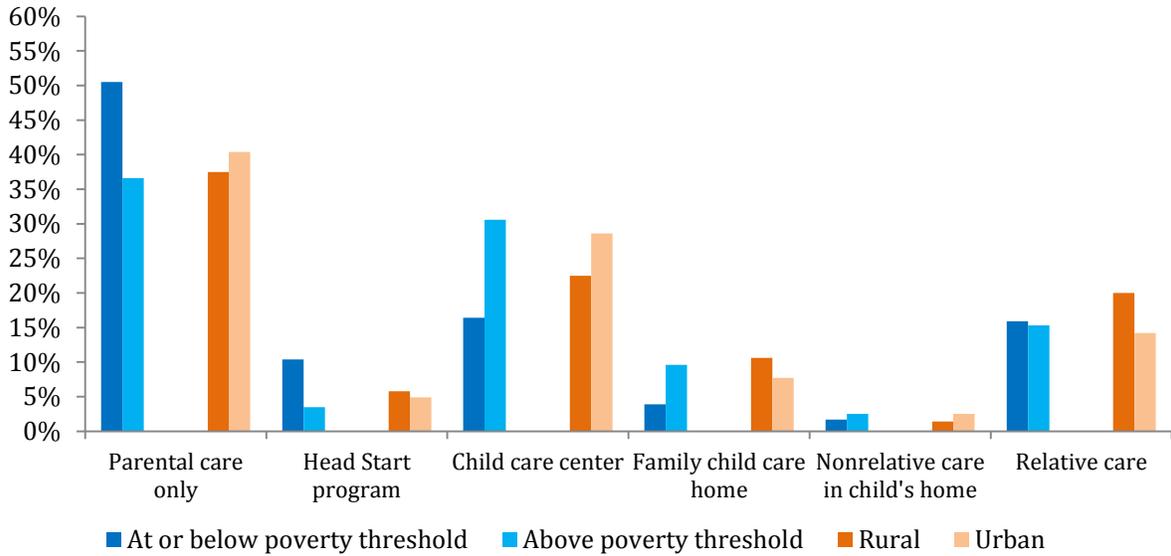
**Percentage of U.S. Preschool Children in Different Types of Child Care, By Age**



**Percentage of U.S. Preschool Children in Different Types of Child Care, By Race/Ethnicity**



**Percentage of U.S. Preschool Children in Different Types of Child Care, By Poverty Status and Urbanicity**



### *Profile of Child Care Center and Day Care Homes*

The 2012 ChildCare Aware of America study estimated there are a total of 117,000 child care centers nationwide, of which 10 percent are nationally accredited. ChildCare Aware of America also estimated there are 209,000 family child care homes, but very few of these are nationally accredited (1 percent). Women comprise the vast majority of those employed in the child care workforce as an estimated 97 percent of child care workers are women.<sup>84</sup>

Looking beyond gender breakdown, in 2009, the U.S. Census Bureau's American Community survey reported nearly 1.8 million people in the early child care and education workforce nationwide. Approximately one-third of this population are center-based child care workers (32 percent) and 23 percent are family-based child care workers. The early child care and education workforce is also comprised of preschool teachers (24 percent), private, home-based child care workers (11 percent), teaching assistants (6 percent), and program directors (5 percent). The nearly 2 million early child care and education workers are employed by child care and early learning programs, preschool programs and Head Start and Early Head Start programs.

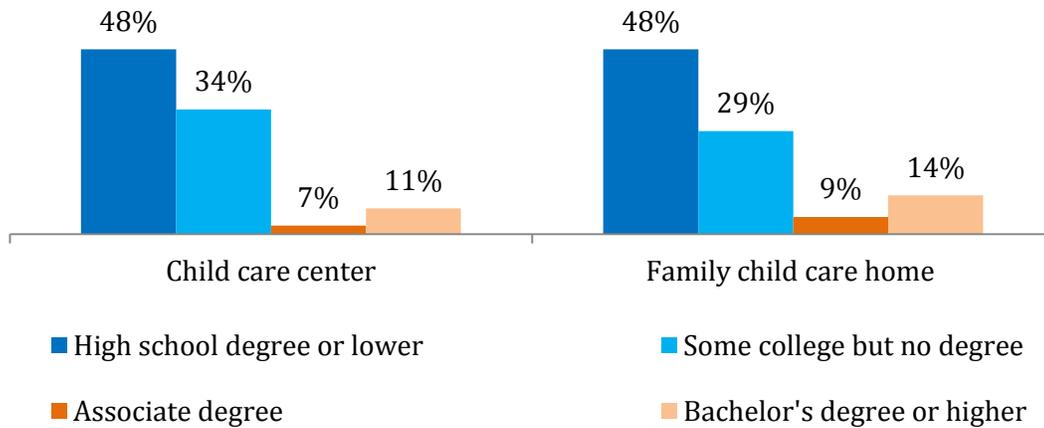
These workers are from a variety of education backgrounds. However, the education distribution of workers does not vary widely between child care centers and family child care homes. States have different education requirements for child care workers: an equal number of states require a high school diploma or GED while the remaining half of states allow workers to have less than a high school diploma. In family-based providers, there are no common requirements, so the range of worker education scans to those with some college education as well as those who have a Child Development Associate (CDA) education credential.<sup>85</sup> The CDA certification is offered for anyone to take; this is a minimum requirement for some state family-based providers. For center-based provider, however, the minimum level of education allowed for a worker is a high school diploma or GED.

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<sup>84</sup> "Child Care in America: 2012 State Fact Sheets," June 2012.

<sup>85</sup> "Early Child Care and Education: HHS and Education are Taking Steps to Improve Workforce Data and Enhance Worker Quality," February 2012.

### *Child Care Worker Education Level*



In addition to different education levels at child care center and family child care homes, the physical setting of the two types of care differs. Center-based care is typically found in non-residential areas, whereas the family-based childcare setting is typically in a residential setting, such as the home of the provider. There are also differences in the focus of child care centers as compared to family child care homes: while center-based care often focuses on promoting school readiness, family-based care can have a more personal approach within the home-like environment.<sup>86</sup>

#### *Ongoing Research about and among Child Care Centers*

Currently, the Office of Planning, Research and Evaluation, an office of the Administration for Children and Families within U.S. Department of Health and Human Services, is conducting a National Survey of Early Care and Education (NSECE). This study explores both the utilization and availability of early care and education in the country. As part of this effort, parents, home-based providers, center-based providers, and workforce providers will all be surveyed. This research design will provide an overview on the nation’s early care and education usage and increase the understanding of parent desires as well as center needs.<sup>87</sup>

<sup>86</sup> “Early Child Care and Education: HHS and Education are Taking Steps to Improve Workforce Data and Enhance Worker Quality,” February 2012.

<sup>87</sup> “National Survey of Early Care and Education (NSECE), 2010-2014.”

### *Profile of Sponsoring Organizations*

Sponsoring organizations are authorized to sponsor family day care providers that participate in CACFP. They may also sponsor child care centers. However, child care centers can also independently participate in CACFP. Family day care homes can only participate in CACFP if they sign an agreement with a sponsoring organization. Sponsoring organizations are charged with taking on the administrative tasks related to planning, organizing and managing CACFP for which they are reimbursed.<sup>88</sup> Additionally, a sponsoring organization's responsibilities include verifying if the family day care home is a Tier I or Tier II home and providing the appropriate documentation of this classification.<sup>89 90</sup>

In 2011, there were 836 existing sponsoring organizations for family child care homes across the 50 states and the District of Columbia. The highest concentration of sponsoring organizations is in the South, with 41 percent of sponsoring organizations located in these states, and the smallest number is in the Midwest (17 percent). Twenty-two percent of sponsoring organizations are in the Northeast, and about two in 10 are in the West (19 percent).<sup>91</sup> More detailed information about the organizational structure, or firmographics, of sponsoring organizations is limited. Existing research from 2000 among 20 states identified 69 percent of sponsoring organizations as private nonprofit agencies, 10 percent as public agencies, 13 percent as military organizations; with the rest falling into an "other" category.<sup>92</sup>

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<sup>88</sup> "Child & Adult Care Food Program," September 2012.

<sup>89</sup> Tier I homes are located in low-income areas or where the provider has a household income equivalent or below 185 percent of the Federal income poverty guidelines; Tier II homes are those that do not meet Tier I criteria however the sponsor organization can identify income-eligible children so meals are reimbursed at Tier I rate.

<sup>90</sup> "Child and Adult Care Food Program (CACFP): Assessment of Sponsor Tiering Determinations," December 2012.

<sup>91</sup> "Child & Adult Care Food Program: Participation Trends 2012," March 2012.

<sup>92</sup> "Child and Adult Care Food Program (CACFP): Assessment of Sponsor Tiering Determinations," December 2012.

Number of TSA-Member CACFP Sponsors <sup>93</sup>			
State	Number of Sponsors	State	Number of Sponsors
Alabama	18	Montana	10
Alaska	8	Nebraska	7
Arizona	18	Nevada	3
Arkansas	12	New Hampshire	8
California	50	New Jersey	15
Colorado	12	New Mexico	16
Connecticut	8	New York	92
Delaware	6	North Carolina	32
District of Columbia	3	North Dakota	6
Florida	45	Ohio	18
Georgia	24	Oklahoma	21
Hawaii	2	Oregon	9
Idaho	7	Pennsylvania	18
Illinois	15	Rhode Island	1
Indiana	20	South Carolina	12
Iowa	22	South Dakota	6
Kansas	20	Tennessee	15
Kentucky	10	Texas	65
Louisiana	28	Utah	8
Maine	15	Vermont	7
Maryland	7	Virginia	20
Massachusetts	24	Washington	12
Michigan	6	West Virginia	1
Minnesota	8	Wisconsin	27

<sup>93</sup> "Child & Adult Care Food Program: Participation Trends 2012," March 2012.

Number of TSA-Member CACFP Sponsors <sup>93</sup>			
Mississippi	16	Wyoming	2
Missouri	10		

*Profile of State Agencies*

This section includes two types of information about state agencies, including:

- A summary and list of the agencies administering CACFP; and
- A summary and list of the agencies responsible for child care center and family child care home policies and licensing.

The first group – those administering CACFP – is among the target audiences in the upcoming formative research. Information about the second group is intended to provide a more comprehensive scan of the agencies that have some oversight responsibility related to child care centers and family day care homes.

There are varying departments and divisions that administer CACFP across the 50 states, the District of Columbia and territories.<sup>94</sup> In over half, a division within the state or territory’s Department of Education is responsible for administering CACFP. Within these Departments of Education, the division responsible for CACFP tends to have a nutrition or wellness focus, often with a specific children’s nutrition focus. In other states, the departments responsible for administering CACFP are oftentimes the Department of Health and Human Services, Department of Health or Department of Agriculture.

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<sup>94</sup> Child Nutrition Programs, 2013.

**STATE AGENCY ADMINISTERING CACFP**

**Department**

AL	Child Nutrition Programs, Department of Education
AK	Child Nutrition Programs, Department of Education and Early Development
AZ	Health and Nutrition Services, Department of Education
AR	Division of Child Care and Early Childhood Education, Department of Human Services
CA	Nutrition Services Division, Department of Education
CO	Prevention Services Division, Department of Public Health and Environment
CT	Bureau of Health, Nutrition, Family Services & Adult Education, Department of Education
DE	School and Community Nutrition Programs, Department of Education
DC	Office of the State Superintendent of Education
FL	Bureau of Childcare Food Programs, Department of Health
GA	Bright From the Start, Department of Early Care and Learning
HI	Office of Hawaii Child Nutrition Programs, Department of Education
ID	Child Nutrition Programs, Department of Education
IL	Nutrition Programs, State Board of Education
IN	Office of School and Community Nutrition, Department of Education
IA	Bureau of Nutrition, Health and Transportation Services, Department of Education
KS	Child Nutrition and Wellness, State Department of Education
KY	Division of School and Community Nutrition, Department of Education
LA	Division of Nutrition Support, Department of Education
ME	Office of Child and Family Services, Department of Health and Human Services
MD	School and Community Nutrition Programs Branch, Department of Education
MA	Nutrition, Health and Safety, Department of Elementary and Secondary Education
MI	Office of School Support Services, Department of Education
MN	Food and Nutrition Services, Department of Education
MS	Office of Healthy Schools, Department of Education
MO	Bureau of Community Food and Nutrition Assistance Programs, Department of Health and Senior Services
MT	Early Childhood Services Bureau, Department of Public Health and Human Services
NE	Nutrition Services, Department of Education
NV	Office of Child Nutrition and School Health, Department of Education
NH	Bureau of Nutrition Programs and Services, Department of Education
NJ	Division of Food and Nutrition, Department of Agriculture
NM	Family Nutrition Bureau, Children, Youth and Families Department
NY	Child and Adult Food Program, Department of Health
NC	Special Nutrition Programs Unit, Department of Health and Human Services

**STATE AGENCY ADMINISTERING CACFP**

ND	Child Nutrition and Food Distribution Programs, Department of Public Instruction
OH	Office for Child Nutrition, Department of Education
OK	Child Nutrition Programs, Department of Education
OR	Child Nutrition and Food Distribution, Department of Education
PA	Division of Food and Nutrition, Department of Education
RI	Office of Statewide Efficiencies, Department of Elementary and Secondary Education
SC	Office of School Food Services and Nutrition, Department of Social Services
SD	Child and Adult Nutrition Services, Department of Education
TN	Adult and Community Programs, Department of Human Services
TX	Food and Nutrition, Department of Agriculture
UT	Child Nutrition Programs, State Office of Education
VT	Child Nutrition, Department of Education
VA	Division of Nutrition, Physical Activity and Food Programs, Department of Health
WA	Child Nutrition Services, State Office of Superintendent of Public Instruction
WV	Office of Child Nutrition, Department of Education
WI	Community Nutrition Team, Department of Public Instruction
WY	Health, Safety & Nutrition Division, Department of Education
Guam	Federal Programs Division, Department of Education, Government of Guam
Puerto Rico	Food and Nutrition Services, Department of Education
Virgin Islands	Office of Special Nutrition Programs, Department of Education

\* In all states and territories excluding Florida and Illinois, the same department is responsible for administering CACFP for both child and adult care.

Across the 50 states and the District of Columbia, there are also a variety of departments handling child care center and family child care home policies and licensing. (The table that follows lists these agencies.) Roughly 30 percent of states house the department of licensing for child care within their state’s Department of Human Services or a division of human services. Within this population, there are several states that include a branch of the human services agency that focuses specifically on child and family services. Nearly 20 percent of states have child care licensing handled directly within the Department of Children and Family Services.<sup>95</sup>

<sup>95</sup> Child Care Aware of America. 2013.

## Department of Licensing by State

### Department of Licensing

AL	Department of Human Resources, Child Care Services Division
AK	Department of Health and Social Services, Child Care Program Office
AZ	Department of Health Services, Division of Licensing Services, Bureau of Child Care Licensing
AR	Department of Human Services
CA	Department of Social Services
CO	Department of Human Services
CT	Department of Public Health
DE	Department of Services for Children, Youth and their Families, Office of Child Care Licensing
DC	Department of Health
FL	Department of Children and Families
GA	Department of Care and Early Learning
HI	Department of Human Services, Child Care Licensing Program
ID	Department of Health and Welfare
IL	Department of Children and Family Services
IN	Family and Social Services Administration
IA	Department of Human Services
KS	Department of Health and Environment
KY	Department for Community Based Services
LA	Department of Children and Family Services
ME	Department of Health and Human Services, Child and Family Services
MD	Department of Education, Division of Early Childhood Development
MA	Department of Early Education & Care
MI	Department of Human Services
MN	Department of Human Services
MS	State Department of Health, Child Care Licensure Division
MO	Department of Social Services
MT	Department of Public Health & Human Services
NE	Department of Health and Human Services, Division of Public Health, Licensing Unit
NV	Department of Health and Human Services, State Health Division
NH	Department of Health and Human Services, Child Care Licensing Unit
NJ	Department of Children and Families, Division of Licensing
NM	Children, Youth and Families Department, Office of Child Development
NY	Office of Children and Families
NC	Department of Health and Human Services, Division of Child Development and Early Education
ND	Department of Human Services

### Department of Licensing by State

OH	Department of Jobs and Family Services
OK	Department of Human Services
OR	Employment Department, Child Care Division
PA	Department of Public Welfare, Office of Development and Early Learning
RI	Department of Children, Youth & Families
SC	Department of Social Services, Division of Child Care Services
SD	Department of Social Services
TN	Department of Human Services
TX	Department of Family Services
UT	Bureau of Child Development
VT	Department for Children and Family Services, Child Development Division
VA	Department of Social Services
WA	Department of Early Learning
WV	Department of Health and Human Services, Bureau for Children and Families
WI	Department of Children and Families
WY	Department of Family Services

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Zimmerman, Frederick J., Christakis, Dimitri A., & Meltzoff, Andrew N. "Television and DVD/Video Viewing in Children Younger Than 2 Years." Archives of Pediatrics & Adolescent Medicine. (May 2007).  
<http://www.maketvwork.com/papers/TV%20and%20video%20viewing%20under%202.pdf>

## vi. ANNOTATED BIBLIOGRAPHY

This section provides a list of literature that was reviewed or consulted for this literature review. Not all sources are cited in the review.

Citation	Document Title	Description
Centers for Disease Control and Prevention. "Childhood Obesity Facts." 2013. <a href="http://www.cdc.gov/healthy-youth/obesity/facts.htm">http://www.cdc.gov/healthy-youth/obesity/facts.htm</a>	Childhood Obesity Facts	Factsheet covering statistics, health effects, and prevention tips for childhood obesity.
Child Care Aware of America. "Child Care in America: 2012 State Fact Sheets." June 2012. <a href="http://www.naccrra.org/sites/default/files/default_site_pages/2012/full2012cca_state_factsheetbook.pdf">http://www.naccrra.org/sites/default/files/default_site_pages/2012/full2012cca_state_factsheetbook.pdf</a>	Child Care in America: 2012 State Fact Sheets	Report to provide key indicators about child care nationally and in individual states.
Child Care Aware of America. "In the States." <a href="http://www.naccrra.org/node/2495">http://www.naccrra.org/node/2495</a>	In the States	Details of child care licensing department, listed by state.
CLIF Kid. "Parents Say Reading Furniture Assembly Instructions is Easier than Reading Nutrition Labels, According to CLIF Kid Survey." (November 2011). <a href="http://www.clifbar.com/pres/s/release/parents_say_reading_furniture_assembly_instructions_is_easier_than_reading/">http://www.clifbar.com/pres/s/release/parents_say_reading_furniture_assembly_instructions_is_easier_than_reading/</a>	Parents Say Reading Furniture Assembly Instructions is Easier than Reading Nutrition Labels, According to CLIF Kid Survey	Quantitative survey of parents with children ages six to 12 to examine confusion surrounding nutrition terminology and labels.

Citation	Document Title	Description
<p>Copeland, Kristen A., Sherman, Susan w., Kendeigh, Cassandra A., Kalkwarf, Heidi J., &amp; Saelens, Brian E. "Societal Values and Policies May Curtail Preschool Children's Physical Activity in Child Care Centers." <i>Pediatrics</i>. (January 2012). <a href="http://pediatrics.aappublications.org/content/early/2012/01/02/peds.2011-2102.full.pdf">http://pediatrics.aappublications.org/content/early/2012/01/02/peds.2011-2102.full.pdf</a></p>	<p>Societal Values and Policies May Curtail Preschool Children's Physical Activity in Child Care Centers</p>	<p>Three main barriers to children's physical activity in child care identified through focus groups and one-on-one interviews of child care providers of children three to five years old.</p>
<p>"C.S. Mott Children's Hospital National Poll on Children's Health." (August 2012). <a href="http://mottnpch.org/reports-surveys/top-10-child-health-concerns-exercise-obesity-smoking-lead-list">http://mottnpch.org/reports-surveys/top-10-child-health-concerns-exercise-obesity-smoking-lead-list</a></p>	<p>C.S. Mott Children's Hospital National Poll on Children's Health</p>	<p>Quantitative online poll of adults about top health concerns.</p>
<p>Data Resource Center for Child &amp; Adolescent Health. "Time Spent on Average Weekday Watching TV or Videos." (2007). <a href="http://www.childhealthdata.org/browse/survey/results?q=284&amp;r=1">http://www.childhealthdata.org/browse/survey/results?q=284&amp;r=1</a></p>	<p>Time Spent on Average Weekday Watching TV or Videos</p>	<p>Quantitative measure from the 2007 National Survey of Children's Health to display screen time for children ages one to five.</p>
<p>Ehlers, Diane K., Huberty, Jennifer L., &amp; Beseler, Cheryl L. "Is School Community Readiness Related to Physical Activity Before and After the Ready for Recess Intervention?" <i>Health Education Research</i>. (October 2012). <a href="http://her.oxfordjournals.org/content/early/2012/10/28/her.cys102.short">http://her.oxfordjournals.org/content/early/2012/10/28/her.cys102.short</a></p>	<p>Is school community readiness related to physical activity before and after the Ready for Recess intervention?</p>	<p>Evaluation of Ready for Recess intervention in schools to determine effect of community readiness on youth physical activity using observations of children in grades three to six and interviews of key informants (staff and parents).</p>

Citation	Document Title	Description
<p>Fakhouri, Tala., Hughes, Jeffrey., Brody, Debra., Kit, Brian., &amp; Ogden, Cynthia. "Physical Activity and Screen-Time Viewing Among Elementary School-Aged Children in the United States From 2009 to 2010." <i>Journal of the American Medical Association Pediatrics</i>. (March 2013). <a href="http://archpedi.jamanetwork.com/article.aspx?articleid=1548755">http://archpedi.jamanetwork.com/article.aspx?articleid=1548755</a></p>	<p>Physical Activity and Screen-Time Viewing Among Elementary School-Aged Children in the United States From 2009 to 2010</p>	<p>Quantitative analysis of data from the National Health and Nutrition Examination Survey; findings include fewer than 40% of children between six and 11 years old meet both physical activity and screen-time recommendations concurrently.</p>
<p>Food Research and Action Center. "Child &amp; Adult Care Food Program: Participation Trends 2012" (March 2012). <a href="http://frac.org/newsite/wp-content/uploads/2009/05/cacfp_participation_trends_report_2012.pdf">http://frac.org/newsite/wp-content/uploads/2009/05/cacfp_participation_trends_report_2012.pdf</a></p>	<p>Child &amp; Adult Care Food Program: Participation Trends 2012</p>	<p>Report to analyze CACFP participation data provided by the USDA.</p>
<p>Gabor, Vivian &amp; Mantinan, Karah. "State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems." (January 2012). <a href="http://www.altarum.org/files/pub_resources/QRIS-Report-22Feb12-FIN.pdf">http://www.altarum.org/files/pub_resources/QRIS-Report-22Feb12-FIN.pdf</a></p>	<p>State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems</p>	<p>Qualitative report on the implementation of QRIS in different states and the challenges of integrating obesity prevention standards.</p>
<p>Gallup. "Americans Favor Limiting Sale of Unhealthy Food in Schools." (March 2013). <a href="http://www.gallup.com/poll/161318/americans-favor-limiting-sale-unhealthy-food-schools.aspx">http://www.gallup.com/poll/161318/americans-favor-limiting-sale-unhealthy-food-schools.aspx</a></p>	<p>Americans Favor Limiting Sale of Unhealthy Food in Schools</p>	<p>Quantitative telephone poll of adults; findings relay Americans support nutritional restrictions on school-based food.</p>

