

# Early Childhood Obesity Prevention: Challenges and Barriers of Implementing Child and Adult Care Food

Elizabeth White, MD; Ryan Potter; Cary Rasmussen, MS; Jennifer Kleven, MD

## ABSTRACT

**Introduction:** The Child and Adult Care Food Program requirements promote healthy eating behaviors and increased physical activity in the daycare setting to help prevent childhood obesity. Some of these standards can be difficult to meet for early childhood education centers. This study examines the challenges and barriers daycare centers face when implementing these guidelines.

**Methods:** Focus groups consisting of participants from early childhood education centers within our community were conducted in April and May of 2018.

**Results:** Three focus groups were conducted, with a total of 7 childcare center directors. Eight themes that affect nutrition and physical activity curriculums at early childhood education centers arose: teacher philosophy and involvement, training/expertise of staff, parental involvement, financial constraints, children's interests, food availability, physical environment, and regulations/guidelines. Overall, participants expressed their sense that child care facilities are undervalued. They agreed that healthy, fresh food choices are expensive, difficult to obtain due to the volume needed, and require additional training to prepare. Emphasis on gross motor development has a varied level of support from families and teachers. Challenges and barriers to providing adequate gross motor activities include limited financial support, lack of physical space, lack of teacher willingness to engage in outdoor activity, and parental resistance.

**Conclusions:** Financial constraints and the "undervaluing" of childcare contribute greatly to many of the challenges and barriers early childhood education centers face in meeting nutrition and physical activity standards. Findings from this study shed light on the significant role early childcare centers play in nurturing child development and the efforts these centers undertake in the interest of children.

## INTRODUCTION

In 1968, the federal government established the Child and Adult Care Food Program (CACFP) to ensure healthy and sufficient food would be available in care settings outside the home.<sup>1</sup> In

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**Author Affiliations:** Gundersen Health System, La Crosse, Wis (White, Potter, Rasmussen, Kleven).

**Corresponding Author:** Jennifer Kleven, MD, Gundersen Health System, 1900 South Ave, La Crosse, WI 54601; Phone 608.775.4492; email jekleven@gundersenhealth.org.

the United States today, over 25% of preschool children are overweight or obese.<sup>2</sup> As malnutrition in the context of obesity has become increasingly prevalent, the US Department of Agriculture has updated CACFP regulations to address the obesity epidemic among children.<sup>1</sup> And as a part of the Healthy, Hunger-Free Kids Act of 2010, the CACFP requires care programs that receive funding to limit added sugars and fats, increase physical activity for children, and encourage a child's innate self-regulation and satiety cues during meal times.<sup>1</sup>

Over 12 million children in the United States spend over 70% of their waking hours in an early childhood education setting outside of their home.<sup>2</sup> During this time, they consume 50% to 75% of their total caloric intake.<sup>2</sup> Financial constraints, varied parental support, and challenges with space and fresh food availability contribute to many of the challenges and barriers early childhood education centers

face in meeting nutrition and physical activity standards.

Childcare centers enrolled in the CACFP are more likely to meet minimum standards for healthy eating and physical activity.<sup>2</sup> This pilot study examines a small sample of childcare directors to better understand their experience implementing CACFP requirements for healthy behaviors within their childcare settings. Through small focus groups, we explored the following: (1) challenges and successes in implementing CACFP guidelines, (2) what childcare directors need to better implement healthy behaviors, and (3) opportunities for health care systems and communities to better support early childhood education.

## METHODS

### Study Design

Focus groups were conducted with directors of local in-home and center-based early childhood education programs. Discussions focused on the participants' experiences with healthy lifestyle-based CACFP regulations that aim to decrease childhood obesity rates.<sup>3</sup> Approval for this study was obtained from the Gundersen Health System Institutional Review Board.

### Regional Demographic Characteristics

The study community is an upper Midwest urban area (>80% urban) with an estimated population of 51,567; 89.6% of residents are white, and 4.9% of the population is under the age of 5 years. The city experiences 4 distinct seasons and has a combined total of 34 certified in-home and licensed daycare centers.<sup>4,5</sup> Approximately 30% of children aged 2 to 4 years in the study area's Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) are overweight or obese.<sup>6</sup>

### Participant Selection

With the assistance of a local nonprofit organization, purposeful sampling identified local site directors or owners who displayed engagement in the early childhood education community and had worked toward continuous improvement for the benefit of child development. A neutral member of the research team extended personal invitations to these potential participants.

