

## **Position of the American Dietetic Association, School Nutrition Association, and Society for Nutrition Education: Comprehensive School Nutrition Services**

*Please note that this study was published before the implementation of Healthy, Hunger-Free Kids Act of 2010, which went into effect during the 2012-13 school year, and its provision for Smart Snacks Nutrition Standards for Competitive Food in Schools, implemented during the 2014-15 school year. As such, certain research may not be relevant today.*

### **ABSTRACT**

It is the position of the American Dietetic Association (ADA), School Nutrition Association (SNA), and Society for Nutrition Education (SNE) that comprehensive, integrated nutrition services in schools, kindergarten through grade 12, are an essential component of coordinated school health programs and will improve the nutritional status, health, and academic performance of our nation's children. Local school wellness policies may strengthen comprehensive nutrition services by encouraging multidisciplinary wellness teams, composed of school and community members, to work together in identifying local school needs, developing feasible strategies to address priority areas, and integrating comprehensive nutrition services with a coordinated school health program. This joint position paper affirms schools as an important partner in health promotion. To maximize the impact of school wellness policies on strengthening comprehensive, integrated nutrition services in schools nationwide, ADA, SNA, and SNE recommend specific strategies in the following key areas: nutrition education and promotion, food and nutrition programs available on the school campus, school-home-community partnerships, and nutrition-related health services. *J Am Diet Assoc.* 2010;110: 1738-1749.

### **POSITION STATEMENT**

*It is the position of the American Dietetic Association, School Nutrition Association, and Society for Nutrition Education that comprehensive, integrated nutrition services in schools, kindergarten through grade 12, are an essential component of coordinated school health programs that will improve the nutritional status, health, and academic performance of our nation's children. Local school wellness policies may strengthen comprehensive nutrition services in schools by providing opportunities for multidisciplinary teams to identify and address local school needs.*

The American Dietetic Association (ADA), School Nutrition Association (SNA), and Society for Nutrition Education (SNE) jointly recognized in 2003 the importance of the comprehensive nutrition services, integrated with a coordinated school health program (CSHP), for the nation's students, preschool through grade 12 (1). The CSHP model includes eight components: a healthful school environment, health education, physical education, health services, nutrition services, counseling and psychological services, health promotion for staff, and family/community involvement (2).

Since 2003, several notable changes have occurred. First, after ADA, SNA, and SNE long advocated for strengthening local commitment to nutrition and health through school nutrition policies, the Child Nutrition and WIC Reauthorization Act of 2004 (Pub L No. 108-265, §204) was enacted, mandating that school districts participating in the National School Lunch Program (NSLP) adopt and implement a local wellness policy by the 2006-2007 school year. This legislation outlined the following required wellness policy components:

1. goals for nutrition education, physical activity, and other activities to promote student wellness;
2. nutrition guidelines for school meals and for all foods available on school campus during the school day;

3. an assurance that nutrition guidelines for school meals would not be less restrictive than the federal guidelines;
4. a plan for measuring implementation of the local wellness policy, including designation of a person/s with operational responsibility for ensuring requirements are met; and
5. the involvement of parent, student, school nutrition, school board, school administration, and public representatives in the development of the local wellness policy.

Other changes include the 2005 update to the Dietary Guidelines for Americans (DGA), specifically encouraging children and adolescents to increase whole grains and low-fat dairy and for children between the ages of 4 to 18 to maintain total fat intake between 25% to 35% (3). Recent reports document the dynamic growth of US Department of Agriculture (USDA)-sponsored school meal programs, contributing one third to one half of some of the participating children's daily nutritional needs (4). In 2009, an average of over 31 million children received school lunches daily. USDA School Breakfast Program (SBP) participation has also expanded over the years, currently serving over 11 million children daily. Through USDA meal programs, school campuses increasingly are serving snacks to children enrolled in afterschool programs, and meals and snacks through the Summer Food Service Program (SFSP).

A final significant change is the growing recognition by both researchers and policymakers of the complex factors influencing the food choices of children and adolescents (5). A recent report discusses how multi-component interventions can positively impact children's nutrition and health-related outcomes (6). These interventions integrate classroom education, healthful foods available on the school campus, farm-to-school programs, family involvement, and community health resources.

As illustrated in the Figure, ADA, SNA, and SNE have each contributed research and recommendations relating to children's nutrition and health. Building on these important contributions, ADA, SNA, and SNE affirm schools as a key partner in health promotion and provide updated research and recommendations relating to comprehensive nutrition services in schools. Comprehensive school nutrition services include the following key components: nutrition education and promotion, food and nutrition programs available on the school campus, school-home-community partnerships, and nutrition-related health services.

This joint position paper begins with our rationale for advancing the role of comprehensive nutrition services in today's schools. Our rationale is followed by a description of each of the key components of comprehensive nutrition services in schools, within the context of the new requirement for wellness policies in all school districts. Then, wellness policy recommendations for reauthorization of the child nutrition programs (CNPs) are addressed. The position paper concludes with a description of roles and responsibilities of local wellness teams and school nutrition practitioners.