Citation	Document Title	Description
<p>Gallup. "In U.S., Parents Struggle to Fit in Exercise." (June 2010).  <a href="http://www.gallup.com/poll/141014/Parents-Struggle-Fit-Exercise.aspx">http://www.gallup.com/poll/141014/Parents-Struggle-Fit-Exercise.aspx</a></p>	<p>In U.S., Parents Struggle to Fit in Exercise</p>	<p>Quantitative telephone survey to illuminate the difficulty many parents have in modeling a healthy lifestyle for their children.</p>
<p>Gerstein/Agne Strategic Communications. "Child Nutrition Initiative National Survey." (February 2010).  <a href="http://www.gistfunders.org/events/documents/ChildNutritionInitiativeNationalSurveyGersteinAgne2010BudgetBriefing.pdf">http://www.gistfunders.org/events/documents/ChildNutritionInitiativeNationalSurveyGersteinAgne2010BudgetBriefing.pdf</a></p>	<p>Child Nutrition Initiative National Survey</p>	<p>Quantitative telephone poll to probe Americans' support for the Child Nutrition Act; findings illustrate importance of hunger, nutrition, obesity, and food safety.</p>
<p>Gutnick, Aviva., Robb, Michael., Takeuchi, Lori., &amp; Kotler, Jennifer. "Always Connected: The New Digital Media Habits of Young Children." The Joan Ganz Cooney Center at Sesame Workshop. (March 2011).  <a href="http://www.joanganzcooneycenter.org/wp-content/uploads/2011/03/jgcc_alwaysconnected.pdf">http://www.joanganzcooneycenter.org/wp-content/uploads/2011/03/jgcc_alwaysconnected.pdf</a></p>	<p>Always Connected: The New Digital Media Habits of Young Children</p>	<p>Mixed methods report portrays significant exposure to and consumption of media in young children under 11.</p>
<p>Harris, Jennifer L., Milici, Frances., Sarda, Vishnudas., &amp; Schwartz, Marlene B. "Food Marketing to Children and Adolescents: What Do Parents Think?" Yale Rudd Center for Food Policy &amp; Obesity. (October 2012).  <a href="http://www.yaleruddcenter.org/resources/upload/docs/what/reports/Rudd_Report_Parents_Survey_Food_Marketing_2012.pdf">http://www.yaleruddcenter.org/resources/upload/docs/what/reports/Rudd_Report_Parents_Survey_Food_Marketing_2012.pdf</a></p>	<p>Food Marketing to Children and Adolescents: What Do Parents Think?</p>	<p>Quantitative online surveys of parents of children ages 2 to 17 to unveil public attitudes about food marketing to youth.</p>

Citation	Document Title	Description
<p>Hughes, Cayce C., Gooze, Rachel A., Finkelstein, Daniel M., &amp; Whitaker, Robert C. "Barriers To Obesity Prevention in Head Start." Health Affairs. (March 2010). <a href="http://content.healthaffairs.org/content/29/3/454.full.pdf+html">http://content.healthaffairs.org/content/29/3/454.full.pdf+html</a></p>	<p>Barriers To Obesity Prevention in Head Start</p>	<p>Qualitative survey of Head Start program directors to communicate the perceived barriers to obesity prevention efforts.</p>
<p>Millstone, Jessica. "Teacher Attitudes about Digital Games in the Classroom." The Joan Ganz Cooney Center at Sesame Workshop. (May 2012). <a href="http://www.joanganzcooneycenter.org/wp-content/uploads/2012/07/jgcc_teacher_survey.pdf">http://www.joanganzcooneycenter.org/wp-content/uploads/2012/07/jgcc_teacher_survey.pdf</a></p>	<p>Teacher Attitudes about Digital Games in the Classroom</p>	<p>Mixed method survey among teachers to investigate attitudes on game-based learning; findings highlight benefit of games to students beyond academic achievement.</p>
<p>National Association of Child Care Resource &amp; Referral Agencies. "Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies." (August 2011). <a href="http://www.naccrra.org/sites/default/files/publications/naccrra_publications/2012/promoting_healthy_practices.pdf">http://www.naccrra.org/sites/default/files/publications/naccrra_publications/2012/promoting_healthy_practices.pdf</a></p>	<p>Promoting Healthy Practices in Child Care Centers: The Role of Child Care Resource and Referral Agencies</p>	<p>Quantitative online survey of Child Care Resource and Referral agencies to understand the interests, barriers, practices and services related to supporting healthy development in child care centers.</p>

Citation	Document Title	Description
<p>National Center for Education Statistics. "Table 44. Number of Children Under 6 Years Old and Not Yet Enrolled in Kindergarten, Percentage in Center-Based Programs, Average Weekly Hours in Nonparental Care, and Percentage in Various Types of Primary Care Arrangements, by Selected Child and Family Characteristics: 2005." Digest of Education Statistics. (2005).  <a href="http://nces.ed.gov/programs/digest/d09/tables/dt09_044.asp">http://nces.ed.gov/programs/digest/d09/tables/dt09_044.asp</a></p>	<p>Number of Children Under 6 Years Old and Not Yet Enrolled in Kindergarten, Percentage in Center-Based Programs, Average Weekly Hours in Nonparental Care, and Percentage in Various Types of Primary Care Arrangements, by Selected Child and Family Characteristics: 2005</p>	<p>Quantitative measurements of the distribution of child care for children less than six years old according to key demographic indicators (age, race, and parental information).</p>
<p>NPR/Robert Wood Johnson Foundation/ Harvard School of Public Health. "A Poll About Children and Weight: Crunch Time During the American Work and School Week – 3pm to Bed." (February 2013).  <a href="http://www.rwjf.org/content/dam/farm/reports/surveys_and_polls/2013/rwjf404410">http://www.rwjf.org/content/dam/farm/reports/surveys_and_polls/2013/rwjf404410</a></p>	<p>A Poll About Children and Weight: Crunch Time During the American Work and School Week – 3pm to Bed</p>	<p>Quantitative telephone poll among parents or guardians of children ages 2 to 17 to assess after-school eating and physical activity behaviors. Findings reveal many factors contribute to the difficulty of healthy behaviors in the crunch time window.</p>

Citation	Document Title	Description
<p>Ogden, Cynthia, Carroll, Margaret., Curtin, Lester., Lamb, Molly., &amp; Flegal, Katherine. "Prevalence of High Body Mass Index in US Children and Adolescents, 2007-2008." <i>Journal of the American Medical Association</i>. (January 2010). <a href="http://jama.jamanetwork.com/article.aspx?articleid=185233">http://jama.jamanetwork.com/article.aspx?articleid=185233</a></p>	<p>Prevalence of High Body Mass Index in US Children and Adolescents, 2007-2008</p>	<p>Quantitative analyses of data from the National Health and Nutrition Examination Survey show no statistically linear trends of excess weight in infants, children, and adolescents at or above the 85<sup>th</sup>, 95<sup>th</sup>, and 97<sup>th</sup> percentiles from 1999-2008.</p>
<p>ORC International. "How American Moms Perceive Childhood Obesity: A Survey of the Obstacles Keeping Moms from Improving their Children's Weight Status." (March 2011). <a href="http://www.mealupgrade.com/docs/Survey%20Executive%20Summary%204.28.11.pdf">http://www.mealupgrade.com/docs/Survey%20Executive%20Summary%204.28.11.pdf</a></p>	<p>How American Moms Perceive Childhood Obesity: A Survey of the Obstacles Keeping Moms from Improving their Children's Weight Status</p>	<p>Quantitative online survey of mothers of children between ages six and 16 to underscore the discrepancies between perceptions of and actual overweight status as well as barriers to eating healthy meals such as picky eaters.</p>
<p>Rideout, Victoria. "Zero to Eight: Children's Media Use in America." <i>Common Sense Media</i>. (Fall 2011). <a href="http://www.commonsensemedia.org/sites/default/files/research/zerotoeightfinal2011.pdf">http://www.commonsensemedia.org/sites/default/files/research/zerotoeightfinal2011.pdf</a></p>	<p>Zero to Eight: Children's Media Use in America</p>	<p>Quantitative online survey of parents with children ages eight and younger to explore and understand patterns of media use among children from birth to age eight; findings reveal media use starts young and increases with age.</p>

Citation	Document Title	Description
<p>Rideout, Victoria &amp; Hamel, Elizabeth. "The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers and Their Parents." Kaiser Family Foundation. (May 2006). <a href="http://www.kff.org/entmedia/upload/7500.pdf">http://www.kff.org/entmedia/upload/7500.pdf</a></p>	<p>The Media Family: Electronic Media in the Lives of Infants, Toddlers, Preschoolers and Their Parents</p>	<p>Quantitative telephone survey, along with focus group discussions, among parents of children ages six months to six years to highlight the media-centric lives of young children.</p>
<p>Ritchie, Lorrene D. "Improving Access to Healthy Nutrition in Licensed Child Care Centers." Manuscript in preparation.</p>	<p>Improving Access to Healthy Nutrition in Licensed Child Care Centers</p>	<p>Semi-structured interviews with directors of child care centers in California to explore barriers to CACFP participation.</p>
<p>Ritchie, Lorrene D., Boyle, Maria., Chandran, Kumar., Spector, Phil., Whaley, Shannon E., James, Paula., Samuels, Sarah., Hecht, Ken., &amp; Crawford, Patricia. "Participation in the Child and Adult Care Food Program is Associated with More Nutritious Foods and Beverages in Child Care." Childhood Obesity. (June 2012). <a href="http://childcareinfo.com/Portals/3/CACFP%20lorrene%20et%20al%206%2012%20pub.pdf">http://childcareinfo.com/Portals/3/CACFP%20lorrene%20et%20al%206%2012%20pub.pdf</a></p>	<p>Participation in the Child and Adult Care Food Program is Associated with More Nutritious Foods and Beverages in Child Care</p>	<p>Quantitative survey of child care providers in California to evaluate differences between food and beverages served to two to five year olds in CACFP-participating sites and non-CACFP sites.</p>

Citation	Document Title	Description
<p>Robert Wood Johnson Foundation. "Preventing Obesity Among Preschool Children: How can Child-care Settings Promote Healthy Eating and Physical Activity?" (October 2011).  <a href="http://www.rwjf.org/content/dam/farm/reports/reports/2011/rwjf71500">http://www.rwjf.org/content/dam/farm/reports/reports/2011/rwjf71500</a></p>	<p>Preventing Obesity Among Preschool Children: How can Child-care Settings Promote Healthy Eating and Physical Activity?</p>	<p>Review of quantitative and qualitative research to identify opportunities to improve nutrition and physical activity strategies in child-care settings.</p>
<p>Sabo Don &amp; Veliz, Phil. "Go Out and Play: Youth Sports in America." Women's Sports Foundation. (October 2008).  <a href="http://www.womenssportsfoundation.org/home/research/articles-and-reports/mental-and-physical-health/go-out-and-play">http://www.womenssportsfoundation.org/home/research/articles-and-reports/mental-and-physical-health/go-out-and-play</a></p>	<p>Go Out and Play: Youth Sports in America</p>	<p>Quantitative survey of parents and children in grades 3 to 12 to investigate participation in and attitudes around team sports and other physical activities.</p>
<p>Scholastic. "Kids &amp; Family Reading Report." (January 2013).  <a href="http://mediaroom.scholastic.com/files/kfr2013-wappendix.pdf">http://mediaroom.scholastic.com/files/kfr2013-wappendix.pdf</a></p>	<p>Kids &amp; Family Reading Report</p>	<p>Quantitative online survey of parents and children ages 6 to 17 to determine attitudes and behaviors about reading, with a particular focus on the rise of technology usage.</p>

Citation	Document Title	Description
<p>Sharma, Shreela., Skala, Katherine., Byrd-Williams, Courtney., Truxillio, Jeanette B., Rahman, Gulsan A., Bonsu, Pamela., &amp; Hoelscher, Deanna. "Nutrition-Related Knowledge, Attitudes, and Dietary Behaviors among Head Start Teachers in Texas: A Cross-Sectional Study." <i>Journal of the Academy of Nutrition and Dietetics</i>. (February 2013). <a href="http://www.andjrn.org/article/S2212-2672(13)00004-X/fulltext">http://www.andjrn.org/article/S2212-2672(13)00004-X/fulltext</a></p>	<p>Nutrition-Related Knowledge, Attitudes, and Dietary Behaviors among Head Start Teachers in Texas: A Cross-Sectional Study</p>	<p>Quantitative analysis of a survey among Head Start teachers in Harris County, TX to assess nutritional knowledge, attitudes, and behaviors; findings underscore the need for additional training in teachers.</p>
<p>Siena Research Institute. "Special New York State New Technologies Survey." (August 2011). <a href="http://www.siena.edu/uploadedfiles/home/Parents_and_Community/Community_Page/SRI/Independent_Research/Tech0711%20Crosstabs.pdf">http://www.siena.edu/uploadedfiles/home/Parents_and_Community/Community_Page/SRI/Independent_Research/Tech0711%20Crosstabs.pdf</a></p>	<p>Special New York State New Technologies Survey</p>	<p>Quantitative telephone survey with New York state adults to examine perceived benefits and drawbacks of new technology as well as measure ownership and usage.</p>

Citation	Document Title	Description
<p>Sisson, Susan B., Campbell, Janis E., May, Kellie B., Brittain, Danielle R., Monroe, Lisa A., Guss, Shannon H., &amp; Ladner, Jennifer L. "Assessment of Food, Nutrition, and Physical Activity Practices in Oklahoma Child-Care Centers." Journal of the Academy of Nutrition and Dietetics. (August 2012). <a href="http://www.sciencedirect.com/science/article/pii/S2212267212006296">http://www.sciencedirect.com/science/article/pii/S2212267212006296</a></p>		<p>Sisson, Susan B., Campbell, Janis E., May, Kellie B., Brittain, Danielle R., Monroe, Lisa A., Guss, Shannon H., &amp; Ladner, Jennifer L. "Assessment of Food, Nutrition, and Physical Activity Practices in Oklahoma Child-Care Centers." Journal of the Academy of Nutrition and Dietetics. (August 2012). <a href="http://www.sciencedirect.com/science/article/pii/S2212267212006296">http://www.sciencedirect.com/science/article/pii/S2212267212006296</a></p>
<p>"Star Ratings/Oklahoma Child Care." 2013. <a href="http://www.oklahomachildcare.org/node/378">http://www.oklahomachildcare.org/node/378</a></p>	<p>Star Ratings/Oklahoma Child Care</p>	<p>Overview of Oklahoma star rating system</p>
<p>Takeuchi, Lori. "Families Matter: Designing Media for a Digital Age." Joan Ganz Cooney Center at Sesame Workshop. (June 2011). <a href="http://www.joanganzcooneycenter.org/wp-content/uploads/2011/06/jgcc_familiesmatter.pdf">http://www.joanganzcooneycenter.org/wp-content/uploads/2011/06/jgcc_familiesmatter.pdf</a></p>	<p>Families Matter: Designing Media for a Digital Age</p>	<p>Online survey and in-depth case studies to understand the attitudes toward and rules around using media at home from parents of children ages three to 10.</p>

Citation	Document Title	Description
<p>Tandon, Pooja., Zhou, Chuan., Lozano, Paula., &amp; Christakis, Dimitri. "Preschoolers' Total Daily Screen Time at Home and by Type of Child Care." <i>Journal of Pediatrics</i>. (October 2010). <a href="http://www.jpeds.com/article/S0022-3476(10)00673-6/fulltext">http://www.jpeds.com/article/S0022-3476(10)00673-6/fulltext</a></p>	<p>Preschoolers' Total Daily Screen Time at Home and by Type of Child Care</p>	<p>Quantitative analysis of data from the Early Childhood Longitudinal Study-Birth Cohort to evaluate the screen time of preschoolers in different child care settings.</p>
<p>The Child and Adult Care Food Program Sponsors Association (TSA). "Find a CACFP Sponsor." <a href="https://www.cacfp.org/sponsors.asp">https://www.cacfp.org/sponsors.asp</a></p>	<p>Find a CACFP Sponsor</p>	<p>Detailed listing of TSA-member CACFP sponsors and contact information by state.</p>
<p>Trost, Stewart G., Messner, Lana., Fitzgerald, Karen., &amp; Roths, Barbara. "A Nutrition and Physical Activity Intervention for Family Child Care Homes." <i>American Journal of Preventive Medicine</i>. (October 2011). <a href="http://www.sciencedirect.com/science/article/pii/S0749379711004478">http://www.sciencedirect.com/science/article/pii/S0749379711004478</a></p>	<p>A Nutrition and Physical Activity Intervention for Family Child Care Homes</p>	<p>Experimental training intervention with family child care homes across Kansas to determine the effects of training on policies and practices related to healthy eating and physical activity.</p>

Citation	Document Title	Description
<p>Trost, Stewart G., Messner, Lana., Fitzgerald, Karen., &amp; Roths, Barbara. "Nutrition and Physical Activity Policies and Practices in Family Child Care Homes." American Journal of Preventive Medicine. (December 2009). <a href="http://www.ncbi.nlm.nih.gov/pubmed/19944921">http://www.ncbi.nlm.nih.gov/pubmed/19944921</a></p>	<p>Nutrition and Physical Activity Policies and Practices in Family Child Care Homes</p>	<p>Evaluation of family child care home providers in Kansas to assess strengths and weaknesses of policies and practices related to nutrition and physical activity.</p>
<p>U.S. Department of Agriculture, Food and Nutrition Service. "Child and Adult Care Food Program." (2012). <a href="http://www.fns.usda.gov/cnd/care/cacfp/aboutcacfp.htm">http://www.fns.usda.gov/cnd/care/cacfp/aboutcacfp.htm</a></p>	<p>Child and Adult Care Food Program</p>	<p>Details concerning the CACFP (administration, definitions, eligibility, funding, etc.).</p>
<p>U.S. Department of Agriculture, Food and Nutrition Service, Office of Research and Analysis. "Child and Adult Care Food Program (CACFP): Assessment of Sponsor Tiering Determinations 2011." (December 2012). <a href="http://www.fns.usda.gov/Ora/menu/Published/CNP/FILES/CACFPTiering11.pdf">http://www.fns.usda.gov/Ora/menu/Published/CNP/FILES/CACFPTiering11.pdf</a></p>	<p>Child and Adult Care Food Program (CACFP): Assessment of Sponsor Tiering Determinations 2011</p>	<p>Assessment of family day care homes to determine tiering classification errors and resulting erroneous payments.</p>

Citation	Document Title	Description
<p>U.S. Department of Agriculture, Food and Nutrition Service. "Child Nutrition Programs." <a href="http://www.fns.usda.gov/cnd/contacts/statedirectory.htm">http://www.fns.usda.gov/cnd/contacts/statedirectory.htm</a></p>	<p>Child Nutrition Programs</p>	<p>Details of agencies responsible for administering CACFP and other child nutrition programs, listed by state.</p>
<p>U.S. Department of Health &amp; Human Services, Administration for Children &amp; Families, Office of Planning, Research &amp; Evaluation. "National Survey of Early Care and Education (NSECE), 2010-2014." <a href="http://www.acf.hhs.gov/programs/opre/research/project/national-survey-of-early-care-and-education-nsece-2010-2014">http://www.acf.hhs.gov/programs/opre/research/project/national-survey-of-early-care-and-education-nsece-2010-2014</a></p>	<p>National Survey of Early Care and Education (NSECE), 2010-2014</p>	<p>Project overview of NSECE study with objectives, potential analyses topics, and questionnaire instruments for a comprehensive investigation of early care and education in the US.</p>
<p>U.S. Government Accountability Office. "Early Child Care and Education: HHS and Education are Taking Steps to Improve Workforce Data and Enhance Worker Quality." (February 2012). <a href="http://www.naccrra.org/sites/default/files/default_site_pages/2012/gaostepstoimprovedata2012.pdf">http://www.naccrra.org/sites/default/files/default_site_pages/2012/gaostepstoimprovedata2012.pdf</a></p>	<p>Early Child Care and Education: HHS and Education are Taking Steps to Improve Workforce Data and Enhance Worker Quality</p>	<p>Mixed methods report to investigate characteristics of the ECCE workforce and government activities involved with improving worker quality.</p>

Citation	Document Title	Description
<p>Whitaker, Robert C., Gooze, Rachel A., Hughes, Cayce C., &amp; Finkelstein, Daniel M. "A National Survey of Obesity Prevention Practices in Head Start." Archives of Pediatrics &amp; Adolescent Medicine. (December 2009).  <a href="http://archpedi.jamanetwork.com/article.aspx?articleid=382512#RESULTS">http://archpedi.jamanetwork.com/article.aspx?articleid=382512#RESULTS</a></p>	<p>A National Survey of Obesity Prevention Practices in Head Start</p>	<p>Quantitative survey of Head Start program directors to characterize practices and environments related to obesity prevention in Head Starts across the country.</p>
<p>YMCA. "YMCA's Family Health Snapshot." (April 2012).  <a href="http://www.ymca.net/sites/default/files/pdf/family-health-snapshot.pdf">http://www.ymca.net/sites/default/files/pdf/family-health-snapshot.pdf</a></p>	<p>YMCA's Family Health Snapshot</p>	<p>Online survey of healthy living in families with children ages 5 to 12 to detail how active children are during the school year and summertime as well as obstacles to healthy eating and physical activity.</p>
<p>YMCA. "YMCA's Family Health Snapshot." (April 2011).  <a href="http://www.ymca.net/sites/default/files/pdf/20110413-survey.pdf">http://www.ymca.net/sites/default/files/pdf/20110413-survey.pdf</a></p>	<p>YMCA's Family Health Snapshot</p>	<p>Online survey was conducted to identify barriers to healthier living perceived by parents of children ages 5 to 10; findings indicate many parents struggle to keep kids healthy amidst economic realities.</p>
<p>Zimmerman, Frederick J., Christakis, Dimitri A., &amp; Meltzoff, Andrew N. "Television and DVD/Video Viewing in Children Younger Than 2 Years." Archives of Pediatrics &amp; Adolescent Medicine. (May 2007).  <a href="http://www.maketvwork.com/papers/TV%20and%20video%20viewing%20under%202.pdf">http://www.maketvwork.com/papers/TV%20and%20video%20viewing%20under%202.pdf</a></p>	<p>Television and DVD/Video Viewing in Children Younger Than 2 Years</p>	<p>Quantitative telephone survey of Washington and Minnesota parents to measure TV, DVD, and video viewing habits of children two to 24 months old.</p>

## II. WELLNESS EDUCATION EFFORTS

### i. EXECUTIVE SUMMARY

Childhood obesity is a persistent problem in the United States that often has roots early in life. Overweight and obese children are at increased risk for chronic health problems that can shadow them for life. According to the Centers for Disease Control and Prevention (CDC), childhood obesity has more than doubled in children and tripled in adolescents in the past 30 years.<sup>96, 97</sup>

In 2010, the CDC found that the percentage of children aged six to 11 years in the United States who were obese increased to nearly 18 percent from the seven percent measured in 1980. One study showed that children who became obese as early as age two were more likely to be obese as adults.<sup>98</sup> Children who are obese are more likely to be obese as adults, which places them at increased risk for high blood pressure, heart disease, type 2 diabetes and other chronic diseases.

