

# Position of the Academy of Nutrition and Dietetics and the Society for Nutrition Education and Behavior: Food and Nutrition Programs for Community-Residing Older Adults



## ABSTRACT

Given the increasing number and diversity of older adults and the transformation of health care services in the United States, it is the position of the Academy of Nutrition and Dietetics and the Society for Nutrition Education and Behavior that all older adults should have access to evidence-based food and nutrition programs that ensure the availability of safe and adequate food to promote optimal nutrition, health, functionality, and quality of life. Registered dietitian nutritionists and nutrition and dietetics technicians, registered, in partnership with other practitioners and nutrition educators, should be actively involved in programs that provide coordinated services between the community and health care systems that include regular monitoring and evaluation of programming outcomes. The rapidly growing older population, increased demand for integrated continuous support systems, and rising cost of health care underscore the need for these programs. Programs must include food assistance and meal programs, nutritional screening and assessment, nutrition education, medical nutrition therapy, monitoring, evaluation, and documentation of evidence-based outcomes. Coordination with long-term care services and support systems is necessary to allow older adults to remain in their homes; improve or maintain their health and manage chronic disease; better navigate transitions of care; and reduce avoidable hospital, acute, or long-term care facility admissions. Funding of these programs requires evidence of their effectiveness, especially regarding health, functionality, and health care–related outcomes of interest to individuals, caregivers, payers, and policy makers. Targeting of food and nutrition programs involves addressing unmet needs for services, particularly among those at high risk for poor nutrition. Registered dietitian nutritionists and nutrition and dietetics technicians, registered must increase programmatic efforts to measure outcomes to evaluate community-based food and nutrition services.

*J Acad Nutr Diet.* 2019;119(7):1188-1204.

## POSITION STATEMENT

It is the position of the Academy of Nutrition and Dietetics and the Society for Nutrition Education and Behavior that older adults should have access to evidence-based food and nutrition programs that ensure the availability of safe and adequate food to promote optimal nutrition, health, functionality, and quality of life. Registered dietitian nutritionists and nutrition and dietetics technicians, registered, in partnership with other practitioners and nutrition educators, should be actively involved in programs that provide coordinated services between the community and health care systems that include regular monitoring and evaluation of programming outcomes. The rapidly growing older population, increased demand for integrated continuous support systems, and rising cost of health care underscore the need for these programs.

**I**N 2014, ADULTS AGED 65 YEARS and older numbered 46 million and accounted for 15% of the total US population.<sup>1</sup> By 2030, it is projected there will be 74 million older adults, accounting for 21% of the US population. It is expected to stabilize at 21% to 24% of the population at that time.<sup>1</sup> Those aged 85 years and older, the fastest growing segment of the US population, may reach 20 million by 2060.<sup>1</sup>

Improving health, functionality, and the quality of life of older adults is a goal of Healthy People 2020.<sup>2,3</sup> In order to accomplish this, the social determinants of health (conditions in the environment in which people are born, live, learn, work, play, worship, and age) must be integrated into community food and nutrition programming to older adults.<sup>4</sup> While 60% of older adults manage two or more chronic health conditions, many underuse preventive services.<sup>2</sup> There are marked disparities in the economic and physical welfare among older adults based on sex, race, and ethnicity.<sup>5</sup> These disparities include underweight status among older women with limited incomes,

as well as higher obesity rates and perceived poor overall health status among people of color, individuals with limited incomes, lower education, and who are living in rural areas.<sup>6</sup> In addition, upcoming cohorts of older adults are expected to have a higher prevalence of nutrition-related conditions, such as obesity and diabetes.<sup>7</sup>

2212-2672/© 2019 Academy of Nutrition and Dietetics and Society for Nutrition Education and Behavior. Published by Elsevier Inc. All rights reserved.

<https://doi.org/10.1016/j.jand.2019.03.011>

Available online 15 May 2019

This article is being copublished by the Academy of Nutrition and Dietetics and the Society for Nutrition Education and Behavior. Minor differences in style may appear in each publication, but the article is substantially the same in each journal.

