



Childhood Obesity



ISSUE

What is the role of school food service directors in monitoring student weight and reducing the prevalence of obesity?

BACKGROUND

Between 1980 and 2012, the prevalence of obesity doubled in children and quadrupled in adolescents. In 2012, more than one-third of children and adolescents in the United States were overweight or obese,¹ raising concerns about quality of life and life expectancy for these children.² Healthy eating and physical activity are habits associated with a lower risk of being overweight or obese. These habits are influenced by family, community organizations, health care providers, faith-based institutions, businesses, government agencies, media, and schools.³ Schools play a critical role in promoting healthy behaviors among children aged 5 to 17. Schools offer an environment where students eat healthy foods and participate in physical activity, and are one of the key places they can gain the knowledge and skills necessary for healthy living.

To improve the school food environment, the Healthy, Hunger-Free Kids Act of 2010 (HHFKA) required the U.S. Department of Agriculture (USDA) to issue new science-based nutrition standards to improve the nutritional quality of school meals and competitive foods sold in schools. The standards are based on the recommendations of the Institute of Medicine⁴ and are aligned with the 2010 Dietary Guidelines for Americans. The lunch standards specify weekly and daily requirements for low/non-fat fluid milk, fruits, vegetables, meat/meat alternates, and whole grain-rich items. The standards also set specifications for

calories, sodium, saturated fat, and *trans* fat. Similar requirements apply to school breakfasts.

Under HHFKA, new USDA regulations expanded the scope of school wellness policies and required each local education agency to establish a local wellness policy for all schools under its jurisdiction, and to designate one or more agency officials to monitor compliance with the policy.⁵ Guidelines for local wellness policies required inclusion of goals for nutrition promotion and education, physical activity, and other school-based activities that promote student wellness. Also, all foods available on each school campus during the school day must be aligned with USDA’s meal pattern requirements and standards for competitive foods.

“The obesity epidemic is not something new. Most people are aware that it needs to be addressed in our communities.”

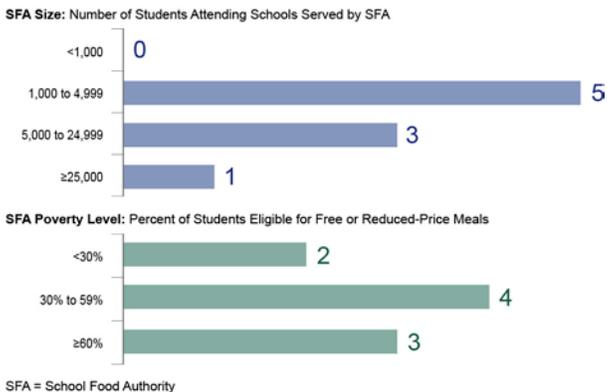
This research brief describes school food service directors’ awareness of the prevalence of childhood obesity in their district, their perception of the role of schools in addressing childhood obesity, and their experiences with school-based efforts to improve student health and prevent obesity. The information comes from semi-structured discussions conducted by telephone (focus group or individual interview) with nine school food service directors in May 2015. Although the participants are not statistically representative of all directors, the qualitative data collection technique was particularly suited to gaining in-depth understanding of how directors implemented HHFKA. See Figure 1 for a summary of the size and poverty level of the school food authorities represented by these directors.⁶

1. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *Journal of the American Medical Association* 2014;311(8):806-814.
2. Institute of Medicine. Local government actions to prevent childhood obesity.2009. <http://iom.edu/Reports/2009/Local-Government-Actions-to-Prevent-Childhood-Obesity.aspx>.
3. Centers for Disease Control and Prevention. Childhood Obesity Facts. <http://www.cdc.gov/healthyyouth/obesity/facts.htm>.
4. Renamed the National Academy of Medicine effective July 1, 2015.