## RATIONALE

A sense of urgency exists regarding the eating behaviors of today's children and adolescents. A 2003 analysis of foods and beverages consumed both at home, and away from home, found an increase in both portion sizes and energy intake (7). However, children and adolescents consume inadequate amounts of nutrient-rich foods such as fruits and vegetables. A study based on 1999-2000 data found only 0.7% of boys aged 14 to 18 years met USDA fruit and vegetable recommendations (8). Moreover, half of all children aged 2 through 18 years consumed less than a serving of fruit per day, with french fries accounting for about half of the vegetables. Growing evidence documents that children and adolescents consume an excess of nutrient-poor snack foods, such as potato chips, cookies, and sugar-sweetened beverages (9,10). In addition, children eat fewer meals at home (11) and consume more fast and convenience foods outside of the home (12).

Physical activity levels have declined in American children while sedentary activities, such as playing video games, have increased (13). Fewer children meet recommended activity levels, now set at 60 minutes a day. Fewer schools offer physical education and recess (14). To counter these trends, improving physical activity in school, and active transport to and from schools, may be a component of a school's CSHP and wellness policy. The local wellness policy provides an opportunity for food and nutrition practitioners to collaborate with physical activity professionals to promote healthful eating and active living among American school children.

Early intervention is one of the most effective methods of creating or changing behaviors (15). Promoting healthful eating and active living in school settings is important for children and adolescents of all sizes. Special attention is also necessary to address the growing rates of overweight and obesity in children and

adolescents. Illustrative of this, obesity rates have doubled among children and tripled among adolescents in only 2 decades (16). In the United States, 30.1% of children and adolescents, aged 2 through 19 years, were at or above the 85th percentile of body mass index for age based on 2003- 2006 data from the National Health and Nutrition Examination Survey (17). Childhood obesity and its associated health issues, such as type 2 diabetes, high blood pressure, and depression, are not evenly distributed across socio-demographic groups (18). Obesity may co-exist with increased food insecurity, poverty, and hunger (19). As childhood and adolescent obesity prevention and treatment programs are developed, prevention of eating disorders, body dissatisfaction, weight discrimination, and bullying must be simultaneously addressed (20).

## SCHOOL WELLNESS POLICIES

Local school wellness policies provide unprecedented opportunities to address school nutrition environments by promoting healthful eating and active living among school-aged children. Preliminary studies indicate current school wellness policies range from strong and specific to weak and vague (21,22). A recent Robert Wood Johnson Foundation report similarly found that by the 2007-2008 school year, policies were generally weak and varied greatly (23). Most school wellness policies did not require evaluation of the implementation or effectiveness, nor did they include provisions for reviewing or revising the policy.

To maximize the impact of school wellness policies on strengthening comprehensive, integrated nutrition services in schools nationwide, ADA, SNA, and SNE recommend specific strategies in the following key areas: nutrition education and promotion, food and nutrition programs available on the school campus, school-homecommunity partnerships, and nutrition- related health services.

## NUTRITION EDUCATION AND PROMOTION

Teaching and promoting healthful eating with an integrated cafeteriaclassroom approach is essential to address childhood health and education problems (24). Yet, few students receive the 50 hours of nutrition education recommended during the school year as the minimum amount necessary for facilitating behavior change (25,26). A 2000 US Department of Education report determined the mean number of hours spent in a school year on nutrition education by elementary school teachers was only 13 (26). Even when nutrition education was provided, the report found numerous inconsistencies in teaching methods and nutrition lessons. In addition, teachers and school administrators received little training in delivering nutrition education and creating an environment promoting healthful eating.

<b>American Dietetic Association (ADA), School Nutrition Association (SNA), and Society for Nutrition Education (SNE)</b>	
<i>Joint Position Paper Title and Citation</i>	<i>Joint Position Statement</i>
Nutrition Services: An Essential Component of Comprehensive School Health Programs J Am Diet Assoc. 2003;103:505-514 <ul style="list-style-type: none"> <li>• Current joint position updates this statement</li> </ul>	Comprehensive nutrition services must be provided for all of the nation’s preschool through grade 12 students. These nutrition services shall be integrated with a coordinated, comprehensive school health program and implemented through a school nutrition policy. The policy should link comprehensive, sequential nutrition education;

	<p>access and promotion of child nutrition programs providing nutritious meals and snacks in the school environment; and family, community, and health services' partnerships supporting positive health outcomes for all children.</p>
<p><b>American Dietetic Association (ADA)</b></p>	
<p><i>Position Paper Title and Citation</i></p>	<p><i>Position Statement</i></p>
	<p>Children ages 2 to 11 years should achieve optimal physical and cognitive development, attain a healthy weight, enjoy food, and reduce the risk of chronic disease through appropriate eating habits and participation in regular physical activity.</p>
	<p>Children and adolescents should have access to an adequate supply of healthful and safe foods that promote optimal physical, cognitive, and social growth and development. Nutrition assistance programs, such as food assistance and meal service programs and nutrition education initiatives, play a vital role in meeting this critical need.</p>
<p>Individual-, Family-, School-, and Community-Based Interventions for Pediatric Overweight  J Am Diet Assoc. 2006;106:925-945  <ul style="list-style-type: none"> <li>• Updated position expected 2011</li> </ul> </p>	<p>Pediatric overweight intervention requires a combination of family-based and school-based multi-component programs that include the promotion of physical activity, parent training/modeling, behavioral counseling, and nutrition education. Furthermore, although not yet evidence-based, community-based and</p>

environmental interventions are recommended as among the most feasible ways to support healthful lifestyles for the greatest numbers of children and their families. ADA supports the commitment of resources for programs, policy development, and research for the efficacious promotion of healthful eating habits and increased physical activity in all children and adolescents, regardless of weight status.