Where once youngsters spent nearly all of their preschool years at home, today nearly two thirds of children, aged zero to five, attend child care centers or family day care homes. For this reason, the Child and Adult Care Food Program (CACFP) commissioned Draftfcb, Weber Shandwick and KRC Research (“Research Team”) to conduct original formative research to better identify and understand the nutrition and physical activity practices in child care centers and family day care homes, as well as the use of electronic media in these settings. To prepare for this formative research, three environmental scans have been conducted.

This scan examines wellness education efforts. Key findings are that:

- **No national standards exist for physical activity or electronic media use in child care settings, and nutrition standards fall short of aligning with current dietary guidance.** That means there is no consistent way that these efforts are implemented, used or evaluated.

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<sup>96</sup> Ogden CL et al. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010. 2012.

<sup>97</sup> National Center for Health Statistics. Health, United States, 2011: With Special Features on Socioeconomic Status and Health. 2012.

<sup>98</sup> Freedman DS et al. The relation of childhood BMI to adult adiposity: the Bogalusa Heart Study. 2005.

- **Evaluation of child care center and family day care home wellness programs relies heavily on self-reported data.** That poses limitations and affects the valid conclusions that can be drawn from using the data collected.
- **In the absence of national physical activity and electronic media use– and for nutrition, updated – standards for child care wellness programs, recommendations from the Institute of Medicine (IOM), Let’s Move! Child Care and state licensing requirements can help fill the gap.** Let’s Move! Child Care and the IOM recommendations support healthy eating habits that align with the federal government’s 2010 *Dietary Guidelines for Americans*.
- **Three promising, nationally-recognized self-assessment tools have emerged to measure wellness programs in child care settings.** The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) is led by a child care health consultant and allows a child care center to self-evaluate their wellness program, revise practices, and ultimately re-evaluate the center’s efforts. Quality Rating and Improvement Systems (QRIS) assign a one to five star quality rating to wellness programs, and provide centers with standards needed to earn the next star level. Wellness Child Care Assessment Tool (WellCCAT) looks at a child care center’s written wellness policies rather than a center’s practices. All three assess nutrition, physical activity and electronic media use, albeit in different ways. They all strive to produce tangible nutrition improvements in these areas through evaluation and revision. The best practices from each tool may serve as a model for national assessment measures.

## ii. INTRODUCTION AND METHODOLOGY

The Child and Adult Care Food Program (CACFP) commissioned Draftfcb, Weber Shandwick and KRC Research (“Research Team”) to conduct original formative research to inform the development and implementation of its training, technical assistance, guidance, and education materials related to nutritional requirements and wellness recommendations in three technical areas: nutrition, physical activity and electronic media use for children, aged zero to five years. In advance of conducting formative research, the research team conducted an environmental scan.

This scan includes three components:

- Literature review of current opinion research
- Wellness education review and evaluation
- Communication channel review

The purpose of the environmental scan is to inform development of the content of the formative research, both by providing a foundation to build upon with new research and also by identifying key research gaps.

The following Wellness Education Review and Evaluation examines key self-assessment tools and wellness education programs that utilize these tools or have shown meaningful results. For this review, the team examined tools and programs from 2003 to present. We also highlight the current CACFP nutrition, physical activity and electronic media use standards followed by recommendations from the Institute of Medicine (IOM) and Let’s Move! Child Care. Last, we have included a few additional organizations that have issued recommendations pertaining to nutrition, physical activity and/or electronic media use.

The tools and programs described are from organizations that specialize in one or more of the following: nutrition education, the importance of physical activity, and/or electronic media use for the zero to five age group.

In selecting the self-assessment tools and programs to highlight, we evaluated criteria that could help refine our search and provide the most useful and insightful results. Our program and literature search was based on the following:

- Expert input from the CACFP Workgroup, a group of approximately 40, national child care experts and influencers convened by USDA to provide guidance on CACFP and counsel on the formative research
- Current knowledge of the child care space and existing programs. Our team includes members with graduate degrees in nutrition as well as a former staff member of USDA's Food and Nutrition Service (FNS) with expertise in this area.
- General program and literature scan using keywords selected to ensure broad reach into documented initiatives. The following key words are those commonly used to describe programs focused on nutrition, physical activity and electronic media use in the child care setting:
  - Child care and healthy eating
  - Child care and healthy eating
  - Child care and nutrition
  - Child care and physical activity
  - Child care and media
  - Child care and electronic media use
  - Child care and obesity
  - Child care and wellness

Our key tools were selected based on the following criteria:

- Nationally recognized self-assessment tools that are used throughout the United States by multiple child care centers and are supported by research that shows use of these tools has led to improved outcomes in nutrition, physical activity and electronic media

Programs were evaluated on their use of a range of interventions including nutrition, physical activity and electronic media as well as if they:

- Represent a range of national and state-focused programs
- Show significant results or utilize one of the self-assessment tools
- Are mentioned by the CACFP Workgroup as an exemplary program or as a program focused exclusively on electronic media use

From a policy perspective, we outlined the current CACFP meal pattern requirements and selected two key organizations, IOM and Let's Move! Child Care, to review. Both have issued recommendations around nutrition, physical activity and electronic media use in the child care setting. Also included are:

- Listing of key additional recommendations
- CACFP requirements as stated in the Healthy Hunger-Free Kids Act (HHFKA)

### iii. DETAILED FINDINGS

In the past 50 years, major cultural changes in work and family structure have occurred in the United States. These changes have altered where many infants, toddlers and young children spend their time before entering kindergarten. Today, 63 percent of youngsters—12.7 million children under age five<sup>99</sup>—are cared for in child care centers or family day care homes. These 12.7 million children each spend an estimated 36 hours per week in child care centers<sup>100</sup>—making this arrangement second only to time spent at home. For this reason, child care facilities are a crucial venue to address and implement health and wellness strategies.

While the concern about childhood obesity has led many child care providers to adopt wellness education programs, there are no national standards for physical activity or electronic media use in child care settings, and for nutrition, standards that have not kept pace with current dietary guidance. This gap results in inconsistent use and evaluation of these programs. What findings exist are mostly based on self-reports, which have limitations. Our research also found that the lack of national standards for physical activity and electronic media use have led many states and programs to implement standards and activities with little, if any, national consistency.

Many of the wellness education programs documented in the academic literature also have a study population of low-income families, whose children are disproportionately affected by obesity. This may be due to the widespread nature of federal food assistance programs that target low-income families, providing ample research opportunities. This leaves unanswered questions about the effect of wellness programs on preschool-age children from higher-income families.

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<sup>99</sup> Gabor, Vivian et al. State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems. 2012.

<sup>100</sup> Foltz, Jennifer. Population-Level Intervention Strategies and Examples for Obesity Prevention in Children. 2012.

Three categories emerged from our research. They are: 1) evaluation 2) emerging best practices and 3) standards and recommendations.

**Evaluation:** These findings underscore both the strengths and weaknesses of using self-assessment tools. With an eye towards USDA’s goal to provide technical assistance, a greater understanding of widely used self-assessment tools can help shape how to evaluate programs and centers that are in greatest need of additional training, tools and resources.

- **Three promising, nationally-recognized self-assessment tools have emerged to measure wellness programs in child care settings.** All three assess nutrition, physical activity and electronic media use, albeit in different ways. They all strive to produce tangible health and wellness improvements in these areas through evaluation and revision and can serve to evaluate programs across the nation. In addition, where national standards are lacking, self-assessments can serve as a program guide both for child care providers and other stakeholders.

*Select Self-Assessment Tools for Child Care Settings*

TOOL	PROCESS	AGE (YEARS)	DEVELOPED
Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC)	With the help of a trained NAP SACC consultant, five steps are implemented: (1) self-assessment, (2) action planning, (3) continuing education workshops, (4) technical assistance, and (5) re-assessment.	2-5	University of North Carolina at Chapel Hill (2003)
Quality Rating and Improvement System (QRIS)	Five components make up a QRIS: (1) quality standards, (2) a process for monitoring standards, (3) a process for supporting quality improvement, (4) provision of financial incentives, and (5) sharing program quality with parents and public.	0-5+	Coalition of States and Organizations (1990)
Wellness Child Care Assessment Tool (WellCCAT)	Child care center written policies are scored using a rating system that determines comprehensiveness and strength.	3-5	Robert Wood Johnson Foundation and the Yale Rudd Center (2008)

- **Evaluations of wellness education programs rely heavily on self-reported data.** This practice poses limitations for many of the programs we reviewed (e.g., Nutrition and

Physical Activity Self-Assessment for Child Care and Brocodile the Crocodile, an intervention designed to reduce electronic media use in preschool-aged children.)

- **Although states' Quality Rating and Improvement Systems (QRIS) are widely used, the structure and language used in the rating system varies greatly, and this makes validation efforts difficult.** Additional clarification around the utility and implementation states of QRIS is needed to further validate the tool's effectiveness.

**Emerging Best Practices:** Practices highlighted below can help guide the research team's formative research questions and analysis. As the research team works to finalize survey questionnaires, it is important to know what practices are effective in helping to improve children's health and wellness; follow-up research questions and analysis can be compared to documented best practices.

- **Action plans help improve programs' health and wellness outcomes.** Individualized action plans help identify centers' greatest needs. That makes it possible to tailor areas for improvement where staff can be most apt to make changes. Certain programs (e.g., Nutrition and Physical Activity Self-Assessment for Child Care, Eat Well Play Hard in Child Care Settings, and certain Quality Rating and Improvement Systems) have child care health consultants review initial self-assessments with center staff to then draft action plans collaboratively. Let's Move! Child Care also includes an action plan, but it is created by center staff alone.
- **Wellness programs that tap health professionals for assistance increase credibility with center staff and parents, and may contribute to overall program effectiveness.** Pediatricians, nurses, registered dietitians and other child care consultants can help programs by guiding goal setting, providing support, and monitoring progress.
- **Linking child care centers with key stakeholders and community resources allows for widespread, sustainable program implementation.** Communication and collaboration across state agencies helps identify and reduce barriers to change.
- **States can promote healthy nutrition and physical activity programs by offering incentives and resources.** In addition to setting standards, many programs offer providers additional resources, such as continuing education credits for staff and technical assistance that can help assist in meeting standards. Many states also provide financial

incentives. These types of incentives – both academic and financial –also overlap with discussions held during USDA's CACFP stakeholder work group meetings, where a wide range of incentives were cited as ways to encourage participation in the upcoming formative research.

- **Wellness programs can serve as a “pilot” for future changes in state licensing rules.** The piloting of standards has been an effective way to determine their effectiveness, and feasibility.
- **Interventions targeting both child care and the home environment may yield greater and longer-lasting health improvements.** Eat Well Play Hard and Brocodile the Crocodile are two programs that use a comprehensive approach and target both settings.
- **Evidence supports integrating physical activity and nutrition education into the classroom curriculum.** This has been shown to be an effective way to reinforce health messages.
- **Documented wellness interventions and program evaluations tend to focus on low-income families.** For these programs, integrating nutrition assistance programs (e.g., Women, Infants, and Children (WIC) and CACFP) into a center’s program structure and processes can help address nutritional needs for these families.

**Standards and Recommendations:** An understanding of the current CACFP standards as well as those proposed by leading organizations can provide insight into the context in which child care providers operate. Noting the proposed standards and recommendations as put forth by Let’s Move! Child Care and the IOM can direct states and providers to additional guidance, as well as point to potential changes for national policy.

- **Let’s Move! Child Care – an initiative established by the First Lady, and the IOM –has proposed recommendations for nutrition, physical activity and electronic media use in the child care setting.** The recommendations contain significant overlap, particularly with regards to low-fat and non-fat dairy and increasing fruits and vegetables. In general, both recommendations support healthy eating habits as described by the *Dietary Guidelines for Americans*. The IOM, whose reports are frequently used to guide national policy, include much greater detail to describe proposed recommendations.

- **Due in part to the lack of national standards, there is wide variety in how programs implement physical activity and use electronic media in child care settings.** In lieu of national standards, many programs follow state licensing requirements.

## **Self-Assessment Tools for Nutrition, Physical Activity And Media Environments In Child Care Settings**

Three, promising, nationally-recognized self-assessment tools have emerged to measure wellness programs in child care settings. All three assess nutrition, physical activity and electronic media use, albeit in different ways. They all strive to produce tangible nutrition improvements in these areas through evaluation and revision and can serve to evaluate programs across the nation.

Where national standards are lacking, self-assessments can also serve as a program guide both for child care providers and other stakeholders.

The following summarizes these three, promising, nationally recognized self-assessment tools employed by child care centers across the United States.

- **The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC):** After child care center staff conducts a self-assessment, NAP SACC brings in child care health consultants (CCHC) to guide child care staff in creating action plans.
- **Quality Rating and Improvement Systems (QRIS):** QRIS, another state-level health promotion strategy gaining traction across the U.S., was initially developed to help child care providers improve structural program areas like parent/caregiver relationships, teaching processes, and business aspects. It is, however, increasingly incorporating nutrition, physical activity, and electronic media use standards.
- **Wellness Child Care Assessment Tool (WellCCAT):** WellCCAT distinguishes itself by evaluating a center's *written* wellness policies rather than wellness practices.

### *Select Self-Assessment Tools for Child Care Settings*

TOOL	PROCESS	AGE (YEARS)	DEVELOPED
Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC)	With the help of a trained NAP SACC consultant, five steps are implemented: (1) self-assessment, (2) action planning, (3) continuing education workshops, (4) technical assistance, and (5) re-assessment.	2-5	University of North Carolina at Chapel Hill (2003)
Quality Rating and Improvement System (QRIS)	Five components make up a QRIS: (1) quality standards, (2) a process for monitoring standards, (3) a process for supporting quality improvement, (4) provision of financial incentives, and (5) sharing program quality with parents and public.	0-5+	Coalition of States and Organizations (1990)
Wellness Child Care Assessment Tool (WellCCAT)	Child care center written policies are scored using a rating system that determines comprehensiveness and strength.	3-5	Robert Wood Johnson Foundation and the Yale Rudd Center (2008)

The following topics are covered below for each self-assessment tool:

- Description
- Supporting research
- Example intervention

#### **The Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC)**

*Description:* The University of North Carolina at Chapel Hill developed NAP SACC in 2003. It is designed to identify the strengths and weaknesses of nutrition, physical activity and electronic media use policy and practices in child care facilities. NAP SACC may be implemented as a stand-alone program or as part of a larger initiative. Child care centers are encouraged to sign up for the self-assessment by their States and/or related agencies.

The process begins when a child care facility director completes a NAP SACC self-assessment questionnaire. During a scheduled site visit, a NAP SACC-trained consultant (e.g., a child care health consultant, nurse, health educator or other trained professional) then reviews the self-assessment, to help develop a facility-specific action plan. The plan used to help implement new policies and practices to improve the health and wellness environment of the center.<sup>101</sup>

The action plan rolls out over the course of the next six months, but can be longer if needed. In the weeks following the assessment and action plan creation, the consultant delivers five skill-building workshops, of 30 to 60 minutes each, to facility staff. From there, the consultant maintains regular contact with the site to provide continued support and guidance. The consultant may suggest additional materials – available for free online - from the NAP SACC website to the center (e.g., strategies to overcome barriers to change, best practice recommendations, parent and staff handouts).<sup>102,103</sup> At the end of the intervention, the NAP SACC self-assessment is repeated to gauge progress.

*Supporting Research:* In a reliability and validation study of NAP SACC, the authors recommend it as a stable and reasonably accurate tool for use as an environmental nutrition and physical activity self-assessment instrument for child care. The authors note, however, that the study's small sample size and the tool's reliance on self-reports pose limitations and warrant cautious interpretation of the results. "Future studies may wish to employ both an objective measure of the child care environment, as well as the self-assessment instrument pre- and post-intervention to see if the instruments perform in a similar, or parallel manner."<sup>104</sup> The authors suggest that a more comprehensive delivery of NAP SACC would include a focus on parents and the home environment.<sup>9</sup>

### ***Example Intervention: North Carolina's Implementation of NAP SACC***

Nineteen child care centers (15 intervention, four control) spanning eight North Carolina counties participated in a 2007 pilot intervention of the NAP SACC tool, developed at the University of

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<sup>101</sup> Email exchange with Dr. Sara Neelon, Duke University (formerly Dr. Benjamin). Questions about NAP SACC. 2013.

<sup>102</sup> Center for Health Promotion and Disease Prevention. NAP SACC Program. 2007.

<sup>103</sup> Center for Training and Research Translation. The Nutrition and Physical Activity Self-Assessment for Child Care. 2012.

<sup>104</sup> Benjamin, Sara et al. Reliability and validity of a nutrition and physical activity environmental self-assessment for child care. 2007.

North Carolina at Chapel Hill. The objective was to test NAPSACC in improving nutrition and physical activity practices in these centers as compared with control centers. The intervention centers reported higher scores in the NAP SACC physical activity and nutrition measurements post-intervention compared to control centers. Research staff confirmed the improvement in nutrition and physical activity. The box below lists the specific areas of focus within nutrition and physical activity.<sup>105</sup>

**Nutrition:** Fruits and vegetables; fried food and high-fat meats; beverages; menus and variety; meals and snacks; food items outside of regular meals and snacks; supporting healthful eating; nutrition education for children, parents and staff; and nutrition policy.

**Physical Activity:** Active play and inactive time; TV use and TV viewing; play environment; supporting physical activity; physical activity education for children, parents, and staff; and physical activity policy.

Study authors noted several program strengths. Center staff is led by community professionals who provided additional expertise. In addition, the availability of continuing education credits for skill-building workshops proved to be an effective incentive to maximize staff participation. The researchers also noted that centers led by motivated staff performed better than those with disinterested staff. They concluded that this remained a key factor in centers' health and wellness activities.<sup>10</sup>

Authors also cited study limitations such as small sample size and reliance of self-assessment measures. The study concluded that the tool holds promise as a way to promote healthy weight environments in early childhood education settings.<sup>10</sup>

### **Quality Rating and Improvement System (QRIS)**

*Description:* A coalition of states and organizations began experimenting with QRIS in the 1990's,<sup>106</sup> but it is only in recent years that QRIS have incorporated wellness standards in child care quality ratings. Much like the quality ratings given to restaurants and hotels, QRIS award 1-5 star quality ratings to early care settings (center, family day care homes, head start, preschool)

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<sup>105</sup> Benjamin, Sara et al. Nutrition and Physical Activity Self-assessment for Child Care (NAP SACC): Results from a Pilot Intervention. 2007

<sup>106</sup> QRIS National Learning Network. 2013.

that meet a set of defined program standards.<sup>107</sup> This assessment is composed of five common elements: (1) standards, (2) accountability measures, (3) provider support, (4) financial incentives, and (5) parent/consumer education efforts. QRIS sometimes include nutrition, physical activity, and/or electronic media use as subcategories to these broader elements. The QRIS evaluation process takes place once a year when trained outside staff assess child care centers during a site visit to assess the environment first-hand, review center documents and evaluate administrative data. At the same time, however, states differ in how they define quality standards, implement them, and provide incentives. Everything from how they share information to the criteria used for assessment can vary greatly across states, and there is a need for greater standardization among those implementing and evaluating QRIS.<sup>108</sup>

The most common source of funding for QRIS is the Federal Child Care and Development Fund (CCDF), with all but one state relying on this revenue source. In addition, in August 2011, the Department of Early Learning received a \$60 million grant from the federal government of which the majority is being used to strengthen the QRIS rating system for child care providers.<sup>109</sup>

Providers have a variety of reasons to adopt QRIS. Because a center's rating is available to parents and stakeholders, there is a strong incentive to strive for a higher ranking. Second, the variety of supports and resources offered to participating centers is appealing. Select QRIS offer professional development training and tailored mentoring to help staff reach higher standards. Other QRIS offer financial incentives such as tiered child care subsidy reimbursement as a reward to advance to higher star levels. As of September 2010, 22 States and Territories implemented a statewide QRIS.<sup>14</sup>

*Supporting Research:* To date, QRIS validation efforts are limited. Amidst growing pressure from stakeholders eager to see evidence that QRIS meets intended functions, additional clarification is needed around the purpose of QRIS and the activities that best constitute validation. Recognizing this need, the Office of Planning, Research and Evaluation (OPRE) in the Administration for Children and Families (ACF), U.S. Department of Health and Human Services (DHHS) conducted

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<sup>107</sup> National Infant & Toddler Child Care Initiative. Quality Rating And Improvement Systems (QRIS): Inclusion Of Infant/Toddler Quality Indicators. 2011.

<sup>108</sup> Child Trends. Early Childhood Highlights: Quality Rating and Improvement Systems for Early Care and Education. 2010.

<sup>109</sup> QRIS National Learning Network. 2013.

the Child Care Quality Rating System Assessment (QRS Assessment) project 2008-2011.<sup>110</sup> The project created state-specific resources including reports, case studies, evaluation toolkits and state profiles.

In addition, the Altarum Institute published a report focused specifically on state-based efforts that incorporate health and wellness standards into QRIS. The study found the monitoring tools designed to assess standards' compliance weren't designed to assess nutrition, physical activity, and electronic media use practices. Despite this, some states have successfully integrated health and wellness into their QRIS. The Altarum report analyzed these states' shared commonalities which included: intra- and interagency coordination, communication and collaboration between state agencies to provide ongoing training, technical assistance and monitoring, and partnerships with universities. Finally, the report noted state representatives' eagerness for a venue (i.e. website, listserv, community of practice, annual conference) to share with each other what works, common pitfalls, and what tools exist to reduce duplication of resource production.<sup>111</sup>

### ***Example Intervention: North Dakota's Implementation of QRIS***

North Dakota's QRIS had participating programs create "healthy living policies" that could include nutrition, physical activity, and/or electronic media use and as such, was a strong model to highlight QRIS in practice. From 2010-2011, 22 programs throughout Cass County implemented North Dakota's Early Childhood Quality Rating and Improvement System (ECRIS) to receive a star rating. To advance through the five star levels in the "healthy living" component, programs needed to complete the steps detailed in the box below.<sup>112,113</sup>

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<sup>110</sup> U.S. Department of Health and Human Services Office of Planning, Research and Evaluation. Quality Rating Systems (QRS) Assessment Project, 2008-2011. 2012.

<sup>111</sup> Gabor, Vivian et al. State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems. 2012.