Most (96%) older people live in their own home or other community-based housing and wish to remain in their home as long as possible.<sup>1</sup> This aging in place has health and emotional benefits over institutional care, as well as cost savings for families, government, and health systems.<sup>8</sup> As the US population continues to age, total and per-capita spending by Medicare and other payers will increase if we continue on the current trajectory. The most costly spending is for inpatient hospitalization and skilled nursing facilities.<sup>9</sup> The Patient Protection and Affordable Care Act of 2010 has specific initiatives that benefit older adults. These include Medicare preventive services, coordination of care, and care transitions to improve the quality of care, reduce readmissions, and achieve cost savings for the Medicare program.<sup>10,11</sup> The Centers for Medicare and Medicaid Services have numerous community-based wellness programs with a nutrition focus or component that provide potential opportunities for community food and nutrition programs to leverage stakeholders.<sup>12</sup> In addition, the Medicare Access and CHIP Reauthorization Act of 2015 modernizes the payment system for medical providers from a fee for service to a quality of care payment program, and creates an environment for interdisciplinary team care across health services.<sup>13</sup> Transitions of care can occur between home, independent living facilities, assisted living, nursing home, and hospitals. Providing better coordinated community and home-based services may reduce spending growth in the long-term care sector for those older adults living in the community.<sup>7</sup>

Healthy eating contributes to prevention and risk reduction of many common chronic health conditions prevalent in older adults. Chronic health conditions include: hypertension (55.9%); heart disease, including heart failure (29.4%); diabetes (20.8%); obesity (34.7%); certain cancers (23.4%); and osteoporosis (16.4% ages 70 to 79 years and 26.2% 80+ years).<sup>14</sup> The Healthy Eating Index (HEI) is a measure of diet quality that assesses conformance to the Dietary Guidelines for Americans (DGA) in individuals, food assistance packages, menus, and the US food supply.<sup>15</sup> Components of the HEI include: total fruit, whole fruit, total vegetables, greens and beans,

whole grains, dairy, total protein foods, seafood and plant proteins, fatty acids, refined grains, sodium, and empty calories.<sup>15</sup> Older adults have an HEI score of 68 out of 100, indicating their dietary quality could better align with the 2015-2020 DGA.<sup>15,16</sup> Current dietary patterns and HEI scores could be improved among older adults by increasing their intake of whole grains, vegetables, legumes, dairy products, and foods and beverages lower in sodium, with fewer calories from solid fats and added sugars.<sup>16</sup>

In addition to the nutritional quality of foods, minimizing food safety risk among older adults is essential for maintaining their health and well-being. Older adults are more susceptible than the general population to the effects of foodborne illnesses.<sup>16</sup> Food safety measures for older adults include ensuring foods have been cooked to the correct safe minimal internal temperatures and avoidance of higher-risk foods, such as unpasteurized fruit juices and dairy products, and listeria-prone foods.<sup>16</sup> Community-based nutrition and food programs for older adults must be aware of these risks, take precautions to minimize risks when serving food, and educate food handlers and older adults about safe food-handling practices.

The US Department of Health and Human Services, the US Department of Agriculture (USDA), and state and local community-based partners administer food and nutrition assistance programs for older adults. The purpose of these programs is to reduce food insecurity, hunger, nutritional risk, and/or malnutrition; promote socialization, health, and well-being; and delay adverse health conditions. Together, community food and nutrition programs target vulnerable older adults, including people of color, limited-resource audiences, individuals living in rural communities, individuals with limited English proficiency, and individuals who are at risk of institutional care.<sup>17-19</sup>

Professionals administering community-based food and nutrition programs for older adults should have appropriate training. Healthy People 2020 recommends a 10% increase in the proportion of registered dietitian nutritionists (RDNs) with geriatric certification (baseline was 0.3% in 2009).<sup>3</sup> In agreement with the Academy of Nutrition and Dietetics' Council on

Future Practice, it is recommended that food and nutrition practitioners have "training in geriatric nutrition and a variety of geriatric care specialties to support optimal health and improve health outcomes for a diverse aging population in a variety of settings."<sup>20</sup> Those who are trained in geriatric nutrition are eligible to take the Commission on Dietetic Registration's Board Certification as a Specialist in Gerontological Nutrition.<sup>21</sup> Other training programs include gerontology and geriatrics certificates, masters, and doctoral programs offered through institutions of higher education,<sup>22</sup> and the Academy of Nutrition and Dietetics supports interdisciplinary team training in geriatrics for health professionals.<sup>23,24</sup> As the need grows for RDNs and nutrition and dietetics technicians, registered (NDTRs) to be trained in gerontology and geriatric nutrition, Didactic Programs in Dietetics and graduate nutrition programs should include comprehensive training regarding special nutritional needs of older adults, nutritional assessment in both community and institutional settings, and administration and evaluation of community food and nutrition programs.