Schools and communities have a shared responsibility to provide students with access to high-quality, affordable, nutritious foods and beverages. School-based nutrition services, including the provision of meals through the National School Lunch Program and the School Breakfast Program, are an integral part of the total education program. Strong wellness policies promote environments that enhance nutrition integrity and help students to develop lifelong healthy behaviors.

Benchmarks for Nutrition Programs in Child Care Settings  
J Am Diet Assoc. 2005;105:979-986

- Updated position expected 2011

All child care programs should achieve recommended benchmarks for meeting children's nutrition and nutrition education needs in a safe, sanitary, and supportive environment that promotes healthful growth and development.

<p>Providing Nutrition Services for People with Developmental Disabilities and Special Health Care Needs J Am Diet Assoc. 2010;110:296-307</p>	<p>Nutrition services provided by registered dietitians and dietetic technicians, registered, are essential components of comprehensive care for all people with developmental disabilities and special health care needs.</p>
<p><i>Document Title and Online Link</i></p>	<p><i>Report Purpose and Findings</i></p>
<p>SNA National Nutrition Standards</p>	<p>Legislative action on the following: 1) establishment of one set of uniform national nutrition standards for reimbursable school meals; and 2) Congress giving US Department of Agriculture authority to establish national nutrition standards for foods and beverages available in the school outside the meal program. Federal nutrition standards should pre-empt state and local standards for food and beverages sold/served during the school day throughout the school campus.</p>
<p>SNA National Nutrition Standards Recommendations <a href="http://schoolnutrition.org/uploadedFiles/School_Nutrition/16_LegislativeAction/SNA_National_Nutrition_Standards.pdf">http://schoolnutrition.org/uploadedFiles/School_Nutrition/16_LegislativeAction/SNA_National_Nutrition_Standards.pdf</a></p>	<p>Specific recommendations for individual child nutrition programs including School Breakfast and Lunch, Summer Foodservice, Afterschool Snacks, and other foods sold/served in school campus. SNA recommends that meeting nutrient standards should be phased in over time. State or local wellness policy/initiatives can be more restrictive in items sold/served, but may not alter nutrition standards of items. Foods and beverages sold/served</p>

	<p>outside the reimbursable school meals should complement rather than compete with the meals.</p>
<p>From Cupcakes to Carrots: Local Wellness Policies One Year Later  <a href="http://schoolnutrition.org/uploadedFiles_old/ASFSAs/newsroom/pressreleases/From_Cupcakes_to_Carrots.pdf">http://schoolnutrition.org/uploadedFiles_old/ASFSAs/newsroom/pressreleases/From_Cupcakes_to_Carrots.pdf</a></p>	<p>Foods available through the school nutrition program (reimbursable meals, a` la carte, and school nutrition vending) were farther along in the implementation process than implementation of standards for fundraising, classroom parties, and use of food as a reward. Foods available outside the cafeteria involve multiple groups and, therefore, could take longer to coordinate standards for these. The implementation of the standards has a financial impact on school nutrition programs in two ways: 1) revenues for a` la carte items at middle and high schools decreased, and 2) food costs increased with the new standards. Wellness policies have brought the opportunity for school nutrition programs to become involved in nutrition education and physical activity plans, increasing its visibility and establishing partnerships. Evaluation resources need to be made available to districts and the opportunity to share evaluations from other districts already evaluating should be facilitated</p>
<p>National Professional Standards for School Nutrition Program Personnel</p>	<p>To ensure states and school districts have professionally qualified personnel who can help position school nutrition programs (SNPs) for an integral role in the</p>

academic missions of the school community. A number of states and school districts have not established professional qualifications for directors and other SNP personnel. The program administration at both the state and local levels has grown in complexity. Professional standards will elevate the quality and efficiency of SNPs nationwide by ensuring SNP administrators at both the state and local levels are more qualified to manage these complex programs.

**Society for Nutrition Education (SNE)**

*Report Title and Online Link*

*Report Purpose and Findings*

State of Nutrition Education & Promotion for Children and Adolescent  
[http://www.sne.org/documents/SNENENPreport630\\_Final\\_000.pdf](http://www.sne.org/documents/SNENENPreport630_Final_000.pdf)

SNE sets forth specific recommendations about how to provide a consolidated and comprehensive TeamNutrition Networks that is coordinated at the national level, administered at the State level, andimplemented at the local level. In addition, this report provides a strong rationale for adequately fundingTeam Nutrition Networks by: 1) highlighting critical gaps in pre-kindergarten through grade 12 nutritioneducation and promotion at the local, state, tribal, and federal levels; and 2) explaining the evidence-baseemphasizing the need for effective nutrition education and promotion for children and adolescents.