<sup>112</sup> Banghart, Patti. Comprehensive Obesity Prevention in Early childhood: Promising Federal and State Initiatives. 2012.

<sup>113</sup> ND Growing Futures. Early Childhood Rating & Improvement System Pilot. [2013](#).

- **First Star Level:** Providers create a written “healthy living policy.” Sample standards could include limited screen time, nutrition guidelines, or allowing 30 minutes of outdoor activity.
- **Second Star Level:** Providers create healthy eating menus and physical activity plan.
- **Third Star Level:** Providers complete a healthy living Nutrition and Physical Activity Self-Assessment for Child Care (NAPSACC) self-assessment.
- **Fourth Star Level:** Providers have an Early-Childhood-Rating-and-Improvement-System endorsed observer conduct a healthy living Environment and Policy Assessment and Observation (EPAO). Providers distribute education materials to parents about healthy eating and activity for children.
- **Fifth Star Level:** Providers have a follow-up EPAO and demonstrate an improved score.

Although a formal evaluation of the program’s impact has yet to be conducted, an executive summary of the pilot program noted that on-site technical assistance was helpful for all programs.<sup>114</sup> QRIS drove participation in professional development and motivated teachers and child care providers to increase their credentials and education. In addition, the summary noted that parents were supportive of wellness efforts. This finding is encouraging since outside of North Dakota, select QRIS programs reported resistance from parents, with some referring to staff who enforced nutrition standards as “snack police.”<sup>115</sup>

The ECRIS QRIS pilot program in North Dakota has served as a testing ground for future state legislation. In 2011, the North Dakota state legislature “mandated the creation of a statewide Quality Improvement System (QIS) with stars. Before going statewide, the QIS will be piloted. Specific guidelines for this pilot, including physical activity and nutrition components, are currently being developed.”<sup>116</sup>

### **Wellness Child Care Assessment Tool (WellCCAT)<sup>117</sup>**

*Description:* Research has shown that a lack of written guidelines may compromise their implementation, compliance, and subsequent enforcement. The Robert Wood Johnson Foundation granted funds to the Yale Rudd Center in 2008 to develop a tool that would test the

<sup>114</sup> ND Early Childhood Rating and Improvement System. Cass County QRIS Field Test: Key Findings. 2011.

<sup>115</sup> Gabor, Vivian et al. [State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems](#). 2012.

<sup>116</sup> Gabor, Vivian et al. [State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems](#). 2012.

<sup>117</sup> Falbe, Jennifer et al. The Wellness Child Care Assessment Tool (WellCCAT). 2007.

strength and comprehensiveness of *written* policies in child care centers. It is modeled after a similar tool that grades written policies for K through 12, also developed at the Yale Rudd Center.<sup>118</sup>

WellCCAT evaluates the strength and comprehensiveness of written policies related to nutrition and physical activity – and to a limited extent, electronic media use - at child care centers.<sup>18</sup> Policy documents (e.g., parent and staff handbooks) are scored on 65 measures that are each rated on a scale of 0-2 by either child care centers or an outside third-party evaluator.

The measures are framed around five categories: nutrition education; nutrition standards for foods and beverages; promoting healthy eating in the child-care setting; physical activity; and communication and evaluation. Although electronic media use is not listed within those categories, one of the 65 measures does address time spent in front of computers and televisions. WellCCAT does not capture program *quality* or *practices* that are not written into policy; instead, the focus is on high-quality written policies that have the potential to improve practices. The WellCCAT tool is free to use and available on the Yale Rudd Center Website.<sup>119</sup>

*Supporting Research:* In a 2011 reliability and validation study published in the *Journal of the Academy of Nutrition and Dietetics*, researchers deemed the tool capable of distinguishing between low and high quality policies. In addition, the study found that WellCCAT produces replicable results and is a “standardized method to analyze and compare the comprehensiveness and strength of written nutrition and physical activity policies in child care centers.”<sup>120</sup>

Last, the study authors note that additional research could help compare written policies across programs and whether or not WellCCAT scores are predictive of quality practices in the child care wellness environment.<sup>25</sup>

### ***Example Intervention: Bright Horizons Assessment by WellCCAT***

In 2011, Bright Horizons Family Solution signed a commitment with the Partnership for a Healthier America (PHA) that addressed nutrition, physical activity, and electronic media use.

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<sup>118</sup> Falbe, Jennifer. “The Wellness Child Care Assessment Tool: A Measure to Assess the Quality of Written Nutrition and Physical Activity Policies.” 2011.

<sup>119</sup> Email exchange with Dr. Kathryn Henderson, Yale University. Question about your paper: Strength and comprehensiveness of district school wellness policies predict policy implementation at the school level. 2013.

<sup>120</sup> Falbe, Jennifer et al. Wellness Child Care Assessment Tool (WellCCAT). 2011.

**Bright Horizon's PHA Commitment:**

“Design and implement programming, policies and procedures to be used in daily operations so that Bright Horizons child care centers can ensure that all children are being provided the healthiest available food choices and the recommended amount of time dedicated to physical activity. This will include eliminating sugar-sweetened beverages, increasing consumption of fruits and vegetables at every meal, eliminating fried foods, confirming that no time is being spent in front of televisions or video games and that computer use is limited to educational activity, and ensuring children engage in at least 1-2 hours of physical activity daily.”

To verify that Bright Horizons kept their commitment, PHA hired the Altarum Institute as a third-party examiner; Altarum then used WellCCAT to assess the Bright Horizons' child care centers. Policies affecting nutrition and physical activity environments were scored at baseline and again following policy changes. This scoring was then complemented by an online survey conducted with directors of child care centers.<sup>121</sup> Altarum concluded that, as of January 2013, Bright Horizons' corporate policies reflect the best practices as spelled out by the Wellness Child Care Assessment Tool.<sup>122</sup>

Research into the tool's predictive validity has yet to be conducted, but having policies that endorse wellness practices likely helped Bright Horizons achieve more than 90 percent compliance with its broader PHA commitment. The PHA 2012 Annual Report notes that Bright Horizons met their commitment in almost all key areas, including healthy foods, children's exercise time, limiting electronic media use and offering health information to families.<sup>123</sup>

North Carolina, North Dakota and Bright Horizons' centers across the country have each integrated assessment tools that helped each program address and promote health and wellness in child care settings. The results constitute a valuable contribution to the growing body of literature surrounding health and wellness environments for children. In addition, rather than focus on the perception of providers, these programs' results focused more on the health and wellness outcomes of the zero to five age range. Whether these programs are the exception or the rule to program implementation is difficult to tell, but they serve as examples of best practices.

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<sup>121</sup> Adapted from Falbe, Jennifer. *The Wellness Child Care Assessment Tool: A Measure to Assess the Quality of Written Nutrition and Physical Activity Policies*. 2011.

<sup>122</sup> Partnership for a Healthier America. *In It For Good, Annual Report*. 2012.

<sup>123</sup> Partnership for a Healthier America. *In It For Good, Annual Report*. 2012.

## Additional Programs

To ensure that this environmental scan gathered as much information as possible, USDA convened a CACFP Workgroup to draw upon the expertise of seasoned child care professionals. In three stakeholder meetings, the CACFP Workgroup highlighted a number of well-regarded interventions that don't use NAP SACC, QRIS, and WellCCAT as tools. Six of those programs discussed as exemplary programs by the Workgroup are outlined below. Two of them—Cooking Matters for Child Care Professionals and Let's Move! Child Care—are national programs. Four—Delaware State Licensing Regulations, Eat Well Play Hard in Child Care Settings, Active Bodies Active Minds, and Brocodile the Crocodile—are state programs. Brocodile the Crocodile is the only intervention among the six to be dedicated exclusively to reducing screen time.

### *Comparison of Select National and State Programs*

PROGRAM	NATIONAL OR STATE	FOCUS AREA	TARGET AGE	SETTING	DESCRIPTION
<b>Cooking Matters for Child Care Professionals (2010)</b>	National	Nutrition	0-5 years	Child care centers	Cooking lessons teach child care professionals healthy meal preparation for the kids in their care.
<b>Let's Move! Child Care (2011)</b>	National	Nutrition Physical Activity Electronic media use	0-5 years	Child care centers	Free resources and ideas that encourage providers, child care professionals and parents to have healthier physical activity and nutrition practices.

PROGRAM	NATIONAL OR STATE	FOCUS AREA	TARGET AGE	SETTING	DESCRIPTION
<b>Delaware CACFP/ Delacare Rules (2011)</b>	State	Nutrition Physical Activity Electronic media use	2-5 years	Licensed child care centers, family day care homes	State licensing standards and intensive training implemented through both the state Child and Adult Care Food Program (CACFP) and its child care licensing body, Delaware's Office of Child Care Licensing (OCCL).
<b>Eat Well Play Hard in Child Care Settings (2006)</b>	State	Nutrition Physical Activity Electronic media use	3-5 years	SNAP-Ed families at low-income child care centers receiving CACFP funds	Skill-building activities related to nutrition and physical activity behaviors aimed at increasing self-efficacy and behavioral capabilities of children and their parents.
<b>Washington's Active Bodies Active Minds (2003)</b>	State	Physical Activity Electronic media use	2-5 years	Child care centers and family day care homes	Screen-time reduction information and resources for both families and child care professionals.
<b>Brocodile the Crocodile (2004)</b>	State	Electronic media use	2 - 5 years	Preschools or child care centers	Classroom education and home activities focused on reducing TV viewing.

## National Programs

### Cooking Matters for Child Care Professionals

*Description:* Food insecurity<sup>124</sup> is common among families with lower levels of food and financial skills.<sup>125</sup> The Cooking Matters curriculum teaches how to plan, purchase, and prepare healthy, tasty, and affordable foods on a budget. Lessons are offered to a variety of audiences, with a set of lessons designed specifically to child care professionals at family day care homes or child care centers. The lessons are two-hours and held once a week for six weeks. They entail hands-on food preparation while teaching practical nutrition information and food-budgeting strategies.

Cooking Matters also “plays a critical role in Share Our Strength's No Kid Hungry® Campaign — a national effort to end childhood hunger in America by 2015 — and is nationally sponsored by the ConAgra Foods® Foundation and Walmart.”<sup>126</sup>

*Supporting Research:* The 2011 Cooking Matters annual review surveyed 978 graduates who had taken the program’s child care professional cooking classes. The results showed that their cooking habits had changed for the better. Nineteen percent of graduates felt more confident in finding less expensive fruits and vegetables to buy. In addition, graduates were found to:

- Involve kids in meal preparation 37 percent more often
- Involve kids in meal selection 21 percent more often
- Serve vegetables 61 percent more often

### Let’s Move! Child Care

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<sup>124</sup> The USDA estimates of food insecurity are based on data collected annually in the Food Security Supplement (FSS) to the Current Population Survey (CPS). On the basis of the number of food-insecure conditions reported, households are classified as:

1. Low food security (old label=Food insecurity without hunger): reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.
2. Very low food security (old label=Food insecurity with hunger): Reports of multiple indications of disrupted eating patterns and reduced food intake.

<sup>125</sup> Olsen, Christine. [Factors Protecting Against and Contributing to Food Insecurity Among Rural Families](#). 2004.

<sup>126</sup> Share Our Strength. [Cooking Matters Annual Review](#). 2010.

*Description:* Let's Move! Child Care (LMCC) targets five areas: physical activity, electronic media use, food, beverages, and infant feeding. Its intended audience is early education and child care providers in centers and family day care homes across the country. The initiative is a national call-to-action from First Lady Michelle Obama, and offers participation certificates, tips, education materials, webinars and online resources that direct child care centers towards the five goals. After registering, an online quiz identifies what goals within a center are being met and which need more work. With this information, a child care center can establish an appropriate Action Plan. The Let's Move! Child Care microsite is concise with little additional text to explain whether or not this Action Plan comes with a firm timetable. The site's resources are designed to help child care centers complete their Action Plans. A Child Care Recognition Award is available to those centers that complete their goals and retake the online checklist quiz.

*Supporting Research:* Although there hasn't yet been a national evaluation of Let's Move! Child Care, the program has garnered significant participation. To date, 2,000+ child care centers have joined the initiative and an estimated 280,000 children in 1,600 child care centers across the country are expected to be impacted positively.<sup>127</sup>

## **State Programs**

**Delaware CACFP/Delacare Rules** *Description:* Every state has child care licensing regulations that child care centers and family child care providers must meet to receive a license to operate. Few states, however, include wellness practices (nutrition, physical activity, or electronic media use) in their regulations. Delaware has been at the forefront of using child care regulations as a vehicle to implement improved wellness practices. In January of 2011, the state enacted reforms to statewide licensing regulations to improve nutrition, physical activity, and electronic media use in child care settings. These updated rules, called the Delaware CACFP/Delacare Rules, are implemented through both the state Child and Adult Care Food Program (CACFP) and its child care licensing body, Delaware's Office of Child Care Licensing (OCCL). They apply to child care centers as well as child care homes. The state's standards are part of a larger state strategy to prevent obesity in early childhood. The Delaware based non-profit, Nemours Health and

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<sup>127</sup> White House. [First Lady Unveils Let's Move! Child Care to Ensure Healthy Start for Youngest Children](#). 2011.

Prevention Services (NHPS), has been a pivotal force advocating for improved environments in child care settings across the state.

All CACFP-participating facilities received broad-scale trainings to teach child care providers about the new state regulations and how to implement them. Non-CACFP facilities were also welcome to send attendees. Trainings were comprised of seven sessions involving tool kits with practical “how-to” information for translating the updated rules into practice.

*Supporting Research:* This statewide training for child care providers was evaluated in a study published this past February, 2013. The authors surveyed just over 1,000 child care providers who attended the training. Among those surveyed, 923 providers (84 percent) were from CACFP-participating facilities and 131 providers were from non-CACFP-participating facilities (12 percent). Pre- and post-training questionnaires assessed participants’ knowledge of rules and satisfaction with the training. After the training, participants showed increased knowledge across all 26 rule components. Ninety-seven percent of participants felt the information was easy to understand, and 94 percent felt they learned new skills to help them in their work with children.

Overall, this in-person training was found to effectively increase child care providers’ knowledge of the Delaware CACFP/Delacare rules. Of note, some rules were hard to identify correctly even after the seven hour training. Researchers concluded that rules with multiple components or technical language are too complex and require clarification. An example of an overly complicated rule is, “sweet grains can only be served to children once in a two--week menu cycle as a snack. They cannot be served for breakfast, lunch, or supper, and they cannot be served to infants.” Another emerging observation was that despite the state enforcing rule compliance since January, 2011, prior to the evaluation, many providers were still unfamiliar with the rules. Child care center staff and providers with fewer years of experience in the field were the less knowledgeable subgroups. Authors note that if financial or geographical constraints restrict wide-scale trainings, these groups should be targeted selectively.<sup>128</sup>

### **Eat Well Play Hard in Child Care Settings**

*Description:* Eat Well Play Hard in Child Care Settings (EWPHCCS) is a curriculum devoted to improving nutrition and increasing physical activity used by child care centers in New York State.

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<sup>128</sup> Van Stan, Stefanie et al. The Impact of a Statewide Training to Increase Child Care Providers’ Knowledge of Nutrition and Physical Activity Rules in Delaware. 2013.

EWPHCCS serves eligible and participating SNAP-Ed families with pre-school age (three to five years) children enrolled in low-income child care centers receiving CACFP funds. In FY2012, the Program targeted 227 low-income child care centers<sup>129</sup> and 16 New York City Public Schools.

Ten classes are given to preschoolers and ten classes are given to parents/caregivers spanning subjects such as cooking, nutrition, mealtime behavior, and staying active. The classes are taught by registered dietitians and reinforced with activities and take-home materials.<sup>130</sup>

The program is notable for its design based on the socio-ecological model of behavior change that encourages social support for healthy behaviors and positive role-modeling. The model is applied

**EWPHCCS formed partnerships with stakeholders to receive institutional support and sustainable infrastructure:**

- USDA Supplemental Nutrition Assistance Program-Education (SNAP-Ed)
- New York State (NYS) Office of Children and Family Services, the child care licensing agency
- NYS Early Care and Learning Council, the statewide umbrella organization for Child Care Resource and Referral (CCR&R) agencies
- Child care centers partnering with the CCR&Rs and with New York City
- Department of Health and Mental Hygiene (NYCDOHMH)

to child care centers (practices), staff-level (trainings) and the home (parents receive newsletters, classes, child/teacher feedback). Both child and caregiver classes are interactive and encourage participation such as food preparation and food tasting exercises.

Handling foods boosts parents' self-efficacy and confidence that they can replicate meals at home, while taste-testing lets children see their peers and educators modeling enjoyment of fruit and vegetables.<sup>35</sup>

The program is also known for having strong institutional support. It was designed in 2005 by the New York State Department of Health (NYSDOH), which runs CACFP in New York State.

*Supporting Research:* The USDA funded evaluation of EWPHCCS found that after EWPHCCS, children ate more vegetables at home each day – an increase reflected both in parent offerings

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<sup>129</sup> Eligible centers are those in which 50 percent or more of enrolled families qualify for free or reduced-price meals, coming in at less than 185 percent of federal poverty guidelines

<sup>130</sup> [Center for Training and Research Translation](#). Eat Well Play Hard in Child Care Settings. 2012.

and child-initiated snacking. Children also drank more one-percent or fat free milk. Children's fruit consumption did not show a significant change and the evaluation did not measure physical activity. Participants also enjoyed the intervention; many parents praised the curriculum and the take-home materials. Because the program works with child care centers already participating in the Child and Adult Care Food Program, it has the potential to reach large numbers of at-risk low-income families.<sup>131</sup>

### **Washington Active Bodies Active Minds**

*Description:* The Washington Active Bodies Active Minds (WAABAM) website and tool kit were developed to ensure that environments for preschool children limit electronic media use and encourage physical activity. The University of Washington Center for Public Health Nutrition (CPHN) developed the site with funds from a CDC grant. The project, which was funded for 10 years beginning in 2003, started with summits and pilots that helped inform outreach tools leading up to the creation of a website launch in 2007.<sup>132</sup> Website resources have been designed for both child care professionals and families. Resources specific to child care professionals include sample screen time policies, ideas to reduce electronic media use, educational materials to share with children and families, and training materials for staff. The resources for families are offered in both English and Spanish and include brochures, bookmarks and posters promoting healthy habits as well as a WAABAM toolkit.<sup>133</sup>

*Supporting Research:* A recent evaluation of WAABAM's reach over the past ten years was conducted. The evaluation primarily covers five years (2007-2012) of WAABAM work and briefly reviews earlier screen time reduction initiatives conducted at CPHN since 2003. Data collected for this evaluation included written documentation related to the various WAABAM screen time reduction projects as well as key informant interviews.<sup>134</sup> Highlights from findings report that, to

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<sup>131</sup> Gabor, Vivian et al. SNAP Education and Evaluation Report: New York State Department of Health's Eat Well Play Hard in Child Care Settings Program. 2012.

<sup>132</sup> Email exchange with Karen Holt Luetjen, University of Washington. WAABAM questions for USDA report. May 2013.

<sup>133</sup> University of Washington, Center for Public Health Nutrition. Washington Active Bodies Active Minds. 2007.

<sup>134</sup> "Key Informants" were defined as "anyone who collaborated with or worked for CPHN on a screen time reduction project, was a WAABAM advisory board member, or is currently an advocate for childhood obesity prevention, including screen time reduction efforts in Washington State."

date, 1,400 early child care professionals in Washington State have used WAABAM to teach the benefits of reduced electronic media use to a total of 23,400 children that have been in their care. The evaluation of these WAABAM initiatives concluded that they “increased awareness about the problem of screen time use, increased use of screen time reduction policies and environmental changes in child care settings, and increased parent education related to screen time.”<sup>135</sup>

A 2007 evaluation of just the WAABAM tool kit is also available. The purpose of the evaluation was to find out whether the tool kit was an effective means of reaching Family Day Care Home providers to reduce screen time in this setting.

“Four training sessions were conducted in partnership with Snohomish County Partners in Child Care and City of Seattle Child Care Nutrition Program, and tool kits were given to providers from 2 sessions only. Data were collected at the training and 2 months later.”<sup>136</sup> Among providers who had the tool kit, “93 percent used the tool kit; most commonly used items included the book (81 percent), poster (70 percent), bookmarks (77 percent) and brochures (74 percent).”<sup>41</sup> Reductions in screen time “between baseline and follow-up was more frequently reported by those in the tool kit group than in the control group.”<sup>41</sup> Given these findings, it was concluded the WAABAM tool kits were popular with family day care home providers, and that materials were distributed to parents or displayed in the family day care homes.

### **Brocodile the Crocodile**

*Description:* Brocodile the Crocodile was a health promotion curriculum designed to reduce electronic media use in children, aged three to five years. It was implemented in various New York preschools and day care centers from 2000 to 2001, with results published in 2004. It has not been repeated since 2001. The curriculum was developed cooperatively by the Research Institute of Bassett Healthcare, the State University of New York at Oneonta, and the Columbia University Department of Pediatrics and consisted of seven one-hour sessions. Sample components discussed alternatives to television, as well as promotion of reading, family meal-time and a TV-free week. Children received take-home educational materials and ideas for

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<sup>135</sup> Partners in Action. Screen Time Reduction Tools Evaluated. 2013.

<sup>136</sup> Johnson, Donna. WA Active Bodies Active Minds, WAABAM Tool Kit Evaluation – Executive Summary. 2007

parent-child activities after each session. These materials were intended to spark discussions and reinforce healthy behaviors at home.

*Supporting Research:* Eight intervention centers (90 preschoolers) and eight control centers (73 preschoolers) participated in the Brocodile the Crocodile intervention to reduce television viewing. The intervention was successful in reducing electronic media use: the mean weekly television/video viewing decreased 3.1 hr. /wk. among those in the intervention group compared to an increase of 1.6 hr. /wk. in the control group. “The percentage of children watching television/videos more than 2 hours a day also decreased significantly from 33 percent to 18 percent among the intervention group, compared with an increase of 41 percent to 47 percent among the control group.”<sup>137</sup>

While parents and staff were receptive to the intervention, the researchers noted that, “larger, more intensive interventions that extend over longer time and interventions that more directly involve parents and other caretakers might yield greater and longer-lasting reductions in children’s television/video viewing.” Since the results were compiled from questionnaires completed by parents, it remains to be seen if different results would emerge from child reporting. Interestingly, unlike studies that focus on electronic media use with older children, a reduction in electronic media use was not associated with a change in adiposity. This may have been related to the small study size and lack of child diversity – both cited as study weaknesses. Overall, the study suggests that reducing electronic media use in young children can be both practical and feasible.<sup>42</sup>

As noted by the self-assessment tools and programs described above, the child care environment presents a unique opportunity to instill health promoting behaviors at a young age. Although more research has been done related to the effectiveness of health interventions with older children, programs and related evaluations for early childhood are building. A range of possible interventions, targeting nutrition, physical activity and electronic media use in child care, are emerging.

