Position of the American Dietetic Association: Food Insecurity in the United States

ABSTRACT

It is the position of the American Dietetic Association that systematic and sustained action is needed to achieve food and nutrition security for all in the United States. To eliminate food insecurity, interventions are needed, including adequate funding for and increased utilization of food and nutrition assistance programs, inclusion of food and nutrition education in such programs, and innovative programs to promote and support individual and household economic self-sufficiency. More than 49 million individuals living in the United States experienced food insecurity in 2008. Negative nutrition and non–nutrition-related outcomes have been associated with food insecurity in children, adolescents, and adults, including substandard academic achievement, inadequate intake of key nutrients, poor health, increased risk for and development of chronic disease, poor disease management, and poor psychological and cognitive functioning. Registered dietitians and dietetic technicians, registered, can play key roles in ending food insecurity and are uniquely positioned to make valuable contributions through provision of comprehensive food and nutrition education; competent and collaborative practice; innovative research related to accessing a safe, secure, and sustainable food supply; and advocacy efforts at the local, state, regional, and national levels.

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POSITION STATEMENT

It is the position of the American Dietetic Association that systematic and sustained action is needed to achieve food and nutrition security for all in the United States. To eliminate food insecurity, interventions are needed, including adequate funding for and increased utilization of food and nutrition assistance programs, inclusion of food and nutrition education in such programs, and innovative programs to promote and support individual and household economic self-sufficiency.

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Access to food is a basic human need and fundamental right. The citizens and residents of the United States are its most valuable resource. Yet, food insecurity, that is, limited or intermittent access to nutritionally adequate, safe, and acceptable foods accessed in socially acceptable ways (1), continues in millions of households across the United States (2). In light of the negative outcomes of food insecurity across the life course, including physical impairments, psychological suffering, and sociofamilial disturbances (3), it is unwise and shortsighted to allow this serious, yet avoidable, public health issue to continue.

Using a broad-based approach to systematically address food insecurity in the United States will help to ensure community food security and lead to nutrition security. The Community Food Security Initiative of the US Department of Agriculture has the goal of cutting US food insecurity in half by 2015 through creation and expansion of partnerships that build local food systems and reduce hunger (4). The US Department of Health and Human Services' Healthy People 2010 initiative identified preventable US health threats and established goals to increase quality and years of healthful life and to eliminate health disparities (5). One of the nutrition-related objectives for the nation is to "increase food security [to 94%] among US households and in so doing reduce hunger" (4). In its draft form (6), Healthy People 2020 envisions a "society in which all people live long, healthy lives." The proposed overarching goals of Healthy People 2020 are to eliminate preventable disease, disability, injury, and premature death; achieve health equity, eliminate disparities, and improve the health of all groups; create social and physical environments that promote good health for all; and promote healthful development and healthful behaviors across every stage of life. Food security is the linchpin of healthful living and must be achieved in the United States to improve the health of its citizens and residents.

Although the safety and security of the US food and water supply are of utmost importance, another position paper of the American Dietetic Association focuses on those issues (7). Likewise, another position paper of the American Dietetic Association focuses on world hunger, malnutrition, and food insecurity (8).

This position paper focuses on domestic food insecurity and relates to food availability and food access, rather than food safety from a bioterrorism or natural disaster standpoint. Throughout the paper, the term *food insecurity* will be used to refer to all aspects of food and nutrition insecurity. Figure 1 summarizes relevant terms.

RATIONALE FOR THE POSITION PAPER UPDATE

Achieving food security in the United States is paramount to improving the health of its citizens and residents. Since the 2006 position paper (16), the food security status of the United States has been further documented, with the most recent estimates of food insecurity continuing to fall short of the Healthy People 2010 objective (94% of US population will be food secure) (2,5). In addition, several studies have furthered our understanding of nutrition and non–nutrition-related outcomes of food insecurity, including overweight and obesity, and reinforced that food

Community food security "A situation in which all community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes self-reliance and social justice," (9) without resorting to emergency food sources (10).

Food insecurity "Limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways" (1).

Food insufficiency "An inadequate amount of food intake due to a lack of resources" (11).

Food security "Access by all people, at all times to sufficient food for an active and healthy life . . . [and] includes at a minimum: the ready availability of nutritionally adequate and safe foods, and an assured ability to acquire acceptable foods in socially acceptable ways" (1).