School-based nutrition education and promotion can help advance student academic performance (27). Integrating comprehensive nutrition services within the school environment, including educational activities in



the classroom, healthful food choices throughout the school campus, and reinforcement in the home and community, has been shown to improve children's dietary intake. *The SNE State of Nutrition Education and Promotion for Children and Adolescent 2009 Report* (6) reviewed the evidence and concluded nutrition education interventions were more successful in positively influencing eating behaviors if they: target specific behaviors or practices, focus on the interests and motivations of targeted youth, devote sufficient time and intensity, deliver coherent and clearly focused curricula, involve multiple components using a social ecological approach, and provide professional development to staff.

Congress supported nutrition promotion and education by authorizing USDA's Team Nutrition Network in the Child Nutrition and WIC Reauthorization Act of 2004, §19. Funds were never appropriated to carry out these provisions (6). At the same time, many schools attempting to meet mandates set forth in The No Child Left Behind Act of 2001 (Pub L No. 107-110) eliminated nutrition education, physical education, and recess, and shortened their lunch periods (28). Another challenge to delivering effective nutrition education in schools is the lack of national nutrition education standards.

Food and nutrition practitioners must work to ensure mandatory, consistent funding for integrated and comprehensive nutrition education and promotion programs. Coordinated at the national level, administered at the state level, and implemented at the local level, a wellfunded national nutrition education and promotion program, focusing on comprehensive school nutrition services, would provide needed infrastructure and leverage resources among other nutrition-related federal programs. Partnering with the education community, food and nutrition practitioners should also develop national nutrition education standards, along with innovative, cost-effective strategies for strengthening the nutrition education provisions of local school wellness policies. Standards for the following related areas would also be useful: the minimum number of classroom hours for teaching nutrition education to children and adolescents; the inclusion of experiential learning, such as garden-based curriculum and cooking skills for healthful meals; and the quality of the dining experience, including time allowed for meals.

### **Farm-to-School Programs and Garden-Based Education**

Programs educating students on agriculture and food systems provide nutrition education through integrative, hands-on, and collaborative learning opportunities, including: school foods purchased directly from farmers; incorporating related nutrition education; and experiential learning opportunities through farm visits, gardening, and recycling programs. Although CNPs are not required to participate in farm-to-school initiatives, schools across the nation are developing model programs using innovative strategies to educate children about the links among the environment, agriculture, health, and nutrition. The National Farm-to-School Program estimates over 8,000 schools have implemented some connections with local farmers (29).

Experimental studies suggest that garden-based nutrition education can increase students' nutrition knowledge, preferences for vegetables (30,31), and fruit and vegetable intake (32). A recent review examining the scientific literature on garden-based education programs concludes that evidence for the effectiveness of these programs is promising and emphasizes the need for future research in this area (33). A review of farm-to-school programs, broadly defined as schoolbased programs linking schools with local farms, also identifies positive trends in knowledge, attitudinal, and behavior changes and provides specific recommendations for further research and evaluation (34). Many Web-based resources are available for those interested in exploring the educational, environmental, and social benefits of farm-to-school programs (29). A new USDA initiative, "Know Your Farmer, Know Your Food," strives to connect Americans to their food and create opportunities for local farmers to provide their harvest to schools in their communities (35). First Lady Michelle Obama's Let's Move campaign also integrates garden-based components (36). Further research is needed to document the benefits and feasibility of farm-to-school and other agriculture and food system educational approaches in all regions of the country, particularly in areas with limited growing seasons.

### **Food Marketing and Advertising within Schools**

Food and beverage marketing influences children's eating patterns and health outcomes (37). The Institute of Medicine recommends that state and local school authorities educate students about healthful diets and promote this concept in all areas of the school environment, with consideration of commercial sponsorships, meals and snacks, and the curriculum. For example, schools could adopt policies promoting the availability of healthful foods and beverages. As part of the Council of Better Business Bureaus' Children's Food and Beverage Advertising Initiative, 13 companies have pledged to improve the nutritional profile of food and beverage products in child-directed advertising (38).

Despite constitutional and political barriers, the federal government could respond to the rising childhood obesity rates and use its authority to curtail food marketing in one environment over which it has exclusive control: the public school system (39). The local wellness policy mandate provides schools an opportunity to address food marketing on campuses. The National Alliance for Nutrition and Activity (NANA), of which ADA, SNA, and SNE are members, recommends Congress require inclusion of food marketing goals in school wellness policies. (40). The Omnibus Appropriations Act of 2009 (Pub L No. 111-8) called for research into possible standards for determining which foods are appropriate to market to children and adolescents. A draft set of nutrition standards for marketing of food to children who are 17 years or younger was released in December 2009 by an Interagency Working Group, including representatives from USDA, Federal Trade Commission, Food and Drug Administration, and Centers for Disease Prevention and Control (41). Food and nutrition practitioners could submit feedback to the Interagency Working Group, work with Congress to explicitly require school districts to address food marketing goals in their wellness policies, and work with government, not-for-profit, and industry groups to develop strategies to promote healthful eating and active living within schools, homes, and communities.