Based on their training and expertise, NDTRs should be involved in nutritional risk screenings, whereas RDNs should be responsible for nutrition assessments and developing care plans. Both should be involved with nutrition education delivery and evaluation.

The purpose of this position paper is to update an earlier position paper on this same topic. This update was deemed necessary because of the need to update the statistics provided, changes in health care policy, and the increasing relevance of outcome measures. Integrated throughout the article, an emphasis is placed on:

1. understanding the complexity of nutritional risk, screening, and assessment of the community residing older adult;
2. identifying gaps in the evidence that demonstrate the outcomes of food and nutrition programs for older adults;
3. highlighting opportunities for expanded partnerships of community nutrition programs within and among both home-

and community-based services (HCBS) and health care delivery systems;

4. identifying roles and responsibilities of RDNs and NDTRs in advocacy, leadership, and education; and
5. recommending ways to enhance the relevance, effectiveness, and funding of these community food and nutrition programs.

This position paper reinforces other Academy position papers and partnerships addressing older adults.<sup>23,25,26</sup>

## PROPOSED OUTCOMES FOR COMMUNITY FOOD AND NUTRITION PROGRAMS

Based on the purpose of US Department of Health and Human Services and USDA food and nutrition programs, the following outcomes are recommended:

1. decrease risk of malnutrition;
2. prevent or reverse unintended weight loss (UWL);
3. improve dietary alignment with 2015-2020 DGA, as determined by validated screening and assessment tools;
4. improve food security;
5. decrease avoidable admissions to hospitals, nursing homes, and other care settings associated with poor nutrition; and
6. reduce hospital readmissions through integrated services and recognition of malnutrition risk during transitions of care.<sup>27-33</sup>

RDNs and NDTRs are instrumental in achieving these outcomes and must understand factors influencing older adults' nutritional status, identify tools needed to document programming outcomes, and work collaboratively with state and federal community-based food and nutrition programs serving older adults.

## MALNUTRITION: CHARACTERISTICS AND RISK FACTORS

Malnutrition results from many predisposing factors, including the quality and quantity of food intake, food insecurity, and acute or chronic physical or mental health conditions.<sup>27-33</sup> Changes in food intake are also associated with

poor oral health, gastrointestinal problems, medications that may change appetite, chronic health conditions, and cognitive impairments.<sup>27,31,32</sup> Malnutrition in older adults can be exacerbated by hospitalization and transitions of care.<sup>27</sup> Factors related to malnutrition and nutritional risk and how they are defined are multifactorial and are described.

## Food Insecurity and Hunger

Food insecurity is distinct from hunger. Hunger is "the uneasy or painful sensation caused by a lack of food; the recurrent and involuntary lack of access to food."<sup>34</sup> Although hunger is a potential consequence, food insecurity exists whenever there is "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways."<sup>34</sup> In 2016, the USDA reported the national prevalence of food insecurity was 7.8% among households with an older adult and 8.9% among older adults living alone.<sup>35</sup> The prevalence of food insecurity exceeds 50% in some samples of older adults requesting or receiving food and nutrition assistance, such as congregate meals (CM) or home-delivered meals (HDM).<sup>33</sup>

In cross-sectional studies, food insecurity is associated with poverty, being a person of color, lower nutrient intakes, increased likelihood of poor or fair health, depression, limitations in activities of daily living (ADLs), and poor chronic disease management.<sup>33,36-42</sup> Even though there is limited Supplemental Nutrition Assistance Program (SNAP) data on the impact of food insecurity, evidence is emerging that CM and/or HDM improve food security along with nutritional status and health.<sup>33,40-42</sup> Such information is essential for developing the evidence-based outcomes to support the effectiveness and rationale for continued funding of these programs.<sup>41</sup>

## Weight Status

UWL is a common component of screening for malnutrition.<sup>28</sup> The Academy of Nutrition and Dietetics and the American Society for Parenteral and Enteral Nutrition have identified energy intake and weight loss as two of

six characteristics used for the diagnosis of malnutrition.<sup>28</sup> These characteristics are further categorized into the contexts of acute illness, chronic illness, or social or environmental circumstances. For example, in the context of social or environmental circumstances, the categories for non-severe (moderate) malnutrition are <75% of estimated energy requirement for ≥3 months and for severe malnutrition are ≤50% of estimated energy requirement for ≥1 month. The characteristics for weight loss related to malnutrition are similar to those in the context of chronic illness and social or environmental circumstances. A weight loss of 5% in 1 month for non-severe and a weight loss of >7.5% in 3 months for severe supports the diagnosis of malnutrition in the context of chronic illness. Older adults commonly have both chronic illness and social or environmental circumstances leading to malnutrition.<sup>28</sup>