Hunger "The uneasy or painful sensation caused by a lack of food. The recurrent and involuntary lack of access to food . . . [that] may produce malnutrition over time" (1).

Nutrition security "The provision of an environment that encourages and motivates society to make food choices consistent with short- and long-term good health" (12).

US Department of Agriculture Food Security Classifications (13)

Food security[a]
High food security: No reported indications of food-access problems or limitations.
Marginal food security: One or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake.

Food insecurity[a]
Low food security: Reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.
Very low food security: Reports of multiple indications of disrupted eating patterns and reduced food intake.

Figure 1. Food insecurity- and hunger-related terms. [a]Several instruments have been validated to measure food insecurity in the United States at the household level and across life course and ethnic groups (14,15).

insecurity is of high priority for public health action. Finally, food insecurity rates in the United States parallel poverty rates (17), and food insecurity worsens in recessionary times (18). With the poor economic conditions in 2009 and 2010 in the United States, it is anticipated that food security will increase, further emphasizing the urgency of this health issue in the United States.

KEY POINTS

Food Insecurity Is Prevalent in the United States

According to the most recent national estimates (2), 85.4% of US households were food secure throughout 2008. However, 14.6% of households (17.1 million), representing 49.1 million individuals, experienced food insecurity sometime during the year due to resource constraints. Of all US households, 8.9% of all households (10.4 million households) had low food security, representing 31.8 million individuals (2). Coping strategies used by these households to avoid very low food security included:

- eating less varied diets;
- participating in federal food and nutrition assistance programs; and
- obtaining emergency food from community food pantries, emergency kitchens, and shelters.

Yet, 5.7% of all households (6.7 million households), representing 17.3 million individuals, had experienced very low food security. In most households, children, especially younger children, were protected from hunger by older members of the households, especially the mother (19). Overall, 1.1 million children lived in households classified as very low food security among children (1.5% of the children in the nation) (2).

Consistent with previous years' estimates, households at risk for food insecurity during 2008 (2) included:

- households with incomes below the income-to-poverty ratio (<1.00, 42.2% of households; <1.30, 39% of households; <1.85, 33.9% of households);
- households with children and headed by a single woman (37.2% of households) or man (27.6% of households);
- households headed by a black non-Hispanic (25.7% of households) or Hispanic (26.9% of households); and
- households located in principal cities (17.7% of households). (Principal cities are "incorporated areas of the largest cities in each metropolitan area") (2).

Households with older adults have rates of food insecurity less than the national average (8.1% for households with older adults; 8.8% for households with older adults living alone) (2). As the number of older adults increases in the United States, continuing to monitor and further understand food insecurity in this segment of the population is important.

Households receiving food from emergency food providers, including pantries (eg, food pantries and food shelves), kitchens (eg, soup kitchens and emergency dining rooms), and shelters (eg, emergency shelters and homeless shelters), appear to be particularly vulnerable to food insecurity. Although the national estimates probably underestimate participation due to sampling strategies utilized (2), about 4.1% of US households (4.8 million), representing 8.8 million adults and 4.5 million children, obtained food from pantries at least once in 2008, and 0.5% of households (623,000) ate at least one meal at a kitchen. Of those households reporting use of a pantry in the past 12 months, 46%, 28%, and 26% reported that this had occurred only in 1 or 2 months, some months (but not every month), and almost every month, respectively (2). Almost 70% of food insecure households, however, did not use a pantry, despite knowing of availability of one in their community.

The most recent Feeding America (formerly America's Second Harvest) study published in 2010 reported that only 24.5% of households using either pantries, kitchens, or shelters were food secure (high food security or marginal food security). Whereas 75.5% were food insecure, with 44.3% and 34.2% of all households being characterized as having low food security and

very low food security, respectively (20). Similar to previous years, according to the most recent national estimates of food insecurity in the United States (2):

- about 31% of households using pantries were food secure (high food security, marginal food security); yet, of those, 55% were classified as having marginal food security and were 10 times as likely to have used a pantry and five times as likely to have eaten at a emergency kitchen as households classified as high food security (those with no indicators of food insecurity);
- food pantry and emergency kitchen use was strongly associated with food insecurity, with food insecure households being 13 and 14 times more likely than their food secure counterparts to have obtained food from a pantry or kitchen, respectively; and
- compared to usage nationally (4.1%), pantry use was higher among households with incomes below the poverty line (17%), with children (5.6%), headed by a single woman with children (11.5%), classified as non-Hispanic black (8.1%) or Hispanic (5.7%), and located in principal cities (4.8%).