## FOODS AVAILABLE ON THE SCHOOL CAMPUS

### **School Nutrition Programs**

School nutrition programs face a daily challenge of meeting children's energy needs while minimizing hunger and obesity, which may co-exist (42,43). The School Nutrition Dietary Assessment (SNDA)-III study reported that 18% of NSLP-participating families were food insecure (44).

Another balancing act schools perform daily is providing high-quality school meals while keeping costs low. When SNA surveyed 48 of the largest school districts in 2008, NSLP reimbursement did not cover program costs in 88% of the responding districts (45). Likewise, the USDA School Lunch & Breakfast Cost Study-II, which used School Year 2005-06 data from 353 schools, determined that 72% of reimbursable lunches and 67% of reimbursable breakfasts cost more to produce than the reimbursement rate (46). Operating a school meal program with current NSLP reimbursement guidelines becomes increasingly difficult as the number of children qualifying for free and reduced-price school meals steadily increases and the number of children able to consistently afford their reduced meal charges continues to decrease (47). The elimination of the reduced-price meal category or, in other words, a modification to a two-tier system of either free or paid meals, would allow children in households qualifying for assistance in USDA's Special Supplemental Nutrition Program for Women, Infants, and Children Program to also receive free school meals.

School meals increasingly serve more nutrient-rich foods and beverages, such as fruits, vegetables, whole grains, low-fat dairy, and lean proteins (48). The US Farm Bill, Food, Conservation, and Energy Act of 2008 (Pub L No. 110-234, §19), expanded USDA's Fresh Fruit and Vegetable Program to all states, as well as the District of Columbia, Guam, Puerto Rico, and the Virgin Islands. This program enhances the school's ability to assist children in meeting daily fruit and vegetable requirements and exposes children to a variety of fruits and vegetables. Currently, the program is limited to only selected, at-risk schools and lacks an accompanying nutrition education program. National expansion is being considered.

To increase children's fruit and vegetable consumption, attention should also be given to the significant role of canned, frozen, and dried fruits and vegetables in school meals. In addition, technical assistance for school nutrition staff on serving and promoting nutrient-rich foods and beverages is needed. An important aspect of promoting nutrient-rich foods in school meals is ensuring the items are appealing and attractive to children.

Schools have additional options for providing meals and snacks (4). In addition to the NSLP, schools may participate in the SBP, SFSP, and the Afterschool Snack Program. Made permanent in 1975, the SBP has steadily grown over the decades and currently operates in over 87,000 schools and institutions. The Seamless Summer Option was authorized in 2004 (Pub L No. 108-265) and allows public and private nonprofit school nutrition authorities participating in the NSLP or the SBP to administer the SFSP with fewer administrative burdens. The Afterschool Snack Program offers cash reimbursements to help schools serve snacks to children after their regular school day ends, providing a nutrition boost for the additional time at school. USDA, state administrators, and school nutrition practitioners should help school districts implement and expand all USDA-supported meal and snack programs as feasible. A school nutrition practitioner is an individual with a food and nutrition degree working in the school nutrition program, such as a director, manager, supervisor, or nutrition education specialist.

Wellness teams have the opportunity to identify the strengths and weaknesses of their school nutrition program and use the findings to recommend changes, such as:

1. estimating reimbursement rates that will fully support the provision of healthful school meals in their geographical area;
2. examining their school's current school meal profile, including the links between the cafeteria and the classroom;
3. promoting school breakfasts, which are associated with improved student academic performance and healthy weights (42);
4. considering the Afterschool Snack Program as an enhancement to afterschool tutoring, as well as the Summer Seamless Option as an opportunity to provide students with nutritious meals year round; and
5. ensuring that sufficient time is allowed for consumption of school meals and recommending recess be scheduled before lunch to improve the consumption of nutritious school meals.

### **Nutrition Standards for Reimbursable School Meals**

Schools are required to meet national nutrition standards established in the 1995 School Meals Initiative (SMI) regulations (49). SMI defines how the DGA apply to school meals and provides options for menu planning systems meeting these standards. According to the SNDA-III study, over 85% of the schools met the SMI standards for protein, vitamins, and minerals. Consuming school meals was positively associated with increased intake of nutrient-rich foods including more offerings of fresh fruit, whole grains, and greater variety of vegetables (48). Currently, no fiber or sodium standards exist in the SMI (50). The SNDA-III study also reported that few schools provided lunches meeting the 2005 DGA for fiber, and none of the schools met the Dietary Reference Intake (DRI) for sodium. Updating school meal standards and menu planning requirements has been a lengthy process, and regulations based on the 2005 DGA may not be in place by the time 2010 DGA are released.

Future USDA efforts should work with local school nutrition practitioners to improve methods for the nutrient analysis of school meals. The use of weighted nutrient analyses may negatively affect the accuracy of school meal reviews. A weighted analysis is based on the history of food prepared, as opposed to unweighted or simple-averaging menu items. School nutrition practitioners have expressed difficulty accurately reporting this type of data. No improvements in accuracy were noted between SNDA-II, which used an unweighted analysis, and SNDA-III, which used a weighted analysis (51).