5. Department of Agriculture, Food and Nutrition Service. Proposed Rule. Local School Wellness Policy Implementation Under the Healthy Hunger-Free Kids Act of 2010. 7 CFR Parts 210 and 220. Federal Register Volume 79, No. 38, 2014. <http://www.fns.usda.gov/school-meals/local-school-wellness-policy>.
6. This brief also includes strategies cited by directors who participated in focus group discussions and telephone interviews for research briefs in this series on other aspects of HHFKA implementation, including whole



Figure 1. Characteristics of School Food Authorities (SFAs) Represented by Participating School Food Service Directors



KEY FINDINGS

The school food service directors in this study reported that the prevalence of childhood obesity has been on the rise in their district, and that schools have an important role in improving student health and weight status. Directors stated that their role in improving student health and weight status is reflected in their commitment to serving healthy school meals and encouraging students to make healthy food choices. All of the directors articulated the need to make HHFKA implementation a school-wide effort that is not limited to school food service.

Although the school food service directors said that they were aware of school-based health promotion programs in their district, most of the directors said that they do not play a role in program planning, and only a few said that they are involved in program delivery or evaluation. The directors emphasized that success in promoting healthy eating and reducing the prevalence of obesity requires school-wide efforts that involve teachers, school nutrition staff, and parents.

INVOLVEMENT IN MONITORING STUDENT WEIGHT

All school food service directors who participated in this study acknowledged that obesity was an issue in their district, and said they have observed an increase in the number of children who are overweight. However, most of the directors said they were not personally involved in weighing or measuring children, or in programs addressing weight concerns in their district.

About one-half of the school food service directors indicated that school nurses weighed and measured the height of students and tracked their body mass index (BMI). A few directors also mentioned annual State surveys that included self-reported and school-measured height and weight

data. Some directors said their district had collected these data a few years ago, but had discontinued doing so because of staffing and budget limitations. One director said that the nurse who served the district's six schools did not have time for routine BMI data collection because of the need to address other health concerns, such as diabetes, influenza, and injuries.

A few school food service directors observed that among today's students, being overweight and obese appears to be more acceptable among peer groups than in the past, and therefore may not be perceived as a health challenge.

“As they're coming through [the line], I start noticing more and more of them that, yes, they're not just a little bit overweight. They are, I think, what would be considered obese. It used to be that heavier kids were made fun of, but now I see it as it's more of a common thing and kind of okay in our society.”

Only one of the school food service directors was aware of the current prevalence of overweight and obesity among the students in her district. Noting that her district was a recipient of a 3-year obesity prevention grant that required annual reporting of BMI data, she said that the prevalence of obesity had dropped from 18.5 percent in school year 2011-2012 to 17.9 percent in school year 2012-2013.

PERCEIVED ROLE OF SCHOOLS IN IMPROVING DIET AND PHYSICAL ACTIVITY PATTERNS

Most school food service directors in this study said that students have ingrained eating habits even before they are enrolled in school. All nine directors said that although schools are an important venue to discuss health and well-being with students, the choices that students make outside of school play a bigger role in influencing the risk of childhood obesity. A few directors suggested that because students make such different food choices outside of school, the ability of school nutrition staff to influence obesity is rather limited.

Most of the school food service directors cited differences in the meals served in schools and at home and emphasized the need to engage parents in discussions about healthy eating. One director noted that school meals may be the only healthy meals that some students receive, yet those meals typically account for less than half of the meals that students eat during the week.

“I've been in this district 20 years now, and seen how the lunches have changed as far as what we're cooking. When you go out and you're talk-

grain-rich foods, fruits and vegetables, sodium, Smart Snacks, plate waste, student participation, and food service revenue.



ing to kids at the table, and this kid opens up a lunchbox and they pull out a [snack cake] and a [soda] ... this is what they're bringing from home. So trying to make sure that what we're giving them is better nutrition will help with obesity.”

One school food service director from a high-poverty district articulated the need to educate and encourage students to try healthier, unfamiliar food options, and to share these experiences with their parents in order to influence the foods that are available at home.