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<sup>137</sup> Dennison, Barbara. An Intervention to Reduce Television Viewing by Preschool Children. 2004.

## CACFP Standards and Policy Recommendations

A close look at the current CACFP standards is also warranted, as CACFP child care centers are required to follow these guidelines. While CACFP has requirements focused on meal patterns for breakfast, lunch and dinner as well as snacks, there are no standards for either physical activity or electronic media use. The CACFP meal patterns requirements outlined below specify minimum portion sizes for each meal component.<sup>138,139</sup>

### *CACFP Meal Pattern Requirements Birth through 11 Months*

	BIRTH THROUGH 3 MONTHS	4 THROUGH 7 MONTHS	8 THROUGH 11 MONTHS	ADDITIONAL NOTES
<b>Breakfast</b>	4-6 fluid ounces of formula or breastmilk	4-8 fluid ounces of formula or breastmilk 0-3 tablespoons of infant cereal	6-8 fluid ounces of formula <sup>1</sup> or breastmilk; and 2-4 tablespoons of infant cereal; 1-4 tablespoons of fruit or vegetable or both	<ul style="list-style-type: none"> <li>• It is recommended that breast milk be served in place of formula from birth through 11 months.</li> <li>• For some breastfed infants who regularly consume less than the minimum of breast milk per feeding, a serving of less than the minimum amount of breast milk may be offered, with additional breast milk offered if the infant is still hungry.</li> <li>• Infant formula and dry infant cereal shall be iron-fortified.</li> <li>• A serving of this component shall be optional.</li> </ul>

<sup>138</sup> The United States Department of Agriculture. Building Blocks for Fun and Healthy Meals, Chapter 2. 2000.

<sup>139</sup> The United States Department of Agriculture. Child and Adult Care Food Program Meal Patterns. 2013.

	BIRTH THROUGH 3 MONTHS	4 THROUGH 7 MONTHS	8 THROUGH 11 MONTHS	ADDITIONAL NOTES
<b>Lunch or Dinner</b>	4-6 fluid ounces of formula <sup>1</sup> or breastmilk	4-8 fluid ounces of formula <sup>1</sup> or breastmilk; 0-3 tablespoons of infant cereal; and 0-3 tablespoons of fruit or vegetable or both	6-8 fluid ounces of formula <sup>1</sup> or breastmilk; 2-4 tablespoons of infant cereal; and/or 1-4 tablespoons of meat, fish, poultry, egg yolk, cooked dry beans or peas; or ½-2 ounces of cheese; or 1-4 ounces (volume) of cottage cheese; or 1-4 ounces (weight) of cheese food or cheese spread; and 1-4 tablespoons of fruit or vegetable or both	<ul style="list-style-type: none"> <li>• Infant formula and dry infant cereal must be iron-fortified.</li> <li>• Breastmilk or formula, or portions of both, may be served; however, it is recommended that breast milk be served in place of formula from birth through 11 months.</li> <li>• For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breast milk may be offered, with additional breast milk offered if the infant is still hungry.</li> <li>• A serving of this component is required when the infant is developmentally ready to accept it.</li> </ul>

	BIRTH THROUGH 3 MONTHS	4 THROUGH 7 MONTHS	8 THROUGH 11 MONTHS	ADDITIONAL NOTES
<b>Snack</b>	4-6 fluid ounces of formula or breastmilk	4-6 fluid ounces of formula or breastmilk	2-4 fluid ounces of formula <sup>1</sup> or breastmilk, or fruit juice; and 0-½ bread or 0-2 crackers	<ul style="list-style-type: none"> <li>• Infant formula and dry infant cereal must be iron-fortified.</li> <li>• Breastmilk or formula, or portions of both, may be served; however, it is recommended that breastmilk be served in place of formula from birth through 11 months.</li> <li>• For some breastfed infants who regularly consume less than the minimum amount of breastmilk per feeding, a serving of less than the minimum amount of breast milk may be offered, with additional breast milk offered if the infant is still hungry.</li> <li>• A serving of this component is required when the infant is developmentally ready to accept it.</li> <li>• Fruit juice must be full-strength.</li> <li>• A serving of this component must be made from whole-grain or enriched meal or flour.</li> </ul>

**CACFP Meal Pattern Requirements 1-12 Years**

	1-2 YEARS	3-5 YEARS	6-12 YEARS	ADDITIONAL NOTES
<b>Breakfast</b>				<ul style="list-style-type: none"> <li>• Children age 12 and older may be served larger portions based on their greater food needs. They may not be served</li> </ul>
<b>Milk</b> (fluid milk)	½ cup	1/3 cup	1 cup	
<b>Fruit/Vegetable</b> (juice, fruit and/or vegetable)	½ cup	½ cup	½ cup	

	1-2 YEARS	3-5 YEARS	6-12 YEARS	ADDITIONAL NOTES
<b>Grain/Bread</b> bread or cornbread or biscuit or roll or muffin or cold dry cereal or hot cooked cereal or pasta or noodles or grains	½ slice	1/2 slice	1 slice	less than the minimum quantities listed in this column. <ul style="list-style-type: none"> <li>• Milk served must be low fat (1percent) or non-fat (skim).</li> <li>• Fruit or vegetable juice must be full-strength.</li> <li>• Breads and grains must be made from whole-grain or enriched meal or flour. Cereal must be whole-grain or enriched or fortified.</li> </ul>
	½ serving	½ serving	1 serving	
	¼ cup	1/3 cup	¾ cup	
	¼ cup	¼ cup	½ cup	
	¼ cup	¼ cup	½ cup	
<b>Lunch or Dinner</b>				<ul style="list-style-type: none"> <li>• Children, aged 12 and older, may be served larger portions based on their greater food needs.</li> <li>• They may not be served less than the minimum quantities listed in this column.</li> <li>• Milk served must be low fat (1percent) or non-fat (skim).</li> <li>• Fruit or vegetable juice</li> </ul>
<b>Milk</b> (fluid milk)	½ cup	¾ cup	1 cup	
<b>Fruit/Vegetable</b> (juice, fruit and/or vegetable)	¼ cup	½ cup	¾ cup	
<b>Grain/Bread</b> bread or cornbread or biscuit or roll or muffin or cold dry cereal or hot cooked cereal or pasta or noodles or grains	½ slice	½ slice	1 slice	
	½ serving	½ serving	1 serving	
	¼ cup	1/3 cup	¾ cup	
	¼ cup	¼ cup	½ cup	
	¼ cup	¼ cup	½ cup	

	1-2 YEARS	3-5 YEARS	6-12 YEARS	ADDITIONAL NOTES
<b>Meat/Meat Alternate</b> meat or poultry or fish or alternate protein product or cheese or egg or cooked dry beans or peas or peanut or other nut or seed butters or nuts and/or seeds or yogurt	1 ounce  1 ounce 1 ounce ½ egg ¼ cup  2 tbsp ½ ounce 4 ounces	1 ½ ounces  1 ½ ounces 1 ½ ounces ¾ egg 3/8 cup  3 tbsp ¾ ounce 6 ounces	2 ounces  2 ounces 2 ounces 1 egg ½ cup  4 tbsp 1 ounce 8 ounces	<ul style="list-style-type: none"> <li>must be full-strength.</li> <li>Breads and grains must be made from whole-grain or enriched meal or flour. Cereal must be whole-grain or enriched or fortified.</li> <li>A serving consists of the edible portion of cooked lean meat or poultry or fish.</li> <li>Nuts and seeds may meet only one-half of the total meat/meat alternate serving and must be combined with another meat/meat alternate to fulfill the lunch or supper requirement.</li> <li>Yogurt may be plain or flavored, unsweetened or sweetened.</li> </ul>
<b>SNACK</b>				<ul style="list-style-type: none"> <li>Children age 12 and older may be served larger portions based on their greater food needs.</li> <li>They may not be served less than the minimum quantities listed in this column.</li> <li>Milk served must be low fat (1percent) or non-fat (skim).</li> <li>Fruit or vegetable juice</li> </ul>
<b>Milk</b> (fluid milk)	½ cup	½ cup	1 cup	
<b>Fruit/Vegetable</b> (juice, fruit and/or vegetable)	½ cup	½ cup	¾ cup	
<b>Grain/Bread</b> bread or cornbread or biscuit or roll or muffin or cold dry cereal or hot cooked cereal or pasta or noodles or grains	½ slice ½ serving  ¼ cup  ¼ cup  ¼ cup	½ slice ½ serving  1/3 cup  ¼ cup  ¼ cup	1 slice 1 serving  ¾ cup  ½ cup  ½ cup	

	1-2 YEARS	3-5 YEARS	6-12 YEARS	ADDITIONAL NOTES
<b>Meat/Meat</b>	½ ounce		1 ounce	must be full-strength. Juice cannot be served when milk is the only other snack component. <ul style="list-style-type: none"> <li>• Breads and grains must be made from whole-grain or enriched meal or flour.</li> <li>• Cereal must be whole-grain or enriched or fortified.</li> <li>• A serving consists of the edible portion of cooked lean meat or poultry or fish.</li> <li>• One-half egg meets the required minimum amount (one ounce or less) of meat alternate.</li> <li>• Yogurt may be plain or flavored, unsweetened or sweetened.</li> </ul>
<b>Alternate</b>	½ ounce	½ ounce	1 ounce	
meat or poultry or fish or alternate protein product or cheese or egg or cooked dry beans or peas or peanut or other nut or seed butters or nuts and/or seeds or yogurt	½ ounce	½ ounce	1 ounce	
	½ egg	½ ounce	½ egg	
	½ egg	½ egg	½ egg	
	⅛ cup	⅛ cup	¼ cup	
	1 Tbsp.	1 Tbsp.	2 Tbsp.	
	½ ounce	½ ounce	1 ounce	
	2 ounces	2 ounces	4 ounces	

In 2010, the Institute of Medicine’s (IOM) issued a report that included a series of recommended changes to CACFP meal pattern requirements, as outlined below. These recommendations grew out of the following from the USDA:

“USDA requested that the IOM convene a panel of experts to undertake a study to review and recommend revisions to the CACFP Meal Requirements. The major objective was to develop practical recommendations that would bring CACFP meals and snacks into alignment with current dietary guidance. Specifically, the committee was asked to:

- Review and assess the nutritional needs of the target populations based on the *Dietary Guidelines for Americans* and the DRIs, and
- Use that review as a basis for recommended revisions to the Meal Requirements for CACFP.

As part of its task, the committee was asked to consider certain critical issues identified by the Food and Nutrition Service (FNS). The committee’s goal was to develop well-conceived, practical, and economical recommendations that reflect current nutritional science; to omit foods of low

nutritional value; and to enhance the ability of the program to effectively meet the nutritional needs of the children and adults served.”<sup>140</sup>

Additional specifics for each meal period can be found in the IOM report.

***Key Recommended Changes in CACFP Meal Requirements<sup>141</sup>***

<b>CATEGORY</b>	<b>CURRENT CACFP REQUIREMENTS</b>	<b>IOM RECOMMENDED REQUIREMENTS AND SPECIFICATIONS</b>
Fruits	Fruits and vegetables combined as a category	Fruits as a separate category with increased servings; juice not provided for infants and limited for children; fruits with added sugars limited.
Vegetables		Vegetables as a separate category; servings increased; must provide variety including dark green leafy, bright yellow/orange, legumes; salt content limited; starchy vegetables limited.
Grain	Enriched or whole grain; proportions not specified	At least half must be whole grain rich; additional whole grains are encouraged; grain products high in solid fats and sugars are limited; high sodium grains are limited.
Meat/Alternate	None at breakfast; no restrictions on high fat or highly processed meat	Included in weekly breakfast pattern; some types limited to control calories, solid fat and sodium.
Milk	Nonfat or lowfat for children 2 years and older.	Must be nonfat or lowfat for children aged 2+ years and adults; whole milk for children ages 1-1.9. Flavored milk must be nonfat and allowed for only at-risk programs. Some nonfat or lowfat yogurt allowed as a milk substitute.

In addition to the current CACFP meal pattern requirements and the recommended requirements as detailed by the 2010 IOM report, there are a number of more general policy recommendations that have been – and can continue to be – used to guide child care nutrition, physical activity and electronic media use.

Let’s Move! Child Care,<sup>142</sup> as previously noted, is a comprehensive initiative from U.S. First Lady Michelle Obama. Collaborators include the Nemours Foundation and Child Care Aware of America. Child care providers that register through Let’s Move! Child Care make a commitment to promote nutrition and physical activity in their early care and education program.

<sup>140</sup> The Institute of Medicine. Child and Adult Care Food Program: Aligning Dietary Guidance for All. 2010.

<sup>141</sup> Adapted from the Institute of Medicine report.

<sup>142</sup> Let’s Move! Child Care. 2012.

In addition, the IOM published the report *Early Childhood Obesity Prevention Policies* in June 2011. The IOM reviewed factors contributing to overweight and obesity from ages zero to five years, with a focus on nutrition, physical activity, and sedentary behavior.<sup>143</sup> This report utilized a vast amount of research, including the 2010 *Dietary Guidelines for Americans* and the 2008 *Physical Activity Guidelines for Americans*.

The table below highlights Let's Move! Child Care and the IOM's recommendations as they relate to nutrition, physical activity, and electronic media use.<sup>144</sup>

**Select CACFP-Related Let's Move! Child Care Institute of Medicine Recommendations**

	<b>LET'S MOVE!</b>	<b>INSTITUTE OF MEDICINE<sup>145</sup></b>
<b>Nutrition</b>	<p>For mothers who want to continue breastfeeding, provide their milk to their infants and welcome them to breastfeed during the child care day. Support all new parents' decisions about infant feeding.</p> <p>Serve fruits or vegetables at every meal, eat meals family-style whenever possible, and don't serve fried foods. Provide access to water during meals and throughout the day, and don't serve sugary drinks. For children age 2 and older, serve low-fat (1percent) or non-fat milk, and no more than one 4- to 6-ounce serving of 100 percent juice per day.</p>	<p>Adults who work with infants and their families should promote and support exclusive breastfeeding for six months and continuation of breastfeeding in conjunction with complementary foods for one year or more.</p> <p>To ensure that child care facilities provide a variety of healthy foods and age-appropriate portion sizes in an environment that encourages children and staff to consume a healthy diet, child care regulatory agencies should require that all meals, snacks, and beverages served by early childhood programs be consistent with the Child and Adult Care Food Program meal patterns and safe drinking water be available and accessible to the children.</p> <p>The Department of Health and Human Services and the U.S. Department of Agriculture should establish dietary guidelines for children from birth to age two years in future releases of the Dietary Guidelines for Americans.</p>

143 The Institute of Medicine. *Early Childhood Obesity Prevention Policies*. 2011.

144 The Institute of Medicine's report contains several additional recommendations. Highlighted above are those specifically focused on nutrition, physical activity and/or screen time in the child care setting.

145 See previous table for the IOM's CACFP meal pattern recommendations.

	LET'S MOVE!	INSTITUTE OF MEDICINE <sup>145</sup>
		<p>State child care regulatory agencies should require that child care providers and early childhood educators practice responsive feeding.</p> <p>Government agencies should promote access to affordable healthy foods for infants and young children from birth to age five in all neighborhoods, including those in low-income areas, by maximizing participation in federal nutrition assistance programs and increasing access to healthy foods at the community level.</p> <p>Health and education professionals providing guidance to parents of young children and those working with young children should be trained and educated and have the right tools to increase children's healthy eating and counsel parents about their children's diet.</p>
<b>Physical Activity</b>	Provide 1-2 hours of physical activity throughout the day, including outside play when possible	<p>Child care regulatory agencies should require child care providers and early childhood educators to provide infants, toddlers, and preschool children with opportunities to be physically active throughout the day.</p> <p>Child care regulatory agencies should require child care providers and early childhood educators to allow infants, toddlers, and preschoolers to move freely by limiting the use of equipment that restricts infants' movement and by implementing appropriate strategies to ensure that the amount of time toddlers and preschoolers spend sitting or standing still is limited.</p> <p>Health and education professionals providing guidance to parents of young children and those working with young children should be trained in ways to increase children's physical activity and decrease their sedentary behavior, and in how to counsel parents about their</p>

	LET'S MOVE!	INSTITUTE OF MEDICINE <sup>145</sup>
		children's physical activity.
<b>Electronic media use</b>	No electronic media use for children under two years. For children aged two and older, strive to limit electronic media use to no more than 30 minutes per week during child care, and work with parents and caregivers to ensure children have no more than one to two hours of quality electronic media use per day (as recommended by the American Academy of Pediatrics).	Adults working with children should limit electronic media use, including television, cell phone, or digital media, to less than two hours per day for children aged two-five.  The Secretary of the Department of Health and Human Services, in cooperation with state and local government agencies and interested private entities, should establish a sustained social marketing program to provide pregnant women and caregivers of children from birth to age five with consistent, practical information on the risk factors for obesity in young children and strategies for preventing overweight and obesity.

The recommendations made by Let's Move! Child Care and the IOM both emphasize improved nutrition standards with a heavy focus on increasing consumption of fruits and vegetables, limiting drinks with added sugars and serving low-fat or non-fat milk. The IOM's recommendations – pulled from two reports – range from specific meal pattern suggestions to policy and regulatory actions that could be implemented to encourage physical activity and limit electronic media use in the child care setting. Let's Move! Child Care keeps their recommendations simple and stays focused on outcomes rather than how to achieve any one of the program's five goals. That said, Let's Move! Child Care provides extensive tools, resources and ideas to help child care providers implement their recommendations.

### Additional Recommendations

A number of national, state and local organizations have issued recommendations specific to nutrition, physical activity, and/or electronic media use. Select organizations – including USDA's recent handbook on nutrition and wellness tips for young children – are noted below. With the exception of the National Association for Sport and Physical Education's report focusing exclusively on physical activity, these reports focus on standards related nutrition, physical activity and electronic media use.

### **Recommendations Issued By Select Organizations**

NAME	AUTHOR
<a href="#">Nutrition and Wellness Tips for Young Children: Provider Handbook for the Child and Adult Care Food Program</a> ; 2012	The United States Department of Agriculture
<a href="#">Caring for Our Children: National Health and Safety Performance Standards</a> ; 2011	American Academy of Pediatrics; American Public Health Association and the National Resource Center for Health and Safety in Child Care and Early Education
<a href="#">Model Child-Care Licensing Statute for Obesity Prevention</a> ; 2012	National Policy & Legal Analysis Network to Prevent Childhood Obesity (NPLAN)
<a href="#">Active Start: A Statement of Physical Activity Guidelines for Children From Birth to Age 5</a> ; 2009	National Association for Sport and Physical Education

In addition to the standards and recommendations as outlined above, the 2010 HHFKA mandates a number of changes to CACFP. This final section highlights how the HHFKA will shape future policy as well as technical assistance and training provided by USDA.

#### **The Healthy, Hunger Free Kids Act (HHFKA) and CACFP**

CACFP provisions in the HHFKA will also affect nutrition, physical activity and electronic media use in the child care setting. The HHFKA’s nutrition, physical activity and electronic media use provisions related to CACFP are based largely on the 2010 Dietary Guidelines and two recent Institute of Medicine CACFP reports.<sup>146,147</sup> The HHFKA:<sup>148</sup>

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- **Allows only lower-fat milk options to be served to children over age two.**
  - **Provides available and accessible water throughout the day.**
  - **Requires USDA develop updated meal pattern and nutrition standards – with the proposed regulations released within 18 months of the publication of the Institute of Medicine CACFP report<sup>149</sup> - for CACFP meals and snacks in child care settings that are consistent with the Dietary Guidelines, current relevant science, and recommendations from appropriate, authoritative agencies or organizations.**
  - **Requires USDA issue guidance by 2012 that encourages participating child care centers**
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<sup>146</sup> The Institute of Medicine. Early Childhood Obesity Prevention Policies. 2011.

<sup>147</sup> The Institute of Medicine. Child and Adult Care Food Program: Aligning Dietary Guidance for All. 2010.

<sup>148</sup> Adapted from the Food Research and Action Center’s Fact Sheet. The Healthy, Hunger-Free Kids Act of 2010 Child and Adult Care Food Program Summary.

<sup>149</sup> The Institute of Medicine. Child and Adult Care Food Program: Aligning Dietary Guidance for All. 2010.

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and family day care homes to offer healthier meals and snacks with an emphasis on increasing the consumption of whole grains, fruits and vegetables, and low-fat and non-fat dairy and lean protein foods, and to provide opportunities for adequate physical activity.

- **Calls for child care centers and family day care homes participating in CACFP to receive education and encouragement focused on providing children with meals and snacks consistent with the Dietary Guidelines; to offer daily opportunities for structured and unstructured age-appropriate moderate intensity to vigorous-intensity physical activity; and to limit use of electronic media to an appropriate level in child care.**
- **Directs USDA to provide training and technical assistance to implement the nutrition and wellness recommendations and requirements, including education focused on:**
  - **The menu planning, label reading, purchasing and food preparation skills necessary to produce meals and snacks that are consistent with the goals of the most recent Dietary Guidelines and to promote the health of the population served by CACFP;**
  - **The relationship between nutrition, physical activity, and health;**
  - **The importance of regular physical activity to overall health and well-being; and**
  - **Best practices for physical activity plans in child care centers and family day care homes; and the importance of limiting electronic media use in order to avoid the health consequences of overuse and overexposure.**
- **Requires USDA do a periodic reassessment and updating of the CACFP meal pattern and nutrition standards at least every 10 years.**
- **Charges USDA with producing and disseminating the appropriate materials to support the success of the new CACFP nutrition and wellness rules.**
- **Requests that the Secretary of Agriculture collaborate with the Secretary of Health and Human Services in developing a comprehensive wellness handbook.**
- **Directs the Secretary of Agriculture to work with the Secretary of Health and Human Services to encourage state licensing agencies to include wellness standards within state licensing standards in order to ensure that licensed and regulated child care centers and family day care homes provide physical activity opportunities, limit electronic media use and offer food consistent with the healthy meal patterns and nutrition standards of CACFP.**

Taken together, there is no shortage of recommendations, proposed standards and tools to help providers improve nutrition and physical activity, and decrease electronic media use. That said, the lack of national standards – and for nutrition, standards that could be further aligned with current dietary guidance - result in self-assessment tools and programs that are inconsistent across the nation. Many of the resources and documented evaluations that exist are helpful yet scattered. Additional efforts are needed to provide consistent technical training and tools so that resources to achieve best practices are increasingly made accessible to child care providers and other stakeholders working in this space. The provisions outlined in the HHFKA and the momentum generated by Let’s Move! Child Care have generated a lot of promise and activity that can be leveraged to help improve children’s health and wellness. What follows is a summary of this scan’s implications and recommendations, both for future research as well as insights that could help inform USDA’s approach to strengthening nutrition, physical activity and electronic media use in the child care setting.

#### iv. IMPLICATIONS AND RECOMMENDATIONS

The implications and recommendations below represent future research needs as well as insights that may serve to inform USDA's approach to technical assistance and standard-setting.