Obesity is a far more prevalent problem among older adults than underweight (1% in non-institutionalized older adults).<sup>43</sup> The prevalence of obesity among those 60 years and older is 35.4% overall, 34.0% in non-Hispanic whites, 48.5% in non-Hispanic blacks, and 42.8% in Hispanics.<sup>6</sup> Obesity exacerbates most chronic health conditions, including sarcopenia, frailty, disability, and diabetes.<sup>44-46</sup> Guidelines for weight-loss treatment for older adults are limited.<sup>46</sup> It is essential to determine the health risk vs benefit of intentional weight loss for older adults by assessing its impact on disease prevention and/or treatment, functionality, and life expectancy.<sup>44-46</sup> Obesity is another area where RDNs and NDTRs should network with interdisciplinary teams to ensure they refer older adults to RDNs and NDTRs for evidence-based weight-loss strategies to maintain overall health, bone density, and lean body mass.<sup>44-46</sup>

## Frailty

An international definition of frailty is "a medical syndrome with multiple causes and contributors that is characterized by diminished strength, endurance, and reduced physiological function that increases an individual's vulnerability for dependency and/or death." Several screening tests for

frailty are available.<sup>47</sup> Frailty has a prevalence of 9.9% among community-residing older adults, is higher in women than men, and increases sharply with age.<sup>48</sup> Higher risk of frailty is significantly associated with risk of malnutrition, unintentional weight loss, and obesity.<sup>47-49</sup> Frailty associated with weight loss can be partially prevented or treated with protein-calorie supplementation.<sup>47</sup> Frailty associated with obesity can be ameliorated with intentional weight loss in obese older adults.<sup>45,46,50</sup>

### Disability and Functional Status

Poor nutrition can contribute to, and be the result of, functional decline and disability. Disability is defined as a physical or mental impairment that substantially limits function in one or more major life activities.<sup>51</sup> Disability is often assessed as ADLs of self-care tasks, such as eating, bathing, toileting, dressing, and mobility. Instrumental ADLs involve tasks of household management, including shopping, performing housework, doing laundry, meal preparation, money management, and medication management. Assessment of ADL and instrumental ADL is widely used to determine need for specific services. Older adults in community housing with services are about twice as likely as traditional community settings to have one or more ADL/instrumental ADL limitations.<sup>1</sup> These limitations increase with age.<sup>52</sup> The risk of malnutrition in conjunction with ADL dependence is associated with increased mortality rates in older adults living in the community.<sup>53</sup> A rapid cognitive decline is associated with poor nutritional status and functional impairment in community-residing older adults.<sup>54</sup>

### Sarcopenia

Sarcopenia is an age-related multifactorial syndrome resulting in loss of skeletal mass and strength.<sup>55</sup> Its prevalence in older adults ranges from 1% to 29% in the community.<sup>55</sup> Adverse outcomes of sarcopenia include functional decline, physical disability, frailty, falls, fractures, poor quality of life, and death.<sup>55</sup> Sarcopenia may be caused in part by nutritional inadequacies, such as inadequate protein

intake.<sup>55</sup> Although, the potential benefits of interventions with protein and/or amino acids are not yet clear,<sup>55</sup> aggressive nutrition support in critically ill older adults with sarcopenia may be needed.<sup>56</sup> The new International Classification of Diseases, Tenth Revision, Clinical Modification code now recognizes sarcopenia as a separately reportable state.<sup>57</sup>

### Environmental and Economic Factors

The environment in which an older adult lives influences his/her health and well-being. Environmental factors may limit food access. Contributors are transportation, walkability, safety, and overall socioeconomic status of communities.<sup>32</sup> In 2014, 10% of older adults lived below 100% of the official poverty threshold.<sup>1</sup> The prevalence of poverty is higher among older women (12.1%) compared to men (7.4%), and older people who are Hispanic (any race, 18.1%), black (19.2%), or Asian (14.7%) compared to non-Hispanic whites (7.8%).<sup>1</sup> Lower income and poverty are associated with poor nutritional status, food insecurity, and other adverse health outcomes.<sup>36-38</sup> Eligibility for federally funded community-based programs can be determined solely by income or a combination of criteria.