An Institute of Medicine committee report recently provided recommendations for revisions to school nutrition standards and menu planning requirements (52). These recommendations included updating nutrition requirements and establishing recommended calorie ranges. Before enacting major changes to the NSLP menu planning requirements, USDA should conduct pilot studies to determine the cost, feasibility, and nutritional impact. Furthermore, USDA should develop, implement, and evaluate pertinent technical assistance resources and support for school meal programs.

### **Agricultural Commodities**

Agricultural commodities cover an estimated 20% of the value of school lunches (53). Schools do not receive USDA commodity entitlement funding for school breakfasts served. State agencies have some leeway in selecting commodities their schools prefer, which normally enables them to reduce food costs. While commodities have been criticized as being highly processed with high levels of fat, sodium, and sugar, over the past several years USDA has made significant strides in improving the nutritional quality of school commodities and has implemented the following changes: lowered amount of sodium in canned vegetables; decreased sugar in canned fruits and vegetables; and increased purchases of canned, frozen, and dried fruits and vegetables and whole-grain foods, including whole-grain pastas, wholegrain tortillas, brown rice, and rolled oats (54). Commodity beef is 85% lean and lower-fat turkey products, including turkey ham, are now available. Cheeses are offered in skim and reduced-fat versions. Trans fats have been eliminated from all potato products (54). Butter and shortening are no longer offered as commodity items.

USDA should continue to improve the availability of nutritious commodities for use in school meals and provide technical assistance at the state and local levels on the use of commodities to assist in meeting nutrition standards throughout the school year. School nutrition practitioners are an important partner, providing valuable input to USDA in the promotion and evaluation of commodities in CNPs.

### **School Nutrition Program Facilities and Equipment**

In order to offer more healthful food choices, many school nutrition programs need new kitchen equipment and

technical assistance to enhance staff's knowledge of food preparation methods and use of new equipment. One small initiative aimed at helping school cafeterias was included in the 2009 American Recovery and Reinvestment Act (Pub. L. 111-5), which allocated \$100 million to assist in the purchase of new school foodservice kitchen equipment, such as steamers and walk-in coolers. School nutrition practitioners should evaluate the impact of these funds, continue to document equipment deficiencies, and consider creative and cost-effective approaches in obtaining needed equipment and staff training resources.

### **Competitive Foods**

Competitive foods (ie, other foods sold on the school campus, excluding reimbursable meals) are offered in many schools; they generally are high in fat, sodium, and added sugar; and often displace consumption of more nutritious foods (55,56). As a result of *National Soft Drink Association vs. Block*, 721 F. 2d 1348 (1983), USDA has limited authority to regulate competitive foods and currently enforces a 1979 regulation (7 CFR Part 210 and Part 220) covering only foods served during lunch or breakfast in the cafeteria. States vary in their enforcement of this dated rule. Twelve states have gone beyond the federal minimums and enacted comprehensive school food and beverage nutrition standards applying to the whole campus and the whole school day for all grade levels (57).

Mandated local school wellness policies provide schools an opportunity to develop and implement local competitive food standards and to also address monitoring and enforcement issues. Currently, wellness teams have the opportunity to consider the most appropriate guidelines for their schools, within requirements mandated by applicable local, state, or federal regulations. Industry has testified to Congress about the challenges of varying standards, such as the cost of manufacturing multiple versions of the same product to meet differing local and state nutrition standards.

Both ADA and SNA have developed recommendations for competitive foods, acknowledging these foods are offered in a variety of locations: vending machines, fundraisers, school stores, classroom parties, and teacher incentives (58,59). If enacted, the proposed Child Nutrition Promotion and School Lunch Protection Act of 2009 (S.934/HR1329) would provide USDA broader authority to regulate competitive foods and establish national nutrition standards for competitive foods. ADA, SNA, and SNE, as members of NANA, support the use of national, evidence-based nutrition standards during the school day, throughout the school campus (40). Innovative strategies are needed to assist in the implementation of standards, such as incentives, self-assessment tools, and coordinated nutrition education.

## **SCHOOL-HOME-COMMUNITY PARTNERSHIPS**

Wellness teams may serve as leaders in fostering school-home-community partnerships. In developing their wellness policies, school districts are required to build multidisciplinary teams, involving parents, students, school nutrition, and school administration. Multidisciplinary teams are encouraged to accommodate local needs using appropriate strategies within budget and oversight capabilities, and to encourage broad support and engagement from key stakeholders.

Using wellness policies to connect the school, home, and community is essential because students receiving consistent messages through multiple channels (home, school, community, and the media) and sources (parents, peers, teachers, health practitioners, and the media) are more likely to adopt healthful behaviors (5,6,15). While classroom teachers play a key role in educating and promoting student wellness, the success of their work depends on additional role models in the home and community reinforcing similar messages and providing a supportive environment in which lessons learned in school can be implemented. Current research substantiates mealtime experiences during early adolescence may contribute to the formation of later, healthful eating habits (60). Therefore, the declining occurrence of the "social meal" (ie, taking time to focus on eating together with family and friends around the table) is a concern. This trend increases the importance of school meals in fostering healthful eating habits.