Important caveats to interpreting food security assessment measures used for the annual estimates include that questions are posed to respondents regarding the previous 12 months. Therefore, those experiencing food insecurity any time during the previous year are classified as food insecure. Consequently, the daily rates of food insecurity are substantially less than the annual rates. On average, it is estimated that 0.9% to 1.2% of households (1.1 to 1.4 million households) experience very low food security each day (2). In addition, experiencing very low food security and the associated reduced food intake and disrupted eating patterns appear to be episodic, rather than chronic, in nature (2).

The causes of food insecurity must be understood before it can be eradicated. Poverty, high housing and utility costs, unemployment, medical and health costs, mental health problems, lack of education, transportation costs, and substance abuse are cited as factors contributing to food insecurity in American cities (21). Smoking also appears to be associated with food insecurity, according to the National Health and Nutrition Examination Survey, 1999-2002 (22), a nationally representative sample of households with children.

Rose (23) noted that food insecurity is often triggered by an event that stresses the household budget—losing a job or assistance benefits, including Supplemental Nutrition Assistance Program (SNAP) benefits, or gaining a household member. Overall, food insecure households must often choose between buying food and buying or paying for other items or needs, including medication (24,25), healthful housing conditions (26), and utility costs for heating or cooling (27,28). Among households using food pantries and other emergency food programs, many reported choosing between buying food and medical care/medication (31.6%), rent/mortgage (35%), or utilities/heating (41.5%) (29). Cook and colleagues (26) developed a measure of household energy security, "access to enough of the kinds of energy needed [to heat/cool home and operate lighting/appliances] for a healthy and safe life in the geographic area." Overall, household and child food insecurity was associated with household energy insecurity, as well as poor health, hospitalizations, and developmental risks among infants and toddlers (26).

Immediate and long-range interventions targeting the causes of food insecurity will undoubtedly assist in reducing rates of food insecurity. Adequate funding for and increased use of food and nutrition assistance programs, as well as innovative programs to promote and support economic self-sufficiency, is paramount. Registered dietitians (RDs) and dietetic technicians, registered (DTRs), can encourage clients to access existing programs providing food and nutrition assistance, social services, and job training as an immediate intervention. RDs and DTRs can also partner with key stakeholders in the community to build local food systems and reduce hunger.

Food Insecurity Is Related to Nutrition and Non-Nutrition Outcomes

Food insecurity is a high priority for public health action, especially in view of its potential negative affect on the nation from public health and economic perspectives. As summarized by Nord and Prell (17), "it is clear that food insecurity is part of a complex of potentially serious health and developmental conditions." Overall, it can have grave consequences, including physical impairments related to insufficient food, psychological issues due to lack of access to food, and sociofamilial disturbances (3). As previously reviewed (16,17), food insecurity is associated with:

- inadequate intake of key nutrients; poor physical and mental health in adults and depression in women;
- overweight and weight gain (especially among women from marginal and low food security households);
- adverse health outcomes for infants and toddlers;
- behavior problems in preschool-aged children;
- lower educational achievement in kindergarteners; and
- depressive disorder and suicidal symptoms in adolescents.

The relationship of food insecurity to nutrition and non–nutrition-related outcomes will be the primary focus of this key point.

Dietary Intake in Children and Adults. Several studies have demonstrated a relationship between food insecurity and less-than-optimal food and nutrient intake, as well as risk for nutrient deficiencies among some life course groups. Although children are typically protected from very low food security in the United States, evidence suggests that food insecurity or insufficiency may be associated with lower dietary quality in children, especially older children (and adults) (30).