### Psychosocial Factors

Poor nutritional status in older adults is associated with depression, bereavement, loneliness, low morale, social isolation, limited social networks, living alone, eating alone, and loss of appetite.<sup>32</sup> For example, among older men and women, 20% and 36% live alone, 10.1% and 14.9% report depression, and 9% and 11% report dementia, respectively.<sup>1</sup> Psychosocial factors influencing nutritional intake may be short-term, in the case of bereavement, or long-term, as in the case of depression.

The RDN and NDTR can be key advocates for community food and nutrition programs by educating those directing the programs about evidence-based dietary recommendations and malnutrition risks. RDNs and NDTRs can ensure the success of meal planning and nutrition education efforts, either for acute or chronic needs, by collaborating with clinical and community partners.

### NUTRITIONAL RISK SCREENING AND ASSESSMENT

In order to contribute to the body of evidence regarding the impact of these community food and nutrition programs, continued outcomes assessments are necessary. A screening tool used with the Older Americans Act (OAA) Nutrition Program is the Nutrition Screening Initiative DETERMINE checklist.<sup>58</sup> It was originally created as an educational tool to promote awareness of one's nutritional risk. It is comprised of 10 questions pertaining to dietary intake, medication use, food insecurity, weight loss, socialization, and ADLs.<sup>58</sup> Sahyoun and colleagues<sup>59</sup> reported that some individual questions, but not the DETERMINE Checklist score, significantly predicted mortality. They recommended the checklist be used for its original purpose (screening).<sup>59</sup> Unfortunately, this is currently the tool that is mandated to be used for HDM; however, it is not systematically collected and deposited so it can be meaningfully assessed. The OAA Nutrition Program should recommend the use of validated nutritional risk tools (eg, the Mini Nutritional Assessment [MNA],<sup>60,61</sup> the Dietary Screening Tool [DST],<sup>62,63</sup> Malnutrition Screening Tool (MST),<sup>64</sup> and Seniors in the Community: Risk Evaluation for Eating and Nutrition [SCREEN II])<sup>65,66</sup> to assess program effectiveness.

One screening tool that could be implemented at the community level is the MNA, both the long (18 items) and short forms (6 items; MNA-SF), which are validated and widely used.<sup>60,61</sup> There is also a self-administered MNA (Self-MNA) with high reliability.<sup>67</sup> The original MNA is an 18-item questionnaire that probes food intake and risk factors for poor nutritional status.<sup>60</sup> Using the MNA (mainly long form) in multinational samples, the prevalence of malnutrition varied among settings and was 5.8% in community, 13.8% in nursing homes, 38.7% in hospitals, and 50.5% in rehabilitation.<sup>29</sup> Also, a few studies have used MNA as an outcome measure for HDM.<sup>68</sup>

Another easy-to-administer tool to help collect evidence regarding the effects of community-based food and nutrition programs is the DST; a validated nutritional risk assessment using dietary intake frequencies to assess nutritional risk.<sup>62,63</sup> It is quick to

administer (~10 minutes) and fast to score (<5 minutes).<sup>62,63</sup> Comprised of 25 questions, the DST is organized into seven diet component categories (processed meats; sweets, added sugars, and added fat; fruits; vegetables; lean protein; whole grains; and dairy).<sup>62</sup> Based on the score, an older adult is classified at one of three nutritional risk levels.<sup>63</sup> The DST can be completed by a participant independently or be interviewer-administered. In addition to serving as a measure of nutritional risk, the DST has been used successfully as a program outcome measure for nutrition interventions targeting older adults with limited incomes because it can reflect changes in dietary measures over time.<sup>69-71</sup>

The MST, which is comprised of two questions concerning the degree of unintentional weight loss and appetite, is also a valid and reliable screening tool.<sup>64</sup> Following a nutrition-focused quality-improvement program, patients identified as malnourished at hospital admission by the MST had a reduction in 30-day readmissions and length of stay.<sup>72</sup> Programs included post-discharge nutrition instructions, telephone calls, and oral nutrition supplement coupons.<sup>72</sup> Evidence is not yet available to support the use of MST as a validated measure to assess programs outcome for SNAP, HDM, or CM.