Building partnerships among school, home, and community representatives to encourage healthful eating and active living is critical. To accomplish this, wellness teams should identify key organizations, such as school parent-teacher associations, local youth organizations, and voluntary health organizations. Other invaluable partners may be local university faculty with expertise in community-based participatory research, who may facilitate the involvement of relevant stakeholders and develop culturally- and context-appropriate strategies (61).

## **HEALTH SERVICES**

An integrative approach to school nutrition includes consideration of school and community health care services available for students. Within the CSHP model, health services are designed to ensure access or referral to primary health care services and provide preventive services, such as education and counseling (2). In reality, few schools have adequate resources and staff to provide these necessary services.

Over 8 million children in the United States currently have no form of health insurance (62). School- Based Health Centers (SBHCs) are filling a health care gap for over 2 million children. SBHCs emerged in the 1970s as a one-stop source of evaluation, diagnosis, and treatment of student health needs. The number of SBHCs has grown from 120 in 1988 to over 1,700 in 44 states in 2009 (62). SBHCs may provide primary preventive care such as comprehensive health assessments, treatment of acute illness, screenings, immunizations, and counseling. Research documents that SBHCs are an effective means of bringing preventive and primary care to children and adolescents (63). A variety of organizations may sponsor an SBHC, including hospitals, local health departments, community health centers, and nonprofit organizations.

Current school budget challenges may impact the sustainability of SBHC programs. Increasingly, SBHCs are being asked to demonstrate direct contributions to academic performance (63,64). SBHCs may be one solution to addressing the critical health care needs of students, including weight management, and a cost-effective use of public-funds (65). While a recent SBHC study indicated improved implementation of care guidelines for treatment of pediatric overweight, food and nutrition practitioners should work further on establishing the evidencebase for the role of SBHC in improving nutritional status, health, and academic performance (66).

## OTHER STATE AND SCHOOL POLICIES IMPACTING STUDENT WELLNESS

Our focus thus far has been on wellness policy areas that have the greatest potential to strengthen the comprehensive school nutrition services. In certain states and for some wellness policy components, the content of the policy is state mandated (22,23,40). Indeed, some states have required all schools adopt state standards for competitive foods and physical education. Other school policies may not be included within the local wellness policy, but play a role in state and local efforts to promote healthful school environments. One example is body mass index measurements in schools, which over 20 states have enacted or are considering (67). At this time, no consensus exists on the utility of body mass index screening programs for children and adolescents.

Another school decision affecting student wellness is whether the school campus is opened or closed; a student attending a school with an open campus policy may leave the school grounds during lunch, while a student at a closed campus may not leave the school premises during meals. The decision to have an open campus may influence students' food choices negatively (68). A concerted effort between school, community, and industry stakeholders could yield some innovative approaches to improve foods available to students in the immediate vicinity of the school. As one example, San Francisco passed an ordinance prohibiting operators of mobile catering vehicles from selling within 1,500 feet of a public middle, junior high, or high school (San Francisco Police Code Art.17.2, Sec. 1 2007).

School nutrition practitioners must keep current with the emerging strategies being considered or enacted to promote healthful eating and active lifestyles in schools. All food and nutrition practitioners should actively pursue ways to contribute the necessary evidence-base as new strategies are considered or enacted to advance student health at the federal, tribal, state, and local levels.

## WELLNESS POLICY RECOMMENDATIONS FOR CHILD NUTRITION REAUTHORIZATION 2010

ADA, SNA, and SNE, as members of NANA, recommend strengthening local wellness policies by requiring school districts to: make wellness policies more accessible to the public; establish standing local wellness policy committees to implement and assess the effectiveness of the local policies; evaluate the implementation of the local wellness policy against recommended model policies; and include policies for physical education and food marketing in schools (40). School resources for monitoring and evaluating the effectiveness of the wide-ranging school wellness policies described in this paper are needed. Finally, the further development, implementation, and evaluation of these school wellness policies requires research and support, beyond the funds received for serving school meals.

# ROLES AND RESPONSIBILITIES

## Wellness Teams

Wellness teams have an opportunity to improve students' eating behaviors and health outcomes. ADA, SNA, and SNE encourage wellness teams to maximize this role, by implementing, evaluating, and disseminating culturally- and context-appropriate programs that integrate improved comprehensive nutrition services for all children and adolescents. Teams should share their experiences, as well as their challenges, within the school community, and, when relevant, with local, state, tribal, and federal agencies and policymakers.

## School Nutrition Practitioners

Administration of CNPs involves managing school nutrition staff; complying with local, state, and federal laws; and serving multiple, nutrient-rich meals to children and adolescents with diverse backgrounds and nutritional needs. Given their unique and necessary skills, it is no surprise that a 2007 Pennsylvania survey noted school nutrition directors (60.3%) were second only to superintendents (75.6%) as the individual generally held responsible for ensuring local wellness policy implementation (69). School nutrition practitioners can significantly impact comprehensive nutrition services in the school environment by helping to provide, supervise, regulate, research, or monitor school meals, nutrition counseling, and nutrition education and promotion activities. School nutrition practitioners are uniquely positioned to ensure findings from a local wellness team are evaluated and disseminated to students, families, community stakeholders, and policymakers.