### Demographics

Three focus groups comprised of 2 to 3 participants were conducted with a total of 7 childcare center directors (Table). The majority of clientele for 6 of the centers represented qualified for state and federal assistance programs and all were predominantly white (88%).

### Focus Groups

Focus groups were held at the community YMCA. Informed consent was obtained, and each participant completed a short demographic questionnaire prior to starting each session (Appendix A). Names were not recorded. Two main researchers served as moderators during discussions and followed an outline of predetermined questions that focused on nutrition and physical activity within the childcare environment (Appendix B). Moderators guided the conversation using probe questions to focus on the discussion topic. Later, a digital audio recording of the discussion was transcribed verbatim to allow for analysis while maintaining anonymity. Discussions lasted approximately 1 hour.

### Data Analysis

The grounded theory method guided the qualitative analysis of transcriptions.<sup>7</sup> Transcriptions were labeled by group. Three members of the research team, including the topic expert, independently reviewed each transcription and identified main themes

**Table.** Daycare Center and Participant Demographics

	n	(%)
Daycare center		
CACFP supported	6	(86)
Non-CACFP supported	1	(14)
Daycare setting		
Daycare center	6	(86)
In-home	1	(14)
Meal and snack responsibility		
Daycare	6	(86)
Parents and daycare	1	(14)
Participant primary role		
Direct childcare contact/provider	2	(28.5)
Administrative/indirect childcare provider	3	(43.0)
Both	2	(28.5)
Participant trained on nutrition and activity recommendations		
Yes	5	(71)
No	2	(29)

Abbreviation: CACFP, Child and Adult Care Food Program.

Note: One participant reported parents are responsible for providing lunch for their child/children and the daycare center is responsible for all other meals and snacks.

for coding. These themes were then compared and agreed upon. Independent analysis of random samples was completed, and coding of the main themes was tested for greater than 70% fidelity across all researchers and the entire sample. After proven fidelity, 1 researcher completed the coding process for main themes. Subthemes were then agreed upon through discussion between all 3 researchers and final coding was completed.

## RESULTS

Eight themes emerged on nutrition and physical activity policies and practices at the childcare facilities: teacher's philosophy and involvement, staff training/expertise, parental involvement, financial aspects of childcare management, interest of the child, food availability, physical environment, and regulations and guidelines. Within the themes, directors expressed their sense that child care facilities are undervalued and, therefore, face challenges related to limited funds for staff, food and equipment, varied parental support of curriculum, and lack of physical space for play. Themes were divided and analyzed under the categories of nutrition or gross motor development. Findings for each theme are summarized below.

### Teachers' Philosophy and Their Involvement – Nutrition

Children explore new foods best in the setting of family style meal formatting. Directors emphasized that family style eating provides an opportunity for social development between peers and adults. "They [the kids] all have to sit down and wait for everybody to be there. We sing a song at lunch and that's a cue that they can dig in," said one participant. However, facilitating family style meals is difficult due to the required coordination of multiple activities

simultaneously. Participants reported that home practices, who supplies the meals (the center or the family), and space all impact success of the family style approach. A few centers have children supply their own food for some meals, making family style meal-time more challenging for teachers, and others reported that they do not have family style eating due to space limitations.

### **Teachers' Philosophy and Their Involvement – Gross Motor**

To meet physical activity standards and to allow for creativity, teachers utilize structured activities, such as music, movement, yoga, and Stimulating Maturity Through Accelerated Readiness Training (SMART) indoors, as well as unstructured outdoor activities. “We...get them out just doing imaginative play...our philosophy [is] everything should be play-based,” said one participant. Some also reported taking children on walks around the community or to the park.

All participants discussed the challenge of preparing children for outdoor play. For some teachers, “It’s easier to not have to put all [the kids’] stuff on [for outdoor play].” Directors reported a generalized lack of interest among the teachers in being outside because outdoor play is sometimes uncomfortable due to temperature, inconvenient due to the necessary outerwear, and difficult due to minimal staff.

### **Training/Expertise of Staff – Nutrition**

Early childhood education center teachers and cooks do not necessarily have experience with meal planning and/or preparation of locally sourced, fresh, seasonal foods. One director described an open-minded cook: “She knows how to cook anything; you give it to her and she’ll cook it. We are [retraining her] to cook a little healthier [be]cause she uses a lot of canned soups and...vegetables... she is enjoying the process too, and she likes showing the kids.” However, serving fresh foods also increases costs. “I can’t pay my cook [competitive wages], and trying to find that match of someone who is awesome and has that passion of working with kids and someone who wants to put in a lot of effort in the kitchen...chopping vegetables...[is difficult],” said another participant.