Food insufficiency has been associated with decreased consumption of vegetables, particularly nutrient-rich dark green vegetables, among US children (31). In contrast, Lorson and colleagues (32) found that total fruit and vegetable intakes of all US children were at less than recommended levels and did not vary among children from fully food-secure, marginally food-secure, low food-secure, and very-low-food-secure households. Compared to their food secure counterparts, however, the proportion of french fries consumed by children and adolescents living in food insecure households made up a greater proportion of total vegetable intake. Widome and colleagues (33)

focused on diet quality and food insecurity among middle and high school youth. They found that, compared to food secure youth, food insecure youth consumed a greater percentage of energy from fat, ate fewer family meals and breakfasts, had less food availability at home, and perceived greater barriers to eating a healthful diet (33). Therefore, the authors suggested that interventions aimed at eliminating barriers to healthful eating would be prudent (33).

Poor nutrition outcomes, including inadequate intakes of key nutrients, among food insecure adults and older adults have been previously reported in nationally representative samples (34,35). Olson (36) reviewed food insecurity in women and emphasized that the role of women in managing family feeding makes them vulnerable to the negative consequences of food insecurity, with fruits and vegetables being sacrificed initially in the face of approaching food insecurity. Women may modify their dietary intake to spare other family members, especially children, from experiencing nutrient deprivation (19). Nonetheless, in US adults, energy intakes did not differ between food secure and food insecure adults. Rather, meal and snack behaviors differed, with food insecure adults consuming fewer (but larger) meals and more snacks, which may compensate for the reduced meal frequency (37). This study underscores the importance of focusing on meal and snack behaviors, rather than only total energy, when monitoring diet quality of food insecure adults.

The literature demonstrates that individuals residing in households lacking access to food may consume diets deficient in particular food groups and nutrients, increasing the risk of poor health, chronic disease development, and other non–nutrition-related outcomes, if not immediately, in the long term. Continuing to document the dietary outcomes of food insecurity is paramount, as is development of appropriate interventions and provision of innovative food and nutrition education by RDs and DTRs, including collaborative, community-based education programs. Since gardening interventions have the potential to enhance produce availability and intake (38,39), one example of a potential community-based program is gardening education in collaboration with a master gardener or county extension educator to increase household produce availability. Adequate funding for and increased use of food and nutrition assistance programs, including those providing nutrition education, is particularly important to improve the dietary outcomes related to food insecurity. In addition, developing community partnerships and networks that build local food systems are crucial. Examples include partnerships in local communities with emergency food and feeding programs, farmers' markets, community gardens, and farm-to-school programs. In the short term, to improve community food security, maximizing access to and use of existing food and nutrition assistance programs is vital (40).

Other Nutrition and Non-Nutrition Outcomes. Collectively, the literature demonstrates that food insecurity has negative nutrition and non-nutrition outcomes and underscores the potential negative implications of food insecurity on the health of citizens and residents of the United States and US health care costs. Health status, chronic disease incidence and risk, diabetes, overweight and obesity, school performance, and mental health are all related to food insecurity. Food insecurity is a preventable health threat. Therefore, it is imperative to document outcomes of food insecurity through collaborative research projects across the life course. Development of appropriate interventions, especially for households with youth, and provision of innovative food and nutrition education by RDs and DTRs and adequate funding for food and nutrition assistance programs is also vital.

Child/Adolescent Health, Development, and Other Outcomes. Food insecurity is associated with adverse health, growth, and development outcomes among children aged 0 to 18 years (41). In addition, maternal food insecurity has been shown to be associated with increased risk of certain birth defects (42,43). For children, food insecurity/insufficiency is associated with poor health (44-47). Very low food security among children further increases the odds of poor health and is associated with more frequent hospitalizations among young children (46). Children of immigrant mothers are especially prone to this negative outcome (48). Infants and toddlers from food insecure households have also been shown to be at developmental risk (49) and at risk for iron deficiency and iron deficiency anemia, especially among ethnic minorities (50,51). Compared to those from food secure households, children and adolescents in food insecure households are also more likely to exhibit behavioral and psychological problems, including suicide risk in adolescents (52-56), as well as poorer academic performance and achievement (52,57).

Adult Health and Chronic Disease Risk and Development. Among adults, food insecurity/insufficiency is associated with poor physical and mental health status, as well as depression in women (58-63) and risk for and incidence of chronic diseases, including diabetes (24,25,35,64). In US adults, food insecurity appears to be associated with diabetes incidence, independent of body mass index (65). Diabetes and chronic disease management is also associated with food insecurity (24,59,66). Finally, human immunodeficiency virus infection and poorer human immunodeficiency virus infection management/treatment outcomes have been associated with food insecurity (67-70).