SCREEN II is another nutritional risk screening tool that could be utilized at the community level.<sup>65</sup> SCREEN II is comprised of 17-questions concerning factors that influence the nutritional health of community-residing older adults (eg, appetite, ability to grocery shop and prepare food, frequency of eating).<sup>65</sup> SCREEN II is able to be administered by an RDN, NDTR, or other nutrition practitioner or can be self-administered.<sup>66</sup> In addition to being a nutritional risk screening tool, it is also useful for measuring the impact of a community food and nutrition program, such as HDM.<sup>73</sup>

Finally, food insecurity is screened with the US Household Food Security Survey Module in national surveys, such as National Health and Nutrition Examination Study and the Current Population Survey.<sup>35</sup> For older adults, food insecurity can be quickly assessed using the “Six-Item Short Form.”<sup>74</sup> USDA food security categories are food secure (0 to 2), food insecure (3 to 6), and additional subcategories of

marginal food security (1 to 2), low food security (3 to 5), and very low food security ( $\geq 6$ ). A subset of two questions from this survey have high sensitivity of >96% and a specificity of >79% for food insecurity in households with older adults (eg, how often the household “worried whether food would run out before we got money to buy more” and how often “the food that we bought just didn’t last and we didn’t have money to get more”).<sup>75</sup>

Across care settings, malnutrition prevention and treatment goals, recommendations, and strategies are emerging.<sup>27,28</sup> Prevalence estimates of adult malnutrition range from 6% to 60%, depending on the criteria used and patient population.<sup>27,28</sup> In addition to the three categories of malnutrition identified by the Academy of Nutrition and Dietetics and American Society for Parenteral and Enteral Nutrition, there are six characteristics used to diagnose malnutrition.<sup>28</sup> These characteristics include insufficient energy intake, UWL, and parameters from a nutrition-focused physical examination.<sup>28,76</sup> The physical examination parameters are loss of muscle mass, loss of subcutaneous fat, localized or generalized fluid accumulation that may sometimes mask weight loss, and diminished functional status as measured by handgrip strength.<sup>28</sup> Two or more characteristics are required for the diagnosis of malnutrition, as there is no single parameter definitive for malnutrition.<sup>28</sup> Therefore, a comprehensive geriatric nutrition assessment, which includes the malnutrition characteristics, is required to identify the root cause(s). The RDN should perform these assessments. Nutritional risk and malnutrition screening in community-based food and nutrition programs may focus on weight and UWL and be assessed by trained NDTRs or other individuals.

As the United States moves toward more evidence-based nutrition programming, the RDN and NDTR, along with other nutrition practitioners, should utilize validated nutrition screening and/or assessment tools when determining program eligibility, nutrition needs assessment, integration of care, and programming impact. Examples of such tools include short forms of the US Household Food Security Survey Module<sup>74,75</sup> MNA-SF,<sup>61</sup> the DST,<sup>62,63</sup> the MST,<sup>64</sup> and the SCREEN

II,<sup>65,66</sup> and the inclusion of the nutrition-focused physical examination in nutrition assessment.<sup>28,76</sup>

Gaps in high-quality malnutrition care occurs during transitions, including hospital discharge.<sup>27,77</sup> This service gap is often due to a lack of insurance coverage for out-of-hospital nutritional risk screenings and assessments.<sup>78</sup> Another gap in care coordination is the lack of interoperability of information technology systems to share health-related information, including linking patients and caregivers with community resources.<sup>79</sup> Demonstration projects have found older adults who were recently discharged from the hospital were vulnerable to inadequate assistance with basic needs and adequate nutrition.<sup>80</sup> Conducting nutritional risk screenings and assessments during hospitalizations and at follow-up medical appointments can help health care providers connect at-risk older adults with the community food and nutrition services available in their community. Connecting older adults with these programs, as well as community RDNs and NTDRs, may help lower hospital readmission rates due to poor nutritional status. This is advantageous for both the client and the hospital, because under the Patient Protection and Affordable Care Act of 2010, hospitals are incentivized to reduce readmission rates.<sup>81</sup>