### **Parental Involvement – Nutrition**

A nutrition curriculum that includes healthy, fresh food choices garners overall support from parents. However, when parents provide food, some still send prepackaged, processed foods. Two participants reported concerns about lack of parental encouragement of healthy food choices and lack of family style meal modeling. Parents voice frustrations with mess, pickiness, and the meal preparation time as a primary driver for choosing prepackaged, less nutritious foods. Children report that they “get to run around with [their] food [at mealtime while at home]” and act as decision-makers for what they will be offered as food choices.

### **Parental Involvement – Gross Motor**

Parents generally support their children being outside; however,

some parents express concerns about exposure to extreme weather. One focus group participant reported setting the expectation at the onset of enrollment – children will go outside often and get dirty. All participants agreed that parents often do not send children to school with appropriate outdoor gear. “[Parents] think if they don’t bring their stuff, we just won’t go outside.”

Despite general support for outdoor activities, participants perceived a lack of parental support for gross motor activities. “We recognize that the gross motor...gets pushed on the back burner because [parents] really want to know what you’re doing with their mind [or] fine motor [development],” said one director. All participants indicated that parents do not appear to understand the importance of gross motor development and the role it plays on future academic performance.

### **Financial Aspects of Childcare Management/Physical Environment – Nutrition**

Costs associated with food storage and updating facilities for food preparation present challenges for early childhood education centers. “I have an old building, [with only] one outlet [in the kitchen that] we can use; it was really hard to maneuver,” said one director. Local grants may temporarily fill the financial gap for centers to purchase freezers, create larger spaces for food preparation, purchase supplies to grow fresh food, and provide training for cooking.

### **Financial Aspects of Childcare Management – Gross Motor**

Participants reported limited funding as a barrier to providing space for gross motor development, participating in field trips, and updating current physical spaces to create a safer environment. “I would love to redo our playground... [surface with rubber chips] so...I would feel that they were safe,” said one director. Participants also reported meeting needs for capital improvements mainly through grants and fundraising, which are used for physical building updates and to fund spaces such as food storage, leaving spaces for gross motor activities low on the priority list.

### **Physical Environment – Gross Motor**

Successful promotion of gross motor activities depends on the appropriate physical environment.<sup>8</sup> One participant reported using community green spaces for outdoor activities. Three others said they feel lucky to have large playgrounds to avoid needing to play in shifts. One director said, “We have a garden [with] a grassy hilly area...traditional playground equipment...[and] a bike path [for] bikes and scooters. We are also fortunate enough to be attached to the recreation center at [the local university], we very often have access to a more gymnasium-type facility.” Other participants reported adapting to their environment through wearing “mud suits” (rain gear), playing with SMART tracks indoors, or utilizing hallways for activities.

All participants indicated challenges relating to limited indoor

space. One said, “By the time you’ve got all your toy shelves and all the other requirements you have to have in the classroom, it doesn’t leave you a lot of space.” Three others agreed. All-weather exposure creates additional challenges to providing an appropriate space for children at play. “All of the equipment is left untouched because it is in the bright sun. ... [We aren’t allowed] to plant a tree on the playground,” added one participant.

### **Interest of the Child – Nutrition**

All participants agreed about children’s willingness to try new foods when encouraged, especially if exposed at a young age. “I was surprised when we introduced hummus for the first time ... the kids just loved it,” said one participant, and the others agreed, noting that the children are receptive, it’s just other people who aren’t.

### **Food Availability – Nutrition**

Participants described creative approaches to overcoming challenges surrounding access to fresh, locally sourced food—including utilizing grant money for “farm to early care and education” programs in order to grow and serve their own food, visiting local produce auctions, or relying on home canning or frozen foods. One provider said, “...we will [go to the local] produce auction... [where] you can buy pallets of [affordable food].” Another participant agreed, “I think the biggest [struggle] is...trying to find someone that will recognize you for being a smaller company and [provide access to affordable foods].” Unless the center is associated with a larger company, most participants agreed with this statement.

### **Regulations and Guidelines – Nutrition**

Three directors described frustrations with regulations regarding menu-planning. “...you have to make your [5-week] menu out [in advance] and...it’s Thursday, we are supposed to have bananas, but I have a case of apples, so we are having apples. I have to cross off bananas and write in apples, or [we] get [marked as non-compliant],” reported one director. Another described limitations due to a lack of safe food handling training while freezing leftover chicken breasts as a cost-saving measure. “I was told that we couldn’t do that because we were not trained to properly.”