Child and Adult Overweight and Obesity. For children, studies exploring the relationship between food insecurity and childhood obesity have used a variety of data sets and methods, yielding mixed results—a positive, negative, or no relationship (47,71). Although additional research should further explore the trends, most recently, a study by Gunderson and Kreider (47) found food security to be positively associated with a healthful weight in a nationally representative sample of US children (National Health and Nutrition Examination Survey, 2001-2006).

For adults, research continues to support that food insecurity is associated with overweight and obesity, especially among women from households experiencing marginal food security or low food security (71-73). Possible causes of this phenomenon include a binge-like eating pattern or overeating when food is available (36) and consumption of low-quality diets of empty-energy, high-fat, and sugary foods (74-76). As with children, additional research is needed to further clarify the relationship of food insecurity and weight status in adults.

US Food Insecurity Can Be Alleviated through a Variety of Immediate and Long-Range Interventions

A variety of strategies are utilized by households when faced with resource constraints. Federal food and nutrition assistance programs, along with community-based, nongovernmental programs, have been shown to improve food and nutrition security. Because households undoubtedly experience job transitions, layoffs, and other disruptions regardless of the economy, robust safety net programs are vital to helping US citizens and residents achieve food and nutrition security (77). As stressed in the position statement, adequate funding for food and nutrition assistance programs is vital to maintain the integrity of the US nutrition safety net. However, systematic, sustainable actions are also needed to achieve food and nutrition security in the United States. Overall, a long-term, systematic, broad-based approach, as described by McCullum and colleagues (40), appears appropriate to effectively sustain our economic social systems and, in turn, preserve our most vital resource, the citizens and residents of the United States.

Federal and Nonfederal Food and Nutrition Programs. Several federal and nonfederal programs address a variety of aspects of food security (Figure 2). In addition to these organizations, state food security and hunger centers or coalitions, several federal agencies, professional organizations, and foundations fund food security-related programs and research.

Generally, the most recent national estimates support that those with greater difficulty accessing food participate in food assistance programs (2). It would be expected, since food and nutrition assistance programs provide food and other resources, that households would be more food secure after receiving the benefits. However, those seeking program assistance are typically those with greater levels of food insecurity. As previously noted, households utilizing community emergency food and meal programs appear to be particularly vulnerable to food insecurity.

Although additional research is needed to further understand the benefits of federal and community food and nutrition assistance programs and their influence on both nutrition and non–nutrition-related outcomes, the most recent national estimates (2) support that those with greater difficulty accessing food participate in food assistance program. First, for households with incomes <130% of the federal poverty level and receiving SNAP benefits in the previous 12 months, more than half were food insecure, with 30.6% experiencing low food security and 25.7% experiencing very low food security. However, of similar households not receiving SNAP, only 30.5% were food insecure (17.1% low food security; 13.4% very low food security) (2).

Next, regarding households with incomes <185% of the federal poverty level and with school-age children participating in free or reduced-price National School Lunch Program (NSLP) in the previous 30 days, 49.4% were food insecure (31.1% low food security; 18.3% very low food security). Of similar households not receiving NSLP benefits, 31.2% experienced food insecurity (19.8% low food security; 11.4% very low food security). Finally, for households with children younger than age 5 years, incomes <185% of federal poverty level, and receiving Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) benefits in the previous month, 45.7% were food insecure (30.7% low food security; 15% very low food security). However, of similar households not receiving WIC benefits, 38.8% were classified as food insecure (27.7% low food security; 11.1% very low food security) (2).

For 2008, 55% of food insecure households participated in NSLP, SNAP, or WIC during the month before completing the food security survey. Specifically, 32.5%, 33.7%, and 14% of food insecure households participated in NSLP, SNAP, and WIC, respectively (2). Participation by households experiencing very low food security was 51.8% for one of the three programs, and 27.9%, 34.4%, and 11.1% for NSLP, SNAP, and WIC, respectively (2).

Community-Based Systematic Actions. Long-term interventions are needed to achieve food and nutrition security in the United States. Social capital, that is, social trust and community norms and networks that facilitate collective action, appears especially important to end food insecurity in the United States (78,79). As part of the Community Food Security Initiative efforts for improving US food insecurity, a variety of methods are planned (4):

- creating or enhancing community infrastructures, as well as research, monitoring, and evaluation methods, to reduce food insecurity;
- increasing job and economic security and empowering community members to become self-sufficient;
- supporting full and efficient use of federal food and nutrition assistance programs and aiding in local supplemental food donation and distribution programs; and
- educating the public on nutrition, food safety, and food security.