##### Future Research

- **It is unknown whether evaluation tools like the Wellness Child Care Assessment Tool that score only written policies hold predictive value for center's health and wellness practices.** Future research should test whether written policies translate into center practices, and consequently health gains for children. Research could also look into differences in language, scope, and categorization of written policies to see what factors help ensure they get operationalized.
- **There is a lack of long-term interventions that assess the potential for maintenance of lasting health benefits.** Wellness interventions may last six months to two years, but to our knowledge, no long-term interventions assess whether health improvements gained from the intervention persist beyond early childhood and into middle and high school.
- **More research is needed to identify the most effective tools and resources to promote nutrition and physical activity to target audiences.** A growing number of options are available to help improve nutrition practices, increase physical activity and cut use of electronic media. Still unknown are the most effective resources and tools and the best way to promote their availability to key audiences.

##### Technical Assistance and Standard-Setting

- **In the absence of national recommendations for physical activity and electronic media use, there is a need to inform child care center providers about existing recommendations.** It is also important to educate providers about the tools and resources that are available.
- **Self-assessment tools often rely on participants' memories and experiences. As a result, they are inherently subjective and can lead to biased results.** Including objective measures as part of a self-assessment, such as body mass index and weight, could make for a more complete evaluation.

- **Research is needed to identify the most effective ways to reach and motivate staff.** .  
For example, Eat Well Play Hard and the Nutrition and Physical Activity Self-Assessment for Child Care found that when a center director lacked enthusiasm and commitment to at the project's start, , there was less likelihood that changes would be implemented. .
- **Data sharing and collaboration often fall short.** Small sample size is cited as a study limitation by the Nutrition and Physical Activity Self-Assessment for Child Care and Brocodile the Crocodile. One way to overcome these problems is for USDA, state agencies and sponsoring organizations to consider providing incentives to encourage collaboration and data sharing.

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**vi. ANNOTATED BIBLIOGRAPHY**

This section provides a list of literature and programs reviewed or consulted in creating this environmental scan. Not all sources are cited in this report.

Citation	Document Title	Description
Academy of Nutrition and Dietetics. "What Role Can Child-Care Settings Play in Obesity Prevention?" Journal of the American Dietetic Association. (2011) <a href="http://www.ncbi.nlm.nih.gov/pubmed/21872698">http://www.ncbi.nlm.nih.gov/pubmed/21872698</a>	What Role Can Child-Care Settings Play in Obesity Prevention?	This review examines the scientific literature on state regulations, practices and policies, and interventions for promoting healthy eating and physical activity, and for preventing obesity in preschool-aged children attending child care.
American Academy of Pediatrics. "Policy Opportunities Tool: Prevention and Treatment of Childhood Overweight and Obesity." (2012). <a href="http://www2.aap.org/obesity/matrix_1.html">http://www2.aap.org/obesity/matrix_1.html</a>	Policy Opportunities Tool: Prevention and Treatment of Childhood Overweight and Obesity	The Policy Opportunities Tool is designed to showcase the various policy strategies that support healthy active living for children and families, aimed for use by healthcare professionals who have experience in advocacy and are interested in focusing their advocacy efforts on obesity prevention.
Arkansas Division of Child Care and Early Childhood Education. "Better Beginnings." (2013). <a href="http://www.arbetterbeginnings.com/">http://www.arbetterbeginnings.com/</a>	Better Beginnings	Better Beginnings gives Arkansas child care providers valuable tools for improving the quality of their programs at every level, by establishing recognized standards of excellence and providing a mechanism for providers to meet these standards.

Citation	Document Title	Description
<p>Auld, GW et al. "Outcomes from a school-based nutrition and education program alternating special resource teachers and classroom teachers." The Journal of School Health. (1999).  <a href="http://www.ncbi.nlm.nih.gov/pubmed/10685377">http://www.ncbi.nlm.nih.gov/pubmed/10685377</a></p>	<p>Outcomes from a school-based nutrition and education program alternating special resource teachers and classroom teachers.</p>	<p>This study modified a successful nutrition program to improve its transferability and potential for institutionalization.</p>
<p>Auld, GW et al. "Outcomes from a School-based Nutrition Education Program Using Resource Teachers and Cross-disciplinary Models." Journal of Nutrition Education and Behavior. (1998).  <a href="http://www.journals.elsevierhealth.com/periodicals/jned/article/PIIS002231829870336X/abstract">http://www.journals.elsevierhealth.com/periodicals/jned/article/PIIS002231829870336X/abstract</a></p>	<p>Outcomes from a School-based Nutrition Education Program Using Resource Teachers and Cross-disciplinary Models</p>	<p>This paper reports on years three and four outcomes of the Integrated Nutrition Project, an ongoing comprehensive elementary school-based program focused on increasing consumption of whole grains, fruits, and vegetables in children and establishing nutrition education in the schools through local partnerships.</p>
<p>Banghart, Patti. "Comprehensive Obesity Prevention in Early Childhood: Promising Federal and State Initiatives." National Center for Children in Poverty. (2012).  <a href="http://www.nccp.org/publications/pub_1058.html">http://www.nccp.org/publications/pub_1058.html</a></p>	<p>Comprehensive Obesity Prevention in Early Childhood: Promising Federal and State Initiatives</p>	<p>This report presents a range of early childhood health and wellness initiatives to inform states of ways they can build strong cross-system efforts to reduce childhood obesity rates.</p>
<p>Barnes, Seraphine Pitt et al. "Early Assessment Initiative Using the Systematic Screening and Assessment Method: Three Case Studies." New Directions for Evaluation. (2010).  <a href="http://onlinelibrary.wiley.com/doi/10.1002/ev.321/abstract">http://onlinelibrary.wiley.com/doi/10.1002/ev.321/abstract</a></p>	<p>Early Assessment Initiative Using the Systematic Screening and Assessment Method: Three Case Studies</p>	<p>The three included case studies describe how the Systematic Screening and Assessment (SSA) Method was used to identify innovations that hold promise to prevent childhood obesity.</p>

Citation	Document Title	Description
<p>Benjamin, Sara et al. "An Intervention to Promote Healthy Weight: Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) Theory and Design." Preventing Chronic Disease. (2007).  <a href="http://www.mendeley.com/catalog/intervention-promote-healthy-weight-nutrition-physical-activity-self-assessment-child-care-nap-sacc/">http://www.mendeley.com/catalog/intervention-promote-healthy-weight-nutrition-physical-activity-self-assessment-child-care-nap-sacc/</a></p>	<p>An Intervention to Promote Healthy Weight: Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) Theory and Design</p>	<p>An intervention model was built around existing public health infrastructure to support use of the self-assessment instrument and encourage environmental changes at the child care level, and this intervention model became the Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) program.</p>
<p>Benjamin, Sara et al. "Nutrition and Physical Activity Self-assessment for Child Care (NAP SACC): Results from a Pilot Intervention." (2007)  <a href="http://www.ncbi.nlm.nih.gov/pubmed/17493564">http://www.ncbi.nlm.nih.gov/pubmed/17493564</a></p>	<p>Nutrition and Physical Activity Self-assessment for Child Care (NAP SACC): Results from a Pilot Intervention</p>	<p>A study done to determine the feasibility, acceptability, and reported impact of a nutrition and physical activity environmental intervention in child care.</p>
<p>Benjamin, Sara et al. "Reliability and validity of a nutrition and physical activity environmental self-assessment for child care." International Journal of Behavioral Nutrition and Physical Activity. (2007).  <a href="http://www.ijbnpa.org/content/4/1/29/">http://www.ijbnpa.org/content/4/1/29/</a></p>	<p>Reliability and validity of a nutrition and physical activity environmental self-assessment for child care</p>	<p>Given the emerging focus on child care settings as a target for intervention, this study aims to find a valid and reliable measure of the nutrition and physical activity environment in child care.</p>
<p>Birken, CS et al. "Office-based randomized controlled trial to reduce electronic media use in preschool children." Pediatrics. (2012 Dec).  <a href="http://pediatrics.aappublications.org/content/early/2012/10/30/peds.2011-3088.full.pdf">http://pediatrics.aappublications.org/content/early/2012/10/30/peds.2011-3088.full.pdf</a></p>	<p>Office-based randomized controlled trial to reduce electronic media use in preschool children.</p>	<p>Randomized trial to determine if an intervention for preschool-aged children in primary care is effective in reducing electronic media use, meals in front of the television, and BMI.</p>

Citation	Document Title	Description
<p>Blue Cross and Blue Shield of North Carolina Foundation. "Shape NC: Healthy Starts for Young Children." (2010).  <a href="http://hugh.ncsmartstart.org/category/shape-nc/shape-nc-home">http://hugh.ncsmartstart.org/category/shape-nc/shape-nc-home</a></p>	<p>Smart Start. (Shape NC: Healthy starts for young children)</p>	<p>Shape NC will build on the Smart Start network to create a cadre of early childhood health and "wellness champions" to ensure that children attending child care programs are served nutritious foods, have opportunities for physical activity, and have teachers modeling healthy behaviors.</p>
<p>Bower, JK et al. "The child care environment and children's physical activity." American Journal of Preventative Medicine. (2008).  <a href="http://www.ncbi.nlm.nih.gov/pubmed/18083447">http://www.ncbi.nlm.nih.gov/pubmed/18083447</a></p>	<p>The Child Care Environment And Children's Physical Activity.</p>	<p>The purpose of this study was to examine the relationships between the child care environment and physical activity behavior of preschool children, identifying aspects of the child care environment that relate to the physical activity behavior of children.</p>
<p>Briley, Margaret et al. "Nutrition and the Child-Care Setting." Journal of the American Dietetic Association. (2011)  <a href="http://www.researchgate.net/publication/51600738_Nutrition_and_the_child-care_setting">http://www.researchgate.net/publication/51600738_Nutrition_and_the_child-care_setting</a></p>	<p>Nutrition and the Child-Care Setting</p>	<p>Commentary discussing some of the nutritional guidelines available to the child-care provider.</p>
<p>Bureau of Indian Education. "Health and Wellness Policy."  <a href="http://www.bie.edu/Resources/policyeval/index.htm">http://www.bie.edu/Resources/policyeval/index.htm</a></p>	<p>Bureau of Indian Education's Health and Wellness Policy</p>	<p>Created nutrition and physical activity requirements to foster healthier school environment.</p>
<p>California Department of Education. "California Preschools Shaping Healthy Impressions through Nutrition and Exercise (SHINE) Forums."  <a href="http://www.cde.ca.gov/ls/nu/he/preschoolshine.asp">http://www.cde.ca.gov/ls/nu/he/preschoolshine.asp</a></p>	<p>California Preschools Shaping Healthy Impressions through Nutrition and Exercise (SHINE) Forums</p>	<p>Series of four forums that demonstrate how to integrate nutrition education, edible gardens, and physical activity into child care center classrooms and day care homes.</p>

Citation	Document Title	Description
California Food Policy Advocates (CFPA). "Healthy Beverage in Child Care." (1992). <a href="http://www.healthybeveragesinchildcare.org/about/">http://www.healthybeveragesinchildcare.org/about/</a>	Healthy Beverages in Child care	Statewide public policy and advocacy organization dedicated to improving the health and well-being of low-income Californians by increasing their access to nutritious and affordable food.
Care.com. <a href="http://www.care.com/">http://www.care.com/</a>	Care.com	Website to aid in finding a child care provider.
Center for Health Promotion and Disease Prevention. "NAP SACC Program." (2007). <a href="http://www.whrv.org/NR/rdonlyres/4C89B06B-4ED9-4315-99B3-4B0D7A3F0E0C/10128/NAPSACBestPracticeRecommendationsforChildCareFaci.pdf">http://www.whrv.org/NR/rdonlyres/4C89B06B-4ED9-4315-99B3-4B0D7A3F0E0C/10128/NAPSACBestPracticeRecommendationsforChildCareFaci.pdf</a>	NAP SACC Program	Provides best practices regarding recommended physical activity and nutrition for child care facilities.
Center for Training and Research Translation. "Eat Well Play Hard in Child Care Settings." (2012). <a href="http://www.health.ny.gov/statistics/prevention/nutrition/cacfp/eatwellplayhard.htm">http://www.health.ny.gov/statistics/prevention/nutrition/cacfp/eatwellplayhard.htm</a>	Eat Well Play Hard	This initiative provides nutrition education, health and wellness and physical activity interventions to pre-school children, their parents and their caregivers. A curriculum was developed by CACFP to support this initiative.
Center for Training and Research Translation. "The Nutrition and Physical Activity Self-Assessment for Child Care." (2012). <a href="http://www.centertrt.org/content/docs/Intervention_Documents/Intervention_Templates/EWPHCCS_template.pdf">http://www.centertrt.org/content/docs/Intervention_Documents/Intervention_Templates/EWPHCCS_template.pdf</a>	The Nutrition and Physical Activity Self-Assessment for Child Care. Center for The Nutrition and Physical Activity Self-Assessment for Child Care	Eat Well Play Hard in Child Care Settings (EWPHCCS) is a multi-component intervention that focuses on improving the nutrition and physical activity behaviors of pre-school age children and their parents/caregivers by using educational strategies and skill building activities to promote healthy behavior change.

Citation	Document Title	Description
Challenge for a Healthier Louisiana. <a href="http://ourhomelouisiana.org/programs/challenge/">http://ourhomelouisiana.org/programs/challenge/</a>	Challenge for a Healthier Louisiana	The BCBSLA Foundation received 49 applications on April 30, 2012 totaling just over \$110 million in possible healthy living initiatives across Louisiana.
Child Care Aware. <a href="http://childcareaware.org/">http://childcareaware.org/</a>	Child Care Aware	Provides tools and resources for child care providers as they begin their career.
Child Trends. "Early Childhood Highlights: Quality Rating and Improvement Systems for Early Care and Education." (2010). <a href="http://www.childtrends.org/Files/Child_Trends-2010_05_10_HL_QRIS.pdf">http://www.childtrends.org/Files/Child_Trends-2010_05_10_HL_QRIS.pdf</a>	Early Childhood Highlights	Provides background and evaluates the Quality Rating and Improvement Systems (QRIS) to assess and improve the quality of early care and education programs for children ages birth to five and older.
Child Trends. "Hip-Hop to Health Jr." <a href="http://www.childtrends.org/lifecourse/programs/hiphop.htm">http://www.childtrends.org/lifecourse/programs/hiphop.htm</a>	Hip-Hop to Health Jr.	The Hip-Hop to Health Jr. curriculum was developed for low-income minority pre-school children ages 3-5 years, aimed to promote healthy eating and exercise habits in children.
CML MediaLit Kit/Center for Media Literacy. <a href="http://www.medialit.org/cml-medialit-kit">http://www.medialit.org/cml-medialit-kit</a>	CML MediaLit Kit/Center for Media Literacy	The CML MediaLit Kit™ provides a vision and directions for successfully introducing media literacy in classrooms and community groups from preK to college, offering a systematic way of constructing curriculum that is modular, flexible and scaleable.

Citation	Document Title	Description
Dennison, Barbara A. "An intervention to reduce television viewing by preschool children." <i>Achieves of Pediatrics and Adolescent Medicine.</i> (2004). <a href="http://www.ncbi.nlm.nih.gov/pubmed/14757609">http://www.ncbi.nlm.nih.gov/pubmed/14757609</a>	An intervention to reduce television viewing by preschool children	The study aims to develop and evaluate an intervention to reduce television viewing by preschool children, through a randomized controlled trial conducted in 16 preschool and/or day care centers.
Dennison, Barbara A. "Brocodile the Crocodile." <i>Archives of Pediatrics and Adolescent Medicine.</i> (2004). <a href="http://www.howardhealthcounts.org/modules.php?op=modload&amp;name=PromisePractice&amp;file=promisePractice&amp;pid=3434">http://www.howardhealthcounts.org/modules.php?op=modload&amp;name=PromisePractice&amp;file=promisePractice&amp;pid=3434</a>	Brocodile the Crocodile	The goal of this program was to develop and implement an intervention in the child care setting to reduce children's television viewing.
Email exchange with Dr. Kathryn Henderson. "Question about your paper: Strength and comprehensiveness of district school wellness policies predict policy implementation at the school level." Yale University. (2013).	"Question about your paper: Strength and comprehensiveness of district school wellness policies predict policy implementation at the school level."	Clarified details surrounding the implementation of the WellCCAT tool.
Email exchange with Dr. Sara Neelon (formerly Dr. Benjamin). "Questions about NAP SACC." Duke University. (2013).	"Questions about NAP SACC."	Clarified details surrounding the implementation of the NAP SACC intervention.
Email exchange with Karen Holt Luetjen, "WAABAM questions for USDA report." University of Washington. (2013).	WAABAM questions for USDA report	Clarified details surrounding the evaluation of WAABAM initiatives as well as the date it was developed.
Falbe, Jennifer et al. "Wellness Child Care Assessment Tool (WellCCAT)." (2007). <a href="http://www.yaleruddcenter.org/resources/upload/docs/what/communities/WellnessChildCareAssessmentTool_JADA_12.11.pdf">http://www.yaleruddcenter.org/resources/upload/docs/what/communities/WellnessChildCareAssessmentTool_JADA_12.11.pdf</a>	Wellness Child Care Assessment Tool (WellCCAT) (2007)	This tool aims to develop a reliable and valid instrument to quantitatively evaluate the quality of written nutrition and physical activity policies at child-care centers.

Citation	Document Title	Description
<p>Falbe, Jennifer et al. "Wellness Child Care Assessment Tool (WellCCAT)." (2011).  <a href="http://yaleruddCenter.org/resources/upload/docs/what/communities/WellnessChildCareAssessmentToolForResearch.pdf">http://yaleruddCenter.org/resources/upload/docs/what/communities/WellnessChildCareAssessmentToolForResearch.pdf</a></p>	<p>Wellness Child Care Assessment Tool (WellCCAT) (2011)</p>	<p>The WellCCAT provides a standard method for the quantitative assessment of nutrition, physical activity, and wellness policies written in parent handbooks, staff handbooks, and in other child care center policy documents.</p>
<p>Falbe, Jennifer. "The Wellness Child Care Assessment Tool: A Measure to Assess the Quality of Written Nutrition and Physical Activity Policies." (2011).  <a href="http://www.sciencedirect.com/science/article/pii/S0002822311015483">http://www.sciencedirect.com/science/article/pii/S0002822311015483</a></p>	<p>The Wellness Child Care Assessment Tool: A Measure to Assess the Quality of Written Nutrition and Physical Activity Policies</p>	<p>The objective of this study is to develop a reliable and valid instrument to quantitatively evaluate the quality of written nutrition and physical activity policies at child-care centers.</p>
<p>Florida Department of Education. "HB 281: Paperwork Reduction." <a href="http://www.fldoe.org/PaperReduction/">http://www.fldoe.org/PaperReduction/</a></p>	<p>HB 281: Paperwork Reduction</p>	<p>The 2005 Legislature passed HB 281, Paperwork Reduction, creating a Paper Reduction Task Force for the purpose of recommending strategies to reduce the paperwork required of school districts and school district personnel, with special emphasis given to the reduction of paperwork required of teachers.</p>
<p>Foltz, Jennifer. "Population-Level Intervention Strategies and Examples for Obesity Prevention in Children." Annual Review of Nutrition, (2012).  <a href="http://www.ncbi.nlm.nih.gov/pubmed/22540254">http://www.ncbi.nlm.nih.gov/pubmed/22540254</a></p>	<p>Population-Level Intervention Strategies and Examples for Obesity Prevention in Children</p>	<p>The purpose of this review is to provide a summary of population-level intervention strategies and specific intervention examples that illustrate ways to help prevent and control obesity in children through improving nutrition and physical activity behaviors.</p>

Citation	Document Title	Description
Food Research and Action Center. "Fact Sheet: The Healthy, Hunger-Free Kids Act of 2010 Child and Adult Care Food Program Summary." (2010). <a href="http://www.frac.org/pdf/summary_cacfp_cnr2010.pdf">http://www.frac.org/pdf/summary_cacfp_cnr2010.pdf</a>	Fact Sheet: The Healthy, Hunger-Free Kids Act of 2010 Child and Adult Care Food Program Summary	Provides a summary of the Child and Adult Care Food Program (CACFP), a nutrition program that contributes to the healthy growth and development of young children.
Freedman DS et al. "The relation of childhood BMI to adult adiposity: the Bogalusa Heart Study." Pediatrics. 2005. <a href="http://pediatrics.aappublications.org/content/115/1/22.full.pdf">http://pediatrics.aappublications.org/content/115/1/22.full.pdf</a>	The relation of childhood BMI to adult adiposity: the Bogalusa Heart Study	Although many studies have found that childhood levels of body mass index (BMI; kg/m <sup>2</sup> ) are associated with adult levels, it has been reported that childhood BMI is not associated with adult adiposity. This study further examined these longitudinal associations.
Fresh Food Financing Initiative of the Food Trust of Philadelphia. <a href="http://thefoodtrust.org/what-we-do/supermarkets">http://thefoodtrust.org/what-we-do/supermarkets</a>	Fresh Food Financing Initiative of the Food Trust of Philadelphia	This program brings supermarkets to communities that lack access to healthy food.
Gabor, Vivian et al. "SNAP Education and Evaluation Report: New York State Department of Health's Eat Well Play Hard in Child Care Settings Program." (2012). <a href="http://www.fns.usda.gov/ora/ME/NU/Published/snap/FILES/Other/SNAP-EdWave1EatWell_Voll.pdf">http://www.fns.usda.gov/ora/ME/NU/Published/snap/FILES/Other/SNAP-EdWave1EatWell_Voll.pdf</a>	SNAP Education and Evaluation Report: New York State Department of Health's Eat Well Play Hard in Child Care Settings Program	The purpose of the study is to describe how several SNAP-Education program models are being carried out across the country and evaluate their impact on nutrition behaviors.
Gabor, Vivian et al. "State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems." Altarum Institute. (2012). <a href="http://www.altarum.org/percent20publications-resources-health-systems-research/obesity-prevention-QRIS">http://www.altarum.org/percent20publications-resources-health-systems-research/obesity-prevention-QRIS</a>	State Efforts to Address Obesity Prevention in Child Care Quality Rating and Improvement Systems	This report provides an in-depth look at how states are incorporating health and wellness into their Quality Rating and Improvement Systems (QRISs) for child care facilities.