Many school food service directors in this study discussed the role of schools mainly from the perspective of school nutrition staff, with a few directors providing a broader perspective that included the engagement of school principals, teachers, and other staff. Two directors expressed the view that teachers and school nutrition staff have a responsibility to model healthy choices for students. But some directors said that teachers are reluctant to get involved in additional activities that take time away from the structured academic curriculum.

“I don't think we're the cause of it by any means, but I do think that we are an educational entity, and that we should practice what we preach to kids for them to see, and have available to them the kinds of foods that we are teaching them to eat, and role-modeling [teachers and staff eating healthy options] is very important.”

All of the school food service directors who participated in this study emphasized that meals and competitive foods offered in schools make an important contribution to students' diet and health. Directors said that school nutrition staff influence children's food choices by educating and encouraging students to choose healthier food options at school meals.

“It's just very hard. ... So while we try to follow all the nutritional guidelines that are set out, a lot of the kids, I think it's across the U.S., they don't get it at home. A lot of the kids in this area, they don't even get regular home-cooked meals. So ... one of our biggest issues right now is trying to get the kids to try new things, and ... to get them to take some of the knowledge ... home.”

SCHOOL-BASED EFFORTS TO IMPROVE DIET AND PHYSICAL ACTIVITY PATTERNS PRIOR TO HHFKA

✓ **Market healthy meals to students.** All school food service directors in this study said that school nutrition staff serve as role models for students and play an important role in encouraging students to choose healthy meals.

“The staff in the building are your front lines, and they have to keep a positive attitude. We have to be the ones to talk about the health of the food that you're having ... to help you eat healthier, to always be positive about it.”

School food service directors described the efforts of school nutrition staff to improve student health, including setting up salad bars, using scratch cooking to prepare healthier meals for students, and using *Smarter Lunchroom* strategies in the cafeteria. One director posted information stands that explain the health benefits of each item available at the salad bar.

School food service directors also described the efforts of elementary school teachers to promote healthy eating. One director said that elementary school teachers walk the children to the cafeteria, and sometimes talk with the students about making healthy selections for lunch. Noting that a few teachers also join the students during meals, the director explained that such guidance and role modeling made a positive difference in what and how much students ate at lunch. She also said that when teachers ate with students, they observed lower plate waste.

“We have a lot of really proactive teachers, PE teachers, parents that are really working hard to make things better. So it's not like we're all alone out there trying to get this done. We have good support with our district, especially the new one I'm at, because it's small and they're very conscious of the health of their kids.”

School food service directors also discussed the role of classroom teachers in successfully implementing the USDA Fresh Fruit and Vegetable Program, and thereby exposing students to new fruits and vegetables.

✓ **Reinforce with students the importance of eating healthy meals.** One school food service director said she invited dietitians and other guest speakers to talk with high school students about the benefits of healthy eating.



Inviting guest speakers on the topic reinforces to students the importance of healthy eating, and makes a connection between the speaker's message and the items served in school meals.

“What we have the nutrition specialist do is speak to individual classes, and we’ve also done assembly style. We’ve also had guest speakers, people who have grown up in the area ... that would come back and speak to the kids, and emphasize the importance of eating healthy.”

✓ **Engage parents in discussions about healthy choices at meals eaten at home and other venues.** All school food service directors emphasized the role of foods eaten outside of the school, noting that students often eat at fast food restaurants and don't have access to healthy foods at home. Most directors agreed that parents have busy schedules and other pressing issues, so planning healthy meals may be a lower priority.

Only one director said that some school principals in his district were very proactive in scheduling meetings with parents and nutritionists. At scheduled tea or brunch sessions with parents, school nutrition staff discussed with the parents the importance of healthy eating and the changes in school meals and snacks.

✓ **Promote physical activity among students who do not participate in competitive sports.** The school food service directors said that they do not play a role in promoting physical activity. However, many of them are aware of competitive sports and other opportunities to promote physical activity at school. Several directors described physical activity programs geared toward students who do not play competitive sports. Some directors described concerted efforts at schools to engage students in physical activity, and others described teacher-driven efforts that varied across schools in their district. Most directors agreed that improving student health and well-being required team effort, with substantive gains from teacher involvement.