Changes in recommendations for feeding infants and young toddlers are confusing as well. “There used to be...guidelines [by age group] ...but with new [CACFP] guidelines...there is not necessarily any sort of guideline of what you’re giving kids under 12 months; it’s all parent recommendations,” said one participant.

### **Regulations and Guidelines – Gross Motor**

Participants expressed frustration with not being allowed to use “common sense” to adapt to particular situations based on resources available to support gross motor activities. For example, “if it feels like 90 degrees you are not supposed to be outside [per regulations]” despite having open access to water play, said one director. Another described her dilemma regarding regulations

that bar them from having a playground on their property, due to a requirement that the playground be attached to the building.

## **DISCUSSION**

As medical providers who care for children, the authors want to partner with early childhood educators caring for children in our community as they work to promote healthy lifestyle behaviors. To increase our baseline knowledge of the challenges childcare providers face in carrying out CACFP requirements and implementing healthy eating and physical activity routines, we started with small focus groups and gathered subjective, personal insights on 3 focus areas. Based on our discussions, childcare centers’ financial constraints and sense of being undervalued are the most prevalent concerns. With current regulations and standards in the setting of unfunded mandates, participants express a disconnect between the market cost and market price of childcare. Directors report that providing healthy, fresh food is expensive and logistically challenging. Obtaining the appropriate resources to prepare and serve this food remains difficult. Funding through community grants and the CACFP make bridging financial gaps possible for some; however, food preparation and storage challenges still exist.

Children do well with the current CACFP nutrition recommendations. It takes some effort to overcome the hesitation of trying new foods, but, having the right environment and teacher support provide learning opportunities through engagement in growing and cooking food. Parents seem to support recommendations and exposure to healthy, fresh foods and family style eating at school/daycare, but—based on focus group participants’ perceptions—this is not necessarily true at home. This dichotomy may be due to a lack of education among parents about recommendations for child development and the benefits of family meals for obesity prevention and general health.<sup>9</sup>

Parent and caregiver engagement and active participation is necessary for childhood weight management and developmental growth.<sup>10</sup> However, the directors interviewed reported that parents describe barriers, such as fatigue and lack of time, that prevent implementation of recommendations for fresh foods and family style meals at home.

Gross motor development depends on extensive involvement in physical activities. Participants indicated that they provide teachers with a general awareness and understanding of the importance of gross motor activities and their contribution to brain development. Teachers are willing to obtain additional training/education for instituting these tools, however, challenges to providing gross motor opportunities include limited financial support, small physical spaces, lack of teacher engagement during outdoor play, parental resistance to outdoor activities, and regulations that support safety for children.

The directors in these focus groups suggested that they need local businesses and health care organizations to recognize the

important role early childhood education centers play in the community. They would like to collaborate with community stakeholders to determine viable options for implementing ideas, such as group purchasing agreements with wholesale food suppliers, increased child-friendly outdoor spaces, and reuse/recycling programs for items such as industrial kitchen supplies or gross motor equipment.

Limitations of this pilot study include its small size and potential sampling bias. All participants were white women, leading to a homogenous sample that may not be broadly representative of the population. The information reported is not necessarily generalizable to other communities or those with a more diverse population. Focus groups contained only engaged early childhood education center directors, potentially resulting in an underestimate of barriers faced by the centers. Further studies that include teachers, parents, and directors would help provide a more complete picture. Focus group questions were limited to the topics of nutrition and physical activity. Other social determinants that may play a role in child development were not specifically explored. More detail regarding the demographics of a particular setting and the physical environment could provide a deeper understanding of the challenges to providing a healthy environment for children.

## CONCLUSION

Individual and community resources are often limited. Early childhood education serves an important role in nurturing child development and promoting healthy lifestyle behaviors from a young age. This study provides initial insight into the day-to-day needs of childcare centers and the children they serve from the perspective of those “in the trenches.” Challenges they face include limited space, lack of teacher expertise and time, unpredictable access to fresh foods, and complying with regulations. According to study participants, financial constraints and the “undervaluing” of childcare significantly contribute to these challenges.

The themes that emerged can be used to create a broader needs assessment and lay a foundation for further research. Areas of study may include surveys to all licensed childcare centers to gauge interest in group food purchasing, need for shared play space, or access to industrial kitchen equipment. This initial information, in combination with further study, can help to assure that community and health care organizations are directing resources to areas of most need, supporting early childhood education, and thereby helping to provide the best care for children.

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**Appendices:** Appendices are available online at [wmjonline.org](http://wmjonline.org).

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