In addition, school nutrition practitioners have the ability to coordinate and integrate services with other federal food and nutrition assistance programs, including the Child and Adult Care Food Program, SFSP, the Supplemental Nutrition Assistance Program, and the Special Supplemental Nutrition Program for Women, Infants, and Children. For example, school nutrition practitioners may visit and work with local Child and Adult Care Food Program participants, to smooth the transition to school meal service in the primary grades. School nutrition practitioners also are in the best position to understand the contribution of afterschool snacks and suppers in children's diets. That is, school nutrition practitioners may coordinate school meals and healthful eating messages so that they complement the other federal nutrition assistance programs in which their children, families, and communities are participating. To facilitate this coordination across programs, USDA's Food and Nutrition Service has initiated a State Nutrition Action Plan initiative to encourage state and local collaboration.

School nutrition practitioners have the additional responsibility to ensure that medical nutrition therapy and/or related nutrition and feeding services are provided to children with disabilities and special needs. The National School Lunch Act permits food substitutions to accommodate a medical or special dietary need for chronically ill students. Working with appropriate medical personnel, including registered dietitians, school nutrition practitioners ensure policies on these important issues are in place (70).

Another critical role for today's school nutrition practitioners is ensuring the safety of the foods served in school settings and advocating for food safety regulations addressing the unique opportunities and challenges of the school nutrition setting. A federal requirement that school nutrition practitioners implement a food safety program at each food preparation and service facility participating in the NSLP or SBP was enacted on July 1, 2005. This food safety program must include the identification of potential food hazards and critical points where hazards can be controlled, and the implementation of monitoring procedures and corrective action plans. Other current food safety-related issues in school nutrition programs include disaster planning, bio-security procedures, and pandemic preparedness.

## Professional Standards for School

Nutrition Practitioners ADA, SNA, and SNE must continue to work together on developing professional standards for school nutrition practitioners, such as school nutrition directors and nutrition education specialists (71). Currently, state standards for school nutrition directors vary widely, with states with larger districts tending to have higher qualifications than states with smaller districts. SNA has recently proposed national, research-based professional standards for state agency directors, school nutrition directors, school cafeteria managers, and school nutrition employees (72). These professional standards are needed to define the basic educational background, work experience, and continuing education requirements needed.

When developing these standards and qualifications, attention should be given to whether and how educational and training opportunities help current and future professionals meet these standards. ADA, SNA, and SNE should work together to improve child nutrition courses and training opportunities at the undergraduate,

graduate, dietetic internship, and continuing education levels. For instance, dietetic interns could be required to work a certain number of hours within school nutrition settings and perform, under supervised guidance, operational and regulatory compliance activities. Another example would be creating and effectively disseminating curriculum and continuing education opportunities that teach school nutrition practitioners how to use available resources, such as the ADA Evidence-Based Library, School Nutrition University online (<http://www.snuniversity.org/>), and the National Food Service Management Institute materials (<http://www.nfsmi.org>).

Another important area for consideration in these professional standards is forming collaborative partnerships. School nutrition practitioners are encouraged to work with many others in the school and community, such as parents, other food and nutrition practitioners, other medical specialists, teachers, sports coaches, agriculture partners, food and equipment industry representatives, school architects, regional planners, researchers, policymakers, and media. This work requires school nutrition practitioners to use common terms to discuss children's health, to build consensus for a healthful school nutrition environment, and to resolve conflicts or competing interests. These skills may help school nutrition practitioners evaluate the effectiveness of programs, enhance services offered, leverage available resources, ensure the nutrition integrity of foods offered and marketed in the school food environment, and reinforce nutrition education in the classroom, home, and community.

Finally, to ensure expectations accurately reflect reality, ADA, SNA, and SNE should create opportunities for regulators, researchers, and policymakers to visit schools to discuss current issues relating to professional standards for school nutrition practitioners. These visits could also provide an opportunity to view best practices and model programs relating to the development of professional standards to strengthen comprehensive nutrition services in schools.

## CONCLUSION

Since its passage in 1946, the Richard B. Russell National School Lunch Act (Pub L No. 79-396, §2. 60 Stat. 230) has defined the purpose of the program to “safeguard the health and well-being of the nation’s children.” School meal programs continue to play a significant role in safeguarding the health and well-being of American children, and are the anchor of comprehensive nutrition services in schools. Wellness policies strengthen school nutrition services by providing an opportunity for multidisciplinary teams, composed of school staff, families, and other community members, to identify local needs, develop feasible strategies to address priority areas, and integrate nutrition services with CSHPs.

Maintaining a long tradition of working together, ADA, SNA, and SNE will continue to advocate for positive actions to improve students’ nutritional status, health, and academic performance. Additional professional organizations, advocacy groups, and stakeholders, with shared issues and values, are encouraged to join in supporting practices and research increasing the effectiveness of comprehensive school nutrition services.

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