Citation	Document Title	Description
<p>Georgia Department of Early Care and Learning. "Caregivers Promoting Healthy Habits: Implementing Wellness Policies in child care centers in Georgia." <a href="http://www.healthyeatingforlife.org/Cabinet/WellnessPolicies.aspx">http://www.healthyeatingforlife.org/Cabinet/WellnessPolicies.aspx</a></p>	<p>Caregivers Promoting Healthy Habits: Implementing Wellness Policies in child care centers in Georgia</p>	<p>Program provided 24 early care and education centers in 14 southwest Georgia counties assistance in developing and implementing wellness policies that encourage healthy eating and physical activity for preschool-age children.</p>
<p>Johnson, Donna. "WA Active Bodies Active Minds, WAABAM Tool Kit Evaluation – Executive Summary." (2007). <a href="http://depts.washington.edu/waaaction/action/screentime/documents/Tool%20kit%20evaluation%20exec%20summary.pdf">http://depts.washington.edu/waaaction/action/screentime/documents/Tool kit evaluation exec summary.pdf</a></p>	<p>WA Active Bodies Active Minds, WAABAM Tool Kit Evaluation – Executive Summary</p>	<p>The purpose of the evaluation was to find out whether the tool kit was an effective means of reaching home-based child care providers and impacting screen environments.</p>
<p>Kentucky Department for Public Health. "5-2-1-0." <a href="http://chfs.ky.gov/dph/mch/hp/5210">http://chfs.ky.gov/dph/mch/hp/5210</a></p>	<p>5-2-1-0</p>	<p>5-2-1-0 is Kentucky's prescription for significantly reducing childhood obesity, designed to give parents, healthcare professionals and day care operators a memorable way to talk about the key evidence-based behaviors that reduce childhood obesity.</p>
<p>Kick the Can: CA." <a href="http://www.publichealthadvocacy.org/healthybev.html">http://www.publichealthadvocacy.org/healthy bev.html</a></p>	<p>Kick the Can: CA</p>	<p>Program aims to change beverage environments in California in order to increase the consumption of water and other healthy beverages while decreasing consumption of soda and other sugary drinks.</p>

Citation	Document Title	Description
<p>Leviton, LC et al. "Evaluability Assessment to Improve Public Health Policies, Programs, and Practices." Annual Review of Public Health. (2010).  <a href="http://www.ncbi.nlm.nih.gov/pubmed/20235852">http://www.ncbi.nlm.nih.gov/pubmed/20235852</a></p>	<p>Evaluability Assessment to Improve Public Health Policies, Programs, and Practices</p>	<p>Studies the evaluability assessment, also commonly known as exploratory evaluation, which has assisted the field of public health to improve programs and to develop a pragmatic, practice-based research agenda.</p>
<p>Leviton, LC et al. "Overview and Rationale for the Systematic Screening and Assessment Method." New Directions for Evaluation. (2010).  <a href="http://www.rwjf.org/en/research-publications/find-rwjf-research/2010/04/overview-and-rationale-for-the-systematic-screening-and-assessme.html">http://www.rwjf.org/en/research-publications/find-rwjf-research/2010/04/overview-and-rationale-for-the-systematic-screening-and-assessme.html</a></p>	<p>Overview and Rationale for the Systematic Screening and Assessment Method</p>	<p>The Systematic Screening and Assessment (SSA) Method is a way to identify the most promising innovations in preparation for evaluation.</p>
<p>Minute Menu.  <a href="http://www.minutemenu.com/web/index.html">http://www.minutemenu.com/web/index.html</a></p>	<p>Minute Menu</p>	<p>Minute Menu offers business management software for all aspects of the child care food program and for the home daycare and Center daycare markets.</p>
<p>National Association for Sport and Physical Education. "Active Start: A Statement of Physical Activity Guidelines for Children From Birth to Age 5." (2009).  <a href="http://www.aahperd.org/naspe/standards/nationalGuidelines/ActiveStart.cfm">http://www.aahperd.org/naspe/standards/nationalGuidelines/ActiveStart.cfm</a></p>	<p>Active Start: A Statement of Physical Activity Guidelines for Children From Birth to Age 5</p>	<p>NASPE developed specific guidelines for the physical activity of children from birth to age 5 to support its position statement and to address the developing child's unique characteristics and needs.</p>
<p>National Center for Health Statistics. "Health, United States, 2011: With Special Features on Socioeconomic Status and Health." Centers for Disease Control and Prevention. 2012.  <a href="http://www.cdc.gov/nchs/data/health_statistics/us/hs11.pdf">http://www.cdc.gov/nchs/data/health_statistics/us/hs11.pdf</a></p>	<p>Health, United States, 2011: With Special Features on Socioeconomic Status and Health</p>	<p>The <i>Health, United States</i> series presents an annual look at national trends in health statistics.</p>

Citation	Document Title	Description
<p>National Council of La Raza. "Comer Ben." <a href="http://www.nclr.org/index.php/issues_and_programs/health_and_nutrition/healthy_foods_families/comer_bien/">http://www.nclr.org/index.php/issues_and_programs/health_and_nutrition/healthy_foods_families/comer_bien/</a></p>	<p>Comer Bien</p>	<p>Collection of stories describing challenges to providing nutritious food.</p>
<p>National Food Service Management Institute: The University of Mississippi. "Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Settings." (2011). <a href="http://nrckids.org/CFOC3/PDFVersion/list.html">http://nrckids.org/CFOC3/PDFVersion/list.html</a></p>	<p>Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Settings</p>	<p>National standards that represent the evidence, expertise, and experience on quality health and safety practices and policies that should be followed in today's early care and education settings.</p>
<p>National Food Service Management Institute: The University of Mississippi. "Education and Training Resources for Participants in the Child and Adult Care Food Program (CACFP)." <a href="http://www.nfsmi.org/Templates/TemplateDivision.aspx?qs=cELETpercent3d">http://www.nfsmi.org/Templates/TemplateDivision.aspx?qs=cELETpercent3d</a></p>	<p>Education and Training Resources for Participants in the Child and Adult Care Food Program (CACFP)</p>	<p>Shares a variety of resources for those in the Child and Adult Care Food Program.</p>
<p>National Governors Association. "Shaping a Healthier Generation: Healthy Kids, Healthy America State Profiles of Progress." (2010). <a href="http://www.nga.org/cms/home/nga-Center-for-best-practices/Center-publications/page-health-publications/col2-content/main-content-list/shaping-a-healthier-generation-h.html">http://www.nga.org/cms/home/nga-Center-for-best-practices/Center-publications/page-health-publications/col2-content/main-content-list/shaping-a-healthier-generation-h.html</a></p>	<p>Healthy Kids, Healthy America/National Governors Association</p>	<p>Through the Healthy Kids, Healthy America program, the NGA Center supported 15 states as they worked to develop policies to prevent childhood obesity. The recognizable progress of each of these states is detailed in this report, as well as, strategies used by the states.</p>

Citation	Document Title	Description
<p>National Infant &amp; Toddler Child Care Initiative. "Quality Rating And Improvement Systems (QRIS): Inclusion Of Infant/Toddler Quality Indicators." (2011).  <a href="http://www.birthtofivepolicy.org/Portals/0/Issuepercent20Groups/NITCCIpercent20QRISpercent20Factpercent20Sheet.pdf">http://www.birthtofivepolicy.org/Portals/0/Issuepercent20Groups/NITCCIpercent20QRISpercent20Factpercent20Sheet.pdf</a></p>	<p>Quality Rating And Improvement Systems (QRIS): Inclusion Of Infant/Toddler Quality Indicators</p>	<p>QRIS define standards for incremental levels of quality across a range of categories, and establish systems for rating and improving quality child care for all children. The National Infant &amp; Toddler Child Care Initiative reviewed 22 QRIS1 to identify States that explicitly include infant/toddler (I/T) quality indicators.</p>
<p>National Policy &amp; Legal Analysis Network to Prevent Childhood Obesity. "Model Child-Care Licensing Statute for Obesity Prevention." (2012).  <a href="http://changelabsolutions.org/publications/child-care-statute">http://changelabsolutions.org/publications/child-care-statute</a></p>	<p>Model Child-Care Licensing Statute for Obesity Prevention</p>	<p>Provides sample standards for regulating physical activity, nutrition and electronic media use, comprehensively for young children supervised in child-care settings.</p>
<p>Natrona County, Wyoming, School District local wellness policy.</p>	<p>Natrona County, Wyoming, School District local wellness policy</p>	<p>Created administrative regulations and specific nutrition guidelines to improve the physical activity and nutrition habits of Natrona County students.</p>
<p>NC Cooperative Extension Agents. "Color Me Healthy."  <a href="http://colormehealthy.com/">http://colormehealthy.com/</a></p>	<p>Color Me Healthy</p>	<p>Program developed to reach children ages four and five with fun, interactive learning opportunities on physical activity and healthy eating, designed to stimulate all of the senses of young children.</p>
<p>ND Early Childhood Rating and Improvement System. "Cass County QRIS Field Test: Key Findings." (2011).  <a href="http://ndc.ndgrowingfutures.org/files/pdf/ExecutiveSummary.pdf">http://ndc.ndgrowingfutures.org/files/pdf/ExecutiveSummary.pdf</a></p>	<p>Cass County QRIS Field Test: Key Findings</p>	<p>Shares the findings from a QRIS pilot in Cass County to test the quality standards and measurement process in the "real world."</p>

Citation	Document Title	Description
ND Growing Futures. "Early Childhood Rating & Improvement System Pilot." (2013). <a href="http://ndc.ndgrowingfutures.org/stars/ecris">http://ndc.ndgrowingfutures.org/stars/ecris</a>	Early Childhood Rating & Improvement System Pilot	Generates a 5 star rating system, with criteria to earn another star or move from star 1 to 2 to 3, etc.
Neelon, Benjamin et al. "Comparison of menus to actual foods and beverages served in North Carolina child-care centers." Journal of the American Dietetic Association. (2010). <a href="http://www.ncbi.nlm.nih.gov/pubmed/21111096">http://www.ncbi.nlm.nih.gov/pubmed/21111096</a>	Comparison of menus to actual foods and beverages served in North Carolina child-care centers.	The purpose of this study was to compare menus with actual foods and beverages served to children in child-care centers, finding that just over half of all meals and snacks matched menus, and nearly 90percent of individual foods and beverages served matched those stated on menus.
New York City's regulations to enforce healthy eating and physical activity in 1,600 licensed day care centers.	New York City's regulations to enforce healthy eating and physical activity in 1,600 licensed day care centers	Program instills regulations that create a day care environment conducive to healthier eating and age-appropriate physical activity.
Nutrition and Physical Activity Self-Assessment for Child Care (NAP-SACC). "Eat Smart. Move More. (2012). <a href="http://www.eatsmartmovemorenc.com/NAP_SACC/NAP_SACC.html">http://www.eatsmartmovemorenc.com/NAP_SACC/NAP_SACC.html</a>	NAP-SACC	Nutrition and Physical Activity Self-Assessment for Child Care (NAP-SACC) is a statewide program aimed at improving the eating and physical activity environments in North Carolina child care centers.
O'Brien, Ashley et al. "Systematic review of effective strategies for reducing electronic media use among young children." Obesity. (2012). <a href="http://www.cmch.tv/SearchDetail.aspx?rtrn=advnce&amp;cid=6760">http://www.cmch.tv/SearchDetail.aspx?rtrn=advnce&amp;cid=6760</a>	Systematic review of effective strategies for reducing electronic media use among young children	Study examines strategies for reducing screen media use among children under age 12, through a systematic review of peer-reviewed intervention studies.

Citation	Document Title	Description
<p>Ogden CL et al. "Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010." Journal of the American Medical Association. 2012.  <a href="http://urology.ucsd.edu/residency/journal-club/Documents/Childhood%20obesity-Ogden.pdf">http://urology.ucsd.edu/residency/journal-club/Documents/Childhood%20obesity-Ogden.pdf</a></p>	<p>Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010</p>	<p>To present the most recent estimates of obesity prevalence in US children and adolescents for 2009-2010 and to investigate trends in obesity prevalence and body mass index (BMI) among children and adolescents between 1999-2000 and 2009-2010</p>
<p>Olsen, Christine. "Factors Protecting Against and Contributing to Food Insecurity Among Rural Families." Family Economics and Nutrition Review. (2004).  <a href="http://www.cnpp.usda.gov/Publications/FENR/V16N1/FENRV16N1.pdf#xml=http://65.216.150.153/taxis/search/pdfhi.txt?query=Christine+Olson+PhD+RD&amp;pr=CNPP&amp;prox=page&amp;rorder=500&amp;rprox=500&amp;rdfreq=500&amp;rwfreq=500&amp;read=500&amp;rdepth=0&amp;sufs=2&amp;order=r&amp;cq=&amp;id=4b9819217">http://www.cnpp.usda.gov/Publications/FENR/V16N1/FENRV16N1.pdf#xml=http://65.216.150.153/taxis/search/pdfhi.txt?query=Christine+Olson+PhD+RD&amp;pr=CNPP&amp;prox=page&amp;rorder=500&amp;rprox=500&amp;rdfreq=500&amp;rwfreq=500&amp;read=500&amp;rdepth=0&amp;sufs=2&amp;order=r&amp;cq=&amp;id=4b9819217</a></p>	<p>Factors Protecting Against and Contributing to Food Insecurity Among Rural Families</p>	<p>The goal of this study was to understand better how the level of human resources and the diversion of financial resources away from food are related to the food security status of rural low-income households.</p>
<p>Partners in Action. "Screen Time Reduction Tools Evaluated." (2013).  <a href="http://depts.washington.edu/waaaction/action/p2/c10.html">http://depts.washington.edu/waaaction/action/p2/c10.html</a></p>	<p>Screen Time Reduction Tools Evaluated</p>	<p>An evaluation of a ten year initiative to help child care professionals and families reduce screen time for young children. The project is called Washington Active Bodies Active Minds, or WAABAM.</p>

Citation	Document Title	Description
Partnership for a Healthier America. "In It For Good Annual Report." (2012.) <a href="http://ahealthieramerica.org/wpc/content/themes/pha/images/files/assets/common/downloads/PHApersent20FINALpercent20022213.pdf">http://ahealthieramerica.org/wpc/content/themes/pha/images/files/assets/common/downloads/PHApersent20FINALpercent20022213.pdf</a>	In It For Good Annual Report 2012	The information included in this report covers progress on commitments executed between May 2010 and December 2012. PHA partners report to the verifiers at different points throughout the year and throughout the course of their commitments, based on when their commitments were signed.
Program Activities for Healthy Development. <a href="http://nrckids.org/CFOC3/HTMLVersion/Chapter02.html#2.1.1.2">http://nrckids.org/CFOC3/HTMLVersion/Chapter02.html#2.1.1.2</a>	Program Activities for Healthy Development	Describes a number of programs aimed at encouraging healthier lifestyles during early childhood development.
QRIS National Learning Network. (2013). <a href="http://qrisnetwork.org/">http://qrisnetwork.org/</a>	QRIS National Learning Network	Network of states and coalitions supportive of using rating and improvement strategies to elevate the quality of care in state early care and education systems and to support and improve children's development.
Share Our Strength. "Cooking Matters Annual Review." (2010). <a href="http://cookingmatters.org/ar_2010.pdf">http://cookingmatters.org/ar_2010.pdf</a>	Cooking Matters Annual Review 2010	Resources based on the model of the Cooking Matters program, in which participants learn how to select nutritious and low-cost ingredients and prepare them in ways that provide the best nourishment possible to their families.

Citation	Document Title	Description
<p>Share Our Strength. "Cooking Matters Annual Review." (2011). <a href="http://cookingmatters.org/CookingMatters20Matters202011Annual20Review.pdf">http://cookingmatters.org/CookingMatters20Matters202011Annual20Review.pdf</a></p>	<p>Cooking Matters Annual Review 2011</p>	<p>Resources based on the model of the Cooking Matters program, in which participants learn how to select nutritious and low-cost ingredients and prepare them in ways that provide the best nourishment possible to their families.</p>
<p>Share Our Strength. "Cooking Matters for Child Care Professionals." <a href="http://cookingmatters.org/what-we-do/educational-outreach/">http://cookingmatters.org/what-we-do/educational-outreach/</a></p>	<p>Cooking Matters for Child Care Professionals</p>	<p>Resources based on the model of the Cooking Matters program, in which participants learn how to select nutritious and low-cost ingredients and prepare them in ways that provide the best nourishment possible to their families.</p>
<p>Sharma, Shreela et al. "Pilot-testing CATCH Early Childhood: A Preschool-based Healthy Nutrition and Physical Activity Program." American Journal of Health Education. (2011). <a href="http://www.ingentaconnect.com/content/aahperd/ajhe/2011/00000042/00000001/art00003?crawler=true">http://www.ingentaconnect.com/content/aahperd/ajhe/2011/00000042/00000001/art00003?crawler=true</a></p>	<p>Pilot-testing CATCH Early Childhood: A Preschool-based Healthy Nutrition and Physical Activity Program</p>	<p>The purpose was to pilot test CATCH Early Childhood (CEC), a preschool-based nutrition and physical activity program among children ages three to five in Head Start</p>
<p>Sigman-Grant, M et al. "About feeding children: mealtimes in child-care centers in four western states." Journal of the American Dietetic Association. (2008). <a href="http://www.ncbi.nlm.nih.gov/pubmed/18237580">http://www.ncbi.nlm.nih.gov/pubmed/18237580</a></p>	<p>About feeding children: mealtimes in child-care centers in four western states.</p>	<p>This study was conducted to describe mealtimes and explore routines, policies, and training in child-care centers, using an intensive review of mealtimes, staff and director questionnaires were created.</p>

Citation	Document Title	Description
<p>Sigman-Grant, M et al. "Child care provider training and a supportive feeding environment in child care settings in 4 states." Preventing Chronic Disease. (2011).  <a href="http://www.ncbi.nlm.nih.gov/pubmed/21843416">http://www.ncbi.nlm.nih.gov/pubmed/21843416</a></p>	<p>Child care provider training and a supportive feeding environment in child care settings in 4 states.</p>	<p>Study found that when trained by nutrition professionals, child care staff learn, adopt, and operationalize childhood health and wellness feeding guidelines, thereby creating a supportive mealtime feeding environment.</p>
<p>Sisson, SB et al. "Assessment of Food, Nutrition, and Physical Activity Practices in Oklahoma Child-Care centers." Journal of the Academy of Nutrition and Dietetics. (2012).  <a href="http://www.ncbi.nlm.nih.gov/pubmed/22818731#">http://www.ncbi.nlm.nih.gov/pubmed/22818731#</a></p>	<p>Assessment of Food, Nutrition, and Physical Activity Practices in Oklahoma Child-Care centers</p>	<p>The purpose of the study was to determine the obesogenic practices in all-day child-care centers caring for preschool-aged children.</p>
<p>Society for Nutrition Education and Behavior. "SNEB Nutrition Education For Children Best Practices." (2006)  <a href="http://www.sneb.org/documents/FINAL-NEforChildrDivBestPract-2006.pdf">http://www.sneb.org/documents/FINAL-NEforChildrDivBestPract-2006.pdf</a></p>	<p>SNEB Nutrition Education For Children Best Practices</p>	<p>Report on the best practices discovered for educating children in the classroom on healthy eating and nutrition.</p>
<p>The Institute of Medicine, "Child and Adult Care Food Program: Aligning Dietary Guidance for All," (2010).  <a href="http://www.iom.edu/Reports/2010/Child-and-Adult-Care-Food-Program-Aligning-Dietary-Guidance-for-All.aspx">http://www.iom.edu/Reports/2010/Child-and-Adult-Care-Food-Program-Aligning-Dietary-Guidance-for-All.aspx</a></p>	<p>Child and Adult Care Food Program: Aligning Dietary Guidance for All</p>	<p>In order to update the regulations, the IOM reviewed and assessed the nutritional needs of the populations served by CACFP in order to provide recommendations to revise the meal requirements for CACFP.</p>
<p>The Institute of Medicine. "Early Childhood Obesity Prevention Policies." The National Academies Press. (2011).  <a href="http://www.iom.edu/Reports/2011/Early-Childhood-Obesity-Prevention-Policies.aspx">http://www.iom.edu/Reports/2011/Early-Childhood-Obesity-Prevention-Policies.aspx</a></p>	<p>Early Childhood Obesity Prevention Policies</p>	<p>In this report, the IOM recommends actions that healthcare professionals, caregivers, and policymakers can take to prevent obesity in children five and younger.</p>

Citation	Document Title	Description
<p>The Nemours Foundation. "Let's Move Child Care!" (2012).  <a href="http://www.healthykidshealthyfuture.org/welcome.html">http://www.healthykidshealthyfuture.org/welcome.html</a></p>	<p>Let's Move Child Care! (Joint with Nemours and Child Care America)</p>	<p>The "Let's Move" campaign establishes several recommendations and benchmarks for health and wellness in early childhood, in areas such as: prenatal care, breast feeding, environmental factors, and child care settings.</p>
<p>The United States Department of Agriculture. "Building Blocks for Fun and Healthy Meals, Chapter 2." (2000).  <a href="http://teammnutrition.usda.gov/resources/blocksintro.pdf">http://teammnutrition.usda.gov/resources/blocksintro.pdf</a></p>	<p>Building Blocks for Fun and Healthy Meals, Chapter 2</p>	<p>Provides CACFP meal pattern charts for infants and children.</p>
<p>The United States Department of Agriculture. "Child and Adult Care Food Program Meal Patterns." (2013).  <a href="http://teammnutrition.usda.gov/resources/blocks2.pdf">http://teammnutrition.usda.gov/resources/blocks2.pdf</a></p>	<p>Child and Adult Care Food Program Meal Patterns</p>	<p>Provides the basics of the CACFP meal pattern plans.</p>
<p>Trost, SG et al. "A nutrition and physical activity intervention for family child care homes." American Journal of Preventive Medicine. (2011).  <a href="http://www.ncbi.nlm.nih.gov/pubmed/21961466">http://www.ncbi.nlm.nih.gov/pubmed/21961466</a></p>	<p>A nutrition and physical activity intervention for family child care homes.</p>	<p>The study determines the effects of a community-based train-the-trainer intervention on FCCHS policies and practices related to healthy eating and physical activity.</p>
<p>U.S. Department of Health and Human Services Office of Planning, Research and Evaluation. "Quality Rating Systems (QRS) Assessment Project, 2008-2011." (2012).  <a href="http://www.acf.hhs.gov/programs/opre/research/project/quality-rating-systems-qrs-assessment-project-2008-2011">http://www.acf.hhs.gov/programs/opre/research/project/quality-rating-systems-qrs-assessment-project-2008-2011</a></p>	<p>Office of Planning, Research and Evaluation's Quality Rating Systems (QRS) Assessment Project</p>	<p>The project will create resources for States regarding the evaluation of child care quality rating systems (QRSs), systems that have been put in place to measure, monitor, and promote high-quality child care.</p>

Citation	Document Title	Description
University of Miami Health System. "Healthy Caregivers-Healthy Children." <a href="http://pediatrics.med.miami.edu/mailman-Center/research/demonstration-projects/healthy-caregivers-healthy-children/">http://pediatrics.med.miami.edu/mailman-Center/research/demonstration-projects/healthy-caregivers-healthy-children/</a>	Healthy Caregiver Healthy Children	A randomized controlled trial examining the effectiveness of a role modeling curriculum on health and wellness with 12 childcare centers.
University of North Carolina. "The Center for Training and Research Translation." <a href="http://www.Centertrt.org/?p=about_who">http://www.Centertrt.org/?p=about_who</a>	UNC The Center for Training and Research Translation	Training Resources and Translation website that have been evaluated and indicated to be evidence based, practice-tested, or promising/emerging.
University of Washington Center for Public Health Nutrition. "Washington Active Bodies Active Minds." (2007). <a href="http://depts.washington.edu/tvhealth/index.htm">http://depts.washington.edu/tvhealth/index.htm</a>	Washington Active Bodies Active Minds	The Washington Active Bodies Active Minds (WAABAM) website and tool kit were developed to ensure that environments for preschool children limit electronic media use and encourage physical activity.
USDA's Food and Nutrition Service, "Nutrition and Wellness Tips for Young Children: Provider Handbook for the Child and Adult Care Food Program," (2012). <a href="http://teamnutrition.usda.gov/Resources/nutritionandwellness.html">http://teamnutrition.usda.gov/Resources/nutritionandwellness.html</a>	Nutrition and Wellness Tips for Young Children: Provider Handbook for the Child and Adult Care Food Program	Handbook was created to help CACFP child care providers create healthier environments for the children in their care. It includes a series of tip sheets addressing wellness recommendations.
USDA's Food and Nutrition Service (FNS). "SNAP-Ed." <a href="http://snap.nal.usda.gov/">http://snap.nal.usda.gov/</a>	SNAP-Ed	SNAP-Ed (Supplemental Nutrition Assistance Program – Education) is a federal/state partnership that supports nutrition education for persons eligible for the Supplemental Nutrition Assistance Program (SNAP).