McCullum and colleagues (40) stressed that creating multisector partnerships and networks, including government and public health agencies, educational institutions, nonprofit organizations, and the volunteer sector, is vital for developing the infrastructure needed to achieve food and nutrition security.

Community-based programs can boost the effectiveness of federal programs in a variety of ways (80,81). Examples of community food security program benefits for both farmers/food producers and community residents include (81):

- SNAP outreach programs, which help to increase the number of eligible participating households in a community, decreasing reliance on emergency food programs.
- Farmers' markets boost incomes of local farmers, while increasing community access to fresh produce.
- Community gardens help residents in public housing and other low-income households supplement their diet with fresh produce.
- Food buying cooperatives save households money by pooling resources.
- Community-supported agriculture programs help stabilize small farmers economically, while providing high-quality, below-retail-cost produce to consumers.
- Farm-to-school initiatives assist local farmers in selling fresh produce directly to school meal programs.
- Food recovery programs rescue wholesome food from being thrown away and provide food to groups serving those in need.

Program	Web site
Bread for the World	www.bread.org
Child and Adult Care Food Program	www.fns.usda.gov/cnd/care/default.htm
Community Food Security Coalition	www.foodsecurity.org
Community Food Security Initiative	http://attra.ncat.org/guide/a_m/cfsi.html
Congressional Hunger Center	www.hungercenter.org
Expanded Food and Nutrition Education Program	www.csrees.usda.gov/nea/food/efnep/efnep.html
Federal nutrition assistance programs: • Child and Adult Care Food Program • Food Assistance For Disaster Relief • School Meals (Fresh Fruit and Vegetable Program; National School Lunch Program, School Breakfast Program; Special Milk Program; Team Nutrition) • Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); WIC Farmers' Market Nutrition Program; Senior Farmers' Market Nutrition Program • Summer Food Service Program • Supplemental Nutrition Assistance Program (SNAP); Healthy Incentives Pilot Program; see also SNAP Ed-Connection and SNAP Nutrition Education	www.fns.usda.gov/fns
Federal nutrition assistance programs—food distribution programs: • Commodity Processing • Commodity Supplemental Food Program • Department of Defense Fresh Fruit and Vegetable Program • Food Distribution Disaster Assistance • Food Distribution Program on Indian Reservations • Nutrition Services Incentive Program • Schools/Child Nutrition Commodity Programs • The Emergency Food Assistance Program	www.fns.usda.gov/fdd
Feeding America (formerly America's Second Harvest)	http://feedingamerica.org/default.aspx
Food Recovery (A Citizen's Guide to Food Recovery)	www.usda.gov/news/pubs/gleaning/content.htm
Food Research and Action Center	www.frac.org
Food Security in the United States Briefing Room (an informational Web site on food security, including national estimates of food security and food security measurement)	www.ers.usda.gov/briefing/foodsecurity
Mazon: A Jewish Response to Hunger	www.mazon.org
Meals on Wheels Association of America	www.mowaa.org/Page.aspx?pid=183
Share Our Strength	www.strength.org
SNAP-Ed Connection	http://snap.nal.usda.gov/nal_display/index.php?tax_level=1&info_center=15
SNAP Nutrition Education	www.fns.usda.gov/fsp/nutrition_education
WHY (World Hunger Year)	www.whyhunger.org

Figure 2. Selected programs, organizations, and resources that address food insecurity and hunger in the United States.