✓ **Provide opportunities to be physically active in the classroom.** A few school food service directors described teacher-led efforts to provide children with the opportunity to be physically active in school, by requiring students to stand up and walk around or do jumping jacks in classrooms after each class period.

✓ **Offer after-school wellness clubs that provide opportunities to be physically active for all students.** One school food service director shared information about an after-school wellness club at the school that focused on physical activity. The program included

activities such as kickball, capture the flag, dancing, and jump rope. The director explained that the wellness club allowed children who were not in competitive sports the opportunity to be active, as an alternative to spending time using their phones to connect to social media.

Two directors discussed activities implemented through grant funding. One director received a 3-year grant to implement a standardized healthy eating and healthy activity curriculum across all grade levels, and to purchase fitness equipment for all schools. The other director discussed using a Healthy Ways to School grant to build sidewalks and trails, as a way to encourage students to walk to school.

“We had a grant from the city. It’s called Healthy Ways to School. Part of the city’s grant was to put in sidewalks. So they built some trails and put in some sidewalks so the kids could walk to school versus having to be bused or having the parents take them. Then there were just certain PE teachers that started walking clubs. We had a couple that used to have or still do have fun runs.”

✓ **Incorporate physical activity into the curriculum.** One school food service director described an innovative Walk Across America program that was initiated by the physical education teachers and school nurses in a few schools, and that was later expanded to all schools in the district. Originally called Walking Route 66, the program was later renamed Walk Across America. The before- and after-school activity encouraged students to track the miles they walked each day, with the goal of collectively walking across America. The teachers also participated in the program and added education components to teach geography, history, and nutrition.

“They took a southern route the first year. They would say, ‘What city is coming up?’ and they would do a little geography lesson tied up with Walking Across America. Then they would tie it in with a little history lesson of the city that was coming up. ... This tied in with so many other lessons. They would even tie in what kind of crops would grow in that area and then what you could make from the crops. ... Then we would ... serve dishes in the menu that incorporated local food items.”



SCHOOL-BASED EFFORTS TO IMPROVE DIET AND PHYSICAL ACTIVITY PATTERNS UNDER HHFKA

✓ **Implement new meal standards.** All school food service directors in this study acknowledged that they were able to implement the new school meal standards and gain acceptance because of the support from school administrators, staff, teachers, and parents.

“Most of the staff bought into it pretty quickly ... not just teachers but school workers, who were encouraged to see that there was an emphasis for things to get healthier and lower in salt and lower in saturated fats and so on. ... We even had principals out there the first couple of months of [HHFKA implementation] to help the kids choose their fruit or vegetable and to encourage them.”

All school food service directors agreed that implementation of the new meal standards was a major step in promoting healthy diets and reducing childhood obesity in their district. All directors also agreed that students are eating healthier meals and snacks. Directors said that although they encountered initial implementation challenges, they were able to serve meals and maintain meal participation rates across all grade levels.

Some school food service directors described positive outcomes of offering a greater variety of vegetables and fruits; shifting from frying to baking, from refined grains to whole grain-rich grains, and from heat-and-serve products to scratch cooking; and reducing the fat and sodium content of school meals.

“I can honestly say I do believe the kids are eating more of a variety of food. I can see kids who used to in the past only pick up an entrée and a milk and nothing else, that they are eating some of the fruits and vegetables.”

One school food service director said that offering fat-free milk, more fresh fruits, and reducing the amount of juice in school meals made it easier to keep calories in check at lunch. She also predicted that these changes will make a major contribution to reducing the prevalence of obesity.

“We went down to no-fat milk ... less calories in the milk ... fresh fruits ... and 4-ounce juices. So that was a huge thing [in reducing obesity rates].”

School food service directors also described the role of *Smarter Lunchroom* strategies in obtaining student buy-in. One director noted that it is hard for younger students to see and reach items in the lunch line. To help these students pick fruits and vegetables, the director used pictures along with names on labels at lunch lines. The visually appealing signs included verbal prompts for students to select fruits and vegetables as part of their meal.