Citation	Document Title	Description
<p>Van Stan, Stefanie, et al. "The Impact of a Statewide Training To Increase Child Care Providers' Knowledge of Nutrition and Physical Activity Rules in Delaware." <i>Childhood Obesity</i>. (2013).  <a href="http://online.liebertpub.com/doi/abs/10.1089/chi.2012.0057?journalCode=chi">http://online.liebertpub.com/doi/abs/10.1089/chi.2012.0057?journalCode=chi</a></p>	<p>The Impact of a Statewide Training To Increase Child Care Providers' Knowledge of Nutrition and Physical Activity Rules in Delaware</p>	<p>The purpose of this study was to evaluate whether or not broad-scale, in-person training can effectively increase child care providers' knowledge of statewide regulations, and whether the trainings are well received.</p>
<p>Wethington, Holly R et al. "Early Assessment of Programs and Policies to Prevent Childhood Obesity: Initiatives in After-School and Child-Care Settings." <i>Journal of Health Behavior and Public Health</i>. (2012).  <a href="http://www.asciencejournal.net/asj/index.php/HBPH/article/view/Article/394">http://www.asciencejournal.net/asj/index.php/HBPH/article/view/Article/394</a></p>	<p>Early Assessment of Programs and Policies to Prevent Childhood Obesity: Initiatives in After-School and Child-Care Settings</p>	<p>The Early Assessment of Programs and Policies to Prevent Childhood Obesity project identified environmental and policy initiatives addressing childhood obesity.</p>
<p>White House. "First Lady Unveils Let's Move! Child Care to Ensure Healthy Start for Youngest Children." (2011).  <a href="http://www.whitehouse.gov/the-press-office/2011/06/08/first-lady-unveils-lets-move-child-care-ensure-healthy-start-youngest-ch">http://www.whitehouse.gov/the-press-office/2011/06/08/first-lady-unveils-lets-move-child-care-ensure-healthy-start-youngest-ch</a></p>	<p>First Lady Unveils Let's Move! Child Care to Ensure Healthy Start for Youngest Children</p>	<p>An effort to work with child care providers to help the youngest children get off to a healthy start. The First Lady released a checklist that providers and parents can use as a tool to encourage healthy eating and physical activity and limit electronic media use for young children.</p>
<p>Wisconsin Department of Children and Families. "YoungStar."  <a href="http://dcf.wisconsin.gov/youngstar/">http://dcf.wisconsin.gov/youngstar/</a></p>	<p>YoungStar</p>	<p>Program created to improve the quality of child care for Wisconsin children, by evaluating and rating the quality of care given by child care providers and setting a consistent standard for child care quality.</p>

### **III. COMMUNICATION CHANNEL REVIEW**

#### **i. INTRODUCTION AND METHODOLOGY**

The U.S. Department of Agriculture’s Food and Nutrition Services (USDA FNS) commissioned DraftFCB, Weber Shandwick and KRC Research (“Research Team”) to conduct original formative research to inform the development and implementation of its training, technical assistance, guidance, and education materials related to nutritional requirements and wellness recommendations in three technical areas: nutrition, physical activity and electronic media use. In advance of conducting formative research, the research team conducted an environmental scan comprised of three components:

- Literature review of current opinion research;
- Wellness education review and evaluation; and
- Communication channel review.

The purpose of the environmental scan is to inform development of the content of the formative research, both by providing a foundation to build upon with new research and also by identifying key research gaps that can be addressed by this contract.

This document reflects the third component, the communication channels review, an investigation into the communications ecosystem around facilities providing child care for children 0 to 5 years old. For this review, however, we found that there is very little available research on the communication channels for child care facilities, and it is clear that research performed under this contract will need to probe in this area.

## ii. KEY FINDINGS

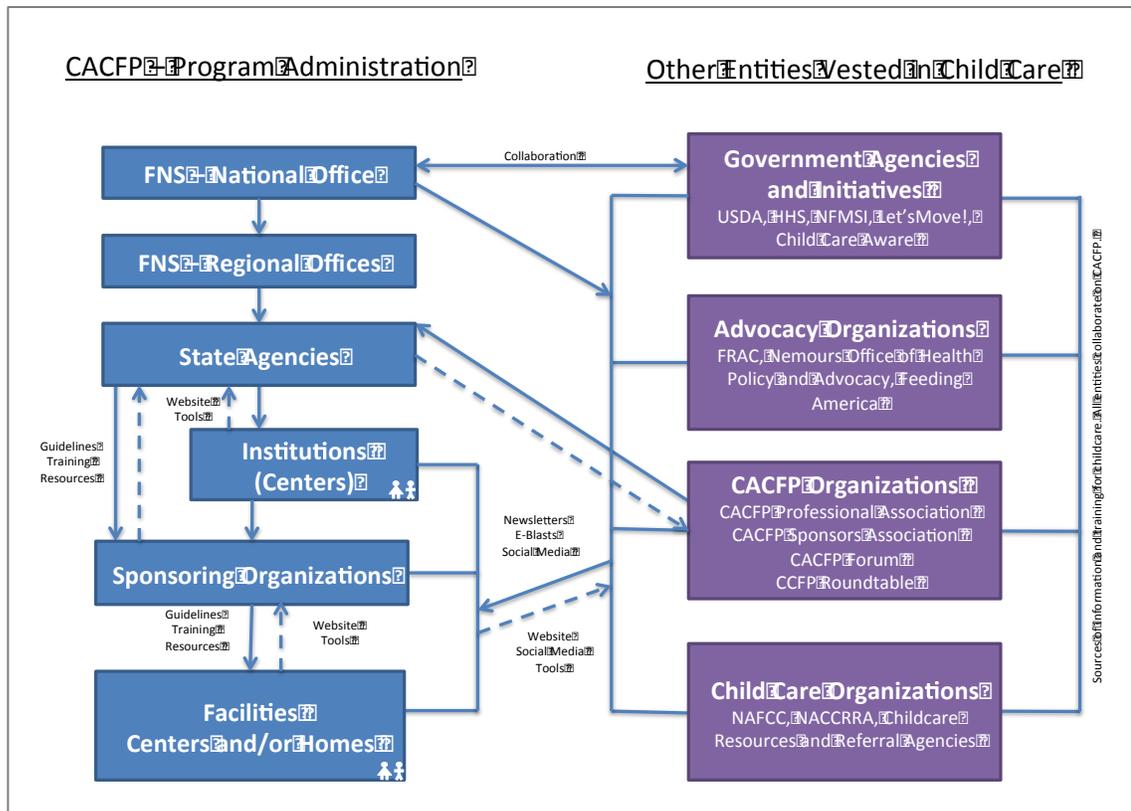
This review is intended to provide an overview of the communications ecosystem surrounding and including child care centers and family day care homes, with an emphasis on those facilities providing care for children age five and under, to better understand the communications possibilities to successfully implement federal nutritional requirements and wellness recommendations in nutrition, physical activity, and electronic media use. Of the three topics for the environmental scans executed under this contract, noted above, the area of communication channels has been found to be the most lacking in available research, and therefore in need of new study.

Due to the limited information available, this review focuses on our review of information from various sources, perhaps most importantly from the input of U.S. Department of Agriculture's Food and Nutrition Services (USDA FNS) stakeholders on key players in the area of information availability and dissemination for child nutrition and physical activity. In addition, we have analyzed the larger communications interrelationships of the various types of organizations in this field, and, finally, by way of comparison and to seek to uncover "best practices" that we can learn from, a look at the communications systems of other types of organizations or organizational structures that may be relevant to FNS.

What follows are the key insights from this investigation and analysis

- **The communications ecosystem surrounding child care providers is complex and not hierarchical.** The complexity of the communication landscape surrounding child care providers comes, in part, from the multi-layered structure of USDA FNS CACFP administration entities, and the sometimes indirect method of communicating information to these providers. It is further compounded by the active presence of other government and non-government organizations (NGOs) that play a large role in providing information relevant to child care providers. The resulting collective ecosystem of communications sources is highly complex.

A visual representation of this communications ecosystem appears on the next page.

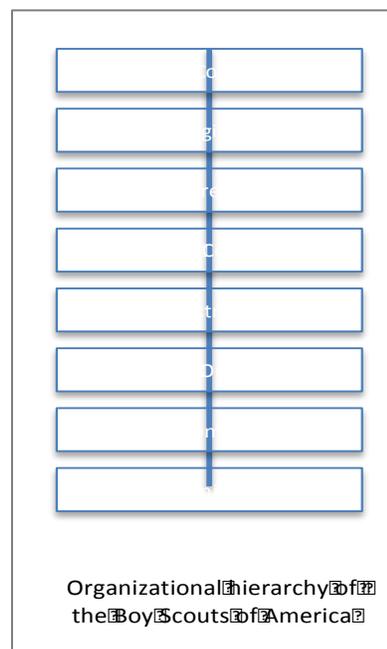


CACFP and Child Care Providers' Communications Ecosystem

On the left side of the diagram we see the communications channels associated with the dissemination of the CACFP guidelines, requirements, and training, as well as the resources available to the child care facilities via web content.

On the right side of the diagram we see the presence of many other types of entities that disseminate or make available information pertaining to child nutrition, physical activity (and possibly screen time) that can be sought out by child care facilities either via readily available web content, including social media, or by signing up for newsletters, e-blasts and other tools offered and distributed by these organizations. It is important to note that this content may not always align with the specifics of the CACFP program.

By way of comparison, we looked to other organizations' structures in an attempt to understand how their communications flows may occur. The Boy Scouts of America, for example, features a highly structured, one-dimensional hierarchy from the National Council at the top to the individual units at the bottom, benefits from efficient communication and information dissemination. Despite the multiple layers, necessary information and resources are available online at a single point of contact. This is not to suggest that this structure is better – or even available – for the CACFP program, but simply to illustrate the relative complexity of the communications ecosystem surrounding the child care providers that are our target.



- **There is a lack of information about how often directors or other personnel of child care facilities seek new information related to nutrition, physical activity, or screen time.** One of the basic questions to be answered is related to information dissemination versus availability (i.e., a “push” versus “pull” strategy for communications). Understanding how – and how often – facilities personnel receive or seek new information may inform the type of channel used and the recommended frequency of use by USDA FNS.
- **It is unclear to what extent directors and personnel of child care provider facilities perceive their need to gain additional information for their programs.** Continuing on the point above, any pull strategy for communications must take into account the perceptions of directors and staff of child care providers about their need to gain new information and what triggers drive that realization or activity.
- **There is a lack of information about the level of penetration of the Internet into child care centers and day care homes and the frequency of its use to inform facilities' operations and activities.** It is assumed that the web-connectedness of child care facilities covers the broad spectrum from highly connected, broadband-enabled facilities to those with virtually no access. The volume of facilities with at least some level of significant, usable access is crucial to understanding how best to communicate with them – and conversely how

to ensure non-web communications are in place for those facilities without robust Internet connectivity.

- **There appears to be no clear, successful online community or social media network for child care facilities, however, such a community could prove valuable in achieving the goals of USDA FNS.** Social media communities have formed both organically and through a centralized concerted effort for industries or interest areas that are characterized by a national presence but with decentralized or independent local entities. These online communities can be places for peer-to-peer information sharing, answers to questions, reinforcement of best practices, and can foster inspiration. While some individual organizations in the child care space offer online communities that serve as local social networks for parents and educators, there is no single online community that has risen above the rest.
- **Child care providers hold the responsibility for staying current on CACFP.** The child-care providers are responsible for obtaining information, registering and staying current on training. Research could probe in this area to understand providers' perceptions of how up-to-date their operations are in their delivery of CACFP goals.

### iii. IMPLICATIONS AND RECOMMENDATIONS

Following are implications for the upcoming formative research related to the key findings presented above:

- **There is a clear need for formative research.** The planned formative research, once completed, will provide valuable insight into the availability and use of various communication channels – especially the Internet – by our target child care providers.
- **There are multiple points of contact available to child-care providers at both the federal and state level.** With so many players at so many levels, an inefficient and ineffective environment for communication is difficult to avoid. Messages provided through the other government agencies and entities such as NGOs and advocacy groups are also inconsistent. This translates to a clear need for defined channels and sources for confirmed CACFP guidelines and information. Research could help gain an understanding of child care providers most frequently used sources for information.
- **Information at the Federal level (i.e., the FNS National Office) is detailed and regulatory but individual providers may not perceive it as solving a recognized problem.**

Information obtained at the federal level is very specific about the CACFP program and the associated nutrition guidance, however providers may not see it as a resource to inform or solve issues related to their daily operations. One potential area for research is around the child care providers' perceptions of this information and how well these perceptions align with the FNS's intent.

- **Local sponsors like Bright from the Start (Georgia Department of Early Care and Learning) serve as valuable resources for providers.** Providers can pay license fees, learn about updated requirements, and sign up for training. It is unclear what providers can obtain

at the federal level that they can't obtain at the state or local level. Conversely, state agencies



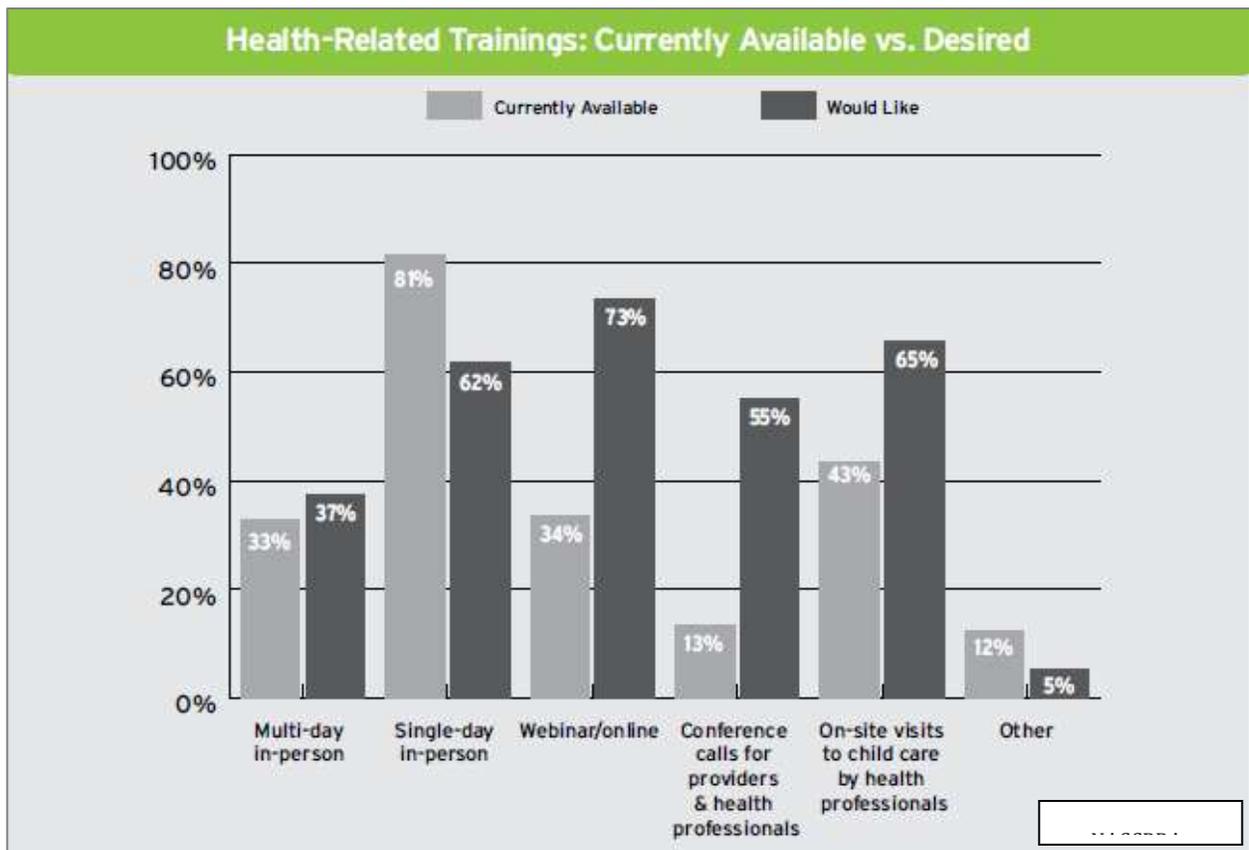
are essential to daily operation of child-care facilities in that they provide the certifications and training at the licensing level. And although this organization is based in Georgia, its website makes content available to anyone anywhere. Research could investigate the types of sources child care providers seek new information for nutrition (such as menu ideas) and physical activity on an ad hoc basis. This research could give an understanding of the target audience's current information-seeking behavior.

- **The various media channels that can be used to reach child care centers and day care homes have unique strengths and weaknesses and can be coordinated to drive communication effectiveness.** A multitude of communications media can be employed to reach child care providers, each with its own set of strengths and weaknesses. These strengths and weaknesses should be considered as part of any communications planning activity. A few are detailed below.
  - a. **Written** – Whether electronic or printed/physical, written communication has the benefit of enabling detailed content that is easily referenced at a future date. Written media allows for otherwise complicated content to be presented visually (e.g., a chart or illustration) to enhance understanding. Written communications, especially electronic formats, can be very cost-efficient to produce and deliver. A weakness of print is that it requires the active engagement of the audience and is often not as visually memorable. In addition, recipients of written messages may not categorize all forms of communication as important or urgent. This may cause pertinent information to be missed or lost.
  - b. **Video** – Video communication (and here we include content available online and on a portable storage device such as a DVD, encompassing live action or animation) can be powerful in its ability to tell a story, enhancing its memorability. Video assets allow for more passive engagement with content, requiring less work on behalf of the audience to receive the message. Unfortunately video media can be cost prohibitive to execute at a level of quality deemed necessary. Because of their relative cost and visibility, video projects are often subject to greater oversight and review than other forms, often slowing their development.
  - c. **Digital content** – Digital communication in the form of e-mail, social media platforms, discussion boards, websites and proprietary intranets are powerful real-time methods

of communication. Disparate entities such as child care providers can easily be reached en masse via blast e-mails, and information can be made available to them in a single centralized location such as a CACFP website. Keeping information up-to-date is more achievable as well. The potential weakness for this channel is the unclear web accessibility of child care facilities, or the web use behaviors of those center directors. Digital communication is a component of a constantly evolving system, with rapidly changing technologies, high relative turnover of costly equipment, operating systems that become outmoded, and a continual – and often challenging – learning curve for individuals.

- d. Live training events and seminars – These communications channels can be extremely effective in delivering customized content in a personal way to a captive audience. They have the benefit of enabling immediate, two-way communication, allowing the audience to ask questions and drive greater understanding. These events can be very costly and usually require the audience to make a comparatively larger time commitment than other channels. The most effective events and seminars are coupled with printed materials so the audience has a physical reference for the material presented.
  - e. Webinars and teleconferences – These channels take the benefits of the live training events and seminars and combine them with the convenience offered by digital and telephony technology, enabling group training events to occur without the logistical requirements of live events in physical spaces. As with digital communication channels in general, these require not just facilities with Internet capabilities but also staff that is comfortable with the technology and adept at using it. Input from USDA stakeholders tells us the capability for this kind of communication varies greatly across the country.
- **Preference for dissemination of information is evolving away from central location, face-to-face approaches to more of a distance model approach.** Communications within the CACFP program administration centers largely on conveying information about training, guidelines and resources to sponsoring organizations and daycare/homecare facilities. Electronic and Internet availability across facilities enables access to information on a more ongoing, on-demand basis rather than through more infrequent concentrated sessions.

- A 2011 study by the National Association of Child Care Resource and Referral Agencies (NACCRRA) conducted among Child Care Resource Referral Agencies (CCR&R) supported this direction. CCR&Rs provide training and technical assistance to child care providers in their states and communities. As the chart below details, the comparison between what is currently available and what CCR&Rs would like to see made available shows a gap in the traditional approach of single-day, in-person training and the desire for more webinar/online trainings, conference calls with health providers and on-site visits.



- Cost was the most commonly cited barrier for child care providers in accessing health related trainings. Limited funding for travel decreases the ability for in-person meetings, this heightens the need for lower cost, more accessible communication channels. CCR&Rs reported there is an unmet need for training in alternate delivery modes. Continuing to further develop and offer alternate modes of information delivery for training and technical assistance resources – such as webinars, conference calls, and

on-site training and visits – will help meet the resource needs and desires of child care providers.

- This direction was reiterated in the CACFP Stakeholder Meetings held during March and April 2013, where stakeholder participants reported that many centers regularly receive information from resources like online listservs, blogs and other websites. A smaller number of providers are not online (particularly in home care centers) and get their information from available mail/hard copy materials. There still remains a population that is uncomfortable with technology and prefers face-to-face trainings. Although these sessions are well attended, an increasing number of centers are opting for webinars over face-to-face meetings. A number of stakeholders noted that Adobe Connect is increasingly used to provide webinar training with family child care sponsors and teleconferences with state licensing agencies.
- Stakeholders cited that in some cases, for instance in New York State, DVDs are sent to child care centers on training topics. It was noted that New York State also conducts teleconferences where participants go to a central location to watch a satellite video. The state is also beginning to use Adobe Connect to provide basic training topics to all sponsors. A majority of center sponsors in New York State use the Internet. In order to improve the Internet capabilities of child care providers, the Healthy Child Care Network in Texas helps to purchase or upgrade infrastructure of facilities. In New York State all sponsors of day care homes use the Internet to file claims in CACFP.
- In Oregon, sponsoring agencies offer training online through webinars or online modules. It was noted that 100% of Oregon's last annual training was done online. This method is cited as being very popular and saves time, particularly for rural providers. For day care homes in Washington State, well over 50% of child care providers have Internet access.
- These findings illustrate the continuing emergence and popularity of web-based communication channels and tools for education, training and procedural interaction.