ROLES AND RESPONSIBILITIES OF RDs AND DTRs

The American Dietetic Association's vision is to "optimize the nation's health through food and nutrition." And the Association values social responsibility; that is, "Making decisions with consideration for . . . environmental, economic, and social implications" (82). In addition, one of the three core research priorities of the Association centers on a "safe, secure, sustainable food supply" (83). In that light, RDs and DTRs are uniquely positioned to play leadership roles in developing, implementing, and evaluating strategies to end US food insecurity. RDs and DTRs understand the effects of inadequate dietary

Education and practice

- Incorporate food security-related concepts into dietetics education programs using creative pedagogy.
- Learn about food insecurity and its consequences on individuals, households, and communities, and communicate this information to other professionals, legislators, policymakers, and community members to increase awareness of food insecurity and its outcomes.
- Provide appropriate nutrition care by obtaining/considering food access- and availability-related information during the assessment. Know and understand the culture of the local community to further assist in determining appropriate questions and/or information to include about food and nutrition security during the nutritional care process. Information to gather:
  - factors such as food and beverage intake (amount/variety/quality);
  - food planning and purchasing abilities and limitations, including availability of transportation;
  - food acquisition practices, including gardening, farming, hunting/fishing, and/or begging, borrowing, or stealing food;
  - preparation abilities and limitations, including availability of appliances and utilities;
  - food safety practices;
  - federal and community food and nutrition assistance program utilization;
  - information related to building and utilizing social networks;
  - anthropometric measurements, including growth pattern and/or weight changes; and
  - nutrition education needs regarding meal planning and purchasing, label reading, and food safety.
- Realize that food insecurity may make purchasing food difficult for the client, preventing compliance to a prescribed diet.
- Screen clients for resource-constrained, lack of access to food using a single-item food sufficiency question, "Which of the following statements best describes the food eaten in your household: 1) Enough of the kinds of food we want to eat; 2) Enough but not always the kinds of food we want to eat; 3) Sometimes not enough to eat; or 4) Often not enough to eat" (30).
- Partner with other professionals to alleviate food insecurity, including urban planners, public health professionals, and others.
- Network with organizations and programs addressing food insecurity in the local community, including food and nutrition assistance programs, emergency food and meal programs, food recovery groups, farmers markets, community-supported agriculture farms, community gardens, anti-hunger advocacy organizations, and food cooperatives.
- Educate eligible clients on the availability and benefits of federal and nonfederal resources available in the community and make referrals or recommend participation.
- Work to decrease the stigma of food assistance programs to increase participation rates.
- Develop innovative interventions and programs that provide nutrition education and build skills to improve the food security of individuals, households, and communities, including programs highlighting the benefits of local, seasonal, and sustainably grown foods, focusing on the development of effective household management strategies and food preparation, and creating food-based projects that foster economic development.

Research

- In view of the core research priority of the American Dietetic Association related to a "safe, secure, sustainable food supply" (83), conduct or collaborate on food insecurity-related research. Examples include:
  - mapping community processes;
  - documenting the nutritional value of emergency foods and donor practices;
  - investigating the causes of food insecurity and its effects on health, nutritional status and well-being of special, at-risk population groups;
  - exploring the influence of food system issues, such as seasonal variation in food availability, on food insecurity in the community;
  - assessing the distance of stores accepting Supplemental Nutrition Assistance Program in a particular area to participant homes; and
  - determining the effectiveness, such as cost-benefit analyses, of food recovery and other programs.
- Participate in evaluating community-based programs designed to address food insecurity.

Advocacy and public policy

- Support legislative and regulatory processes that promote uniform, adequately funded food and nutrition assistance programs, nutrition education, and programs that support the economic self-sufficiency of individuals and families.
- Serve as advocates for the nutritionally vulnerable and those groups at increased risk for food insecurity.
- Assist in efforts to improve food access and acquisition by individuals and reduce edible food loss through food recovery and gleaning.
- Partner with local and state anti-hunger advocacy organizations.
- Serve on a local food policy council, which examines local food systems and provides recommendations for social and public policy changes.
- Eliminate barriers to healthy eating among those at risk for and experiencing food insecurity.
- Advocating that stores accepting the Supplemental Nutrition Assistance Program have nutrient-dense offerings for clientele.

Figure 3. Contributions of registered dietitians and dietetic technicians, registered, to the goal of improving food insecurity in the United States.

intake and food insecurity on health and well-being and are trained in food systems, management, negotiation, decision-making, and marketing/promotion. Clearly, RDs and DTRs are uniquely positioned to play key leadership roles and to collaborate with policymakers, government and community leaders, health departments, county extension programs, anti-hunger organizations, and other community-based organizations to eliminate food insecu-

rity in the United States and to establish food secure communities. Figure 3 summarizes how RDs and DTRs can make valuable contributions toward improving food insecurity through education, practice, research, advocacy, and public policy, especially through community-based involvement.

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