“They [elementary school students] can’t read signs that says peaches – so we displayed some pictures and we started cupping fruits and vegetables. It [the pictures and items in the lunch lines] looks so beautiful that they want to take that.”

✓ **Implement Smart Snacks requirements.** Directors said the shift in the types of competitive foods and beverages sold at school will improve students’ food choices and health in the long run. In describing changes in the competitive foods sold at schools, directors said that instead of offering chips and candy, they were serving snacks that met the Smart Snacks requirements. One director offered fruits and vegetables in after-school programs.

“The Smart Snacks have helped us out a lot. Before the Smart Snacks ruling, we would say, you shouldn’t have these machines on and what you’re selling is no good, and the vendors may say, ‘Well, we’re making some extra revenue here and it’s legal.’ So once some of those rules went into writing, where they can only have certain calories in the drink and the snacks had to be comparable to our snacks, then all of a sudden you saw the changes, because that means companies knew they had to go along with the regulations.”

One school food service director described a targeted campaign to educate parents and school principals about the Smart Snacks policy. The campaign, which started in February 2014, involved informing school principals and parent-teacher organization groups about Smart Snacks, providing them a demonstration of the Alliance Product



Calculator for Smart Snacks,⁷ and encouraging them to download and use the tool. She said the campaign was instrumental in obtaining broad-based support for moving toward offering Smart Snacks and eliminating snacks that did not meet the guidelines.

“This year we did a pretty targeted campaign over the summer with our principals. We started way back last February with principals and PTA groups, and told them about Smart Snacks and showed them how to get to the calculator, and told them that beginning July 1st this was going to be the ‘new us’ at school. So we’ve had a lot of support for that.”

One school food service director described a newly launched peer-to-peer education campaign to encourage high school students to drink water instead of sugar-sweetened beverages. The students made posters that were posted in school hallways, and launched a Twitter hashtag. Students set up a dot survey and invited peers to post a dot each time they selected water instead of a sugar-sweetened beverage.

“It seems like that once you transition and you bring some of the things in, emphasizing water instead of the sugary drinks and lower-salt chips and the whole grain-rich chips, that now that they’re out there and they’ve been there for a while, I don’t receive any complaints about them at all.”

✓ **Continue implementing nutrition and physical activity efforts.** Most school food service directors said that other than making the changes in school meals, they did not start any new initiatives but continued implementing the pre-HHFKA activities that focused on nutrition education and physical activity. A few directors invited guest speakers—including representatives from the local health department, education extension agencies, and community residents—to talk with high school students. One director said they expanded their roster of guest speakers and invited a greater number of nutrition specialists and sports figures from within the community to school-wide assemblies and individual classrooms. The

students looked to these community members as role models and were receptive to their messages.

NEXT STEPS

Schools are an important avenue for reaching children and youth. Students spend much of their day in school, where school nutrition staff and educators have the opportunity to create an environment that promotes healthy eating and physical activity and enables students to develop lifelong healthy lifestyles. Schools educate students about the importance of proper nutrition and physical activity. Schools also offer nutritious meals and snacks and provide opportunities for all students to be physically active. These school-based efforts to improve diet and physical activity patterns have the potential to reduce the prevalence of childhood obesity.

Since the passage of HHFKA, school food service directors have made progress in laying the foundation for healthy eating habits by implementing the new school nutrition standards. The new USDA regulations regarding local school wellness policies call for establishing wellness policy leadership and promoting participation of the general public and the school community in planning, implementing, and evaluating the local policy. School food service directors have the capacity to produce positive changes in schools, and it is important to identify ways to engage them in local wellness policy discussions.

This research brief was produced by Westat under contract with the USDA Food and Nutrition Service.

7. Designed to assess and change foods offered at schools, the calculator is available at the Alliance for a Healthier Generation Website: https://www.healthiergeneration.org/take_action/schools/snacks_and_beverages/smart_snacks/alliance_product_calculator.