## OVERVIEW OF FOOD AND NUTRITION PROGRAMS FOR OLDER ADULTS

There are several community-based food and nutrition programs available to older adults intended to improve their dietary intake and food security. These programs are an essential part of the community-based social and health care systems intended to allow community-residing older adults to remain independent.<sup>68</sup> However, none require the involvement of an RDN or NDTR in local program delivery. RDNs are critical in acquiring evidence of program effectiveness through identifying valid and reliable outcome assessment tools, provision of evidence-based information, and/or training program staff in these measures. RDNs and NDTRs should collaborate with the agencies providing these programs during the grant writing

**Table.** Overview of food and nutrition programs for older adults and opportunities for registered dietitian nutritionists and nutrition and dietetics technicians, registered

Program and purpose	Target audience/eligibility	Services	Participation	Outcomes	Opportunities for RDNs <sup>a</sup> and NDTRs <sup>b</sup> (similar across all programs)
<i>← US Department of Health and Human Services—Administration for Community Living →</i>					
<p><b>Older Americans Act Titles I-VII</b><sup>19,105</sup></p> <p>Purpose:</p> <ul style="list-style-type: none"> <li>• Reduce hunger and food insecurity</li> <li>• Promote socialization</li> <li>• Promote health and well-being of older adults and delay adverse health conditions through access to nutrition and other disease prevention and health promotion services</li> </ul> <p>Title III: Nutrition services to older adults</p> <p>Title VI: Tribal and native organizations for aging programs and services</p>	<p>Adults age 60+ y; age 60+ y in greatest economic and/or social need, with particular attention to those with low incomes, minorities, those in rural areas, those with limited English proficiency</p> <p>Title III</p> <p>Age 60+ y; age &lt;60 y and disabled living in older adult housing, disabled living at home and eating at congregate meal (CM) sites or receive home-delivered meals (HDMs) with older adults, volunteers during meal hours</p> <p>Title VI</p> <p>Age requirement determined by Tribal organizations or Native Hawaiian Program</p>	<ul style="list-style-type: none"> <li>• Meals funded by donations and local, state, and federal funding</li> <li>• RDN can be involved with meal planning and nutritional counseling</li> <li>• RDN not responsible for group nutrition education</li> <li>• Conduct nutritional risk screenings</li> <li>• Provide nutrition education</li> <li>• Offer nutrition counseling (offered infrequently)</li> <li>• Provide health promotion: fall prevention, oral health, chronic disease self-management, general health promotion</li> </ul>	<p>Fiscal Year 2013</p> <ul style="list-style-type: none"> <li>• Provided 219 million meals (38% CM, 62% HDM) to 2.4 million older adults<sup>68</sup></li> <li>• 43% of the CM participants and 59% of the HDM participants received one or more home- and community-based services<sup>68</sup></li> </ul>	<p>CMs and HDMs help participants<sup>105</sup></p> <ul style="list-style-type: none"> <li>• Feel better (79%)</li> <li>• Remain in home (64%)</li> <li>• Eat healthier (73%)</li> <li>• Provide one-half or more of total daily food (58%)</li> <li>• Improve health (76%)</li> </ul> <p>HDM meals help participants:</p> <ul style="list-style-type: none"> <li>• Feel better (85%)<sup>105</sup></li> <li>• Remain in home (90%)<sup>105</sup></li> <li>• Eat healthier (81%)</li> <li>• Reduce falls, isolation, and worry<sup>86</sup></li> </ul> <p>Improved nutritional status, food security, nutritional intake, well-being<sup>87</sup></p>	<ul style="list-style-type: none"> <li>• RDNs with advanced degrees design program evaluation/outcome studies measuring program impacts</li> <li>• NDTRs perform nutritional risk for program participants screenings</li> <li>• RDNs conduct nutrition risk assessments for program participants</li> <li>• Publish program outcomes</li> <li>• Use program outcome data to: <ul style="list-style-type: none"> <li>o advocate for policy changes at the local, state, and federal levels</li> <li>o Advocate for expanded RDN services and integrated clinical and community care</li> <li>o Conduct and lead training for program staff regarding basic nutrition education</li> <li>o Advocate for inclusion of RDNs, NDTRs, and other food and nutrition practitioners to direct nutrition education services</li> </ul> </li> </ul> <p><i>(continued on next page)</i></p>

**Table.** Overview of food and nutrition programs for older adults and opportunities for registered dietitian nutritionists and nutrition and dietetics technicians, registered (continued)

Program and purpose	Target audience/eligibility	Services	Participation	Outcomes	Opportunities for RDNs <sup>a</sup> and NDTRs <sup>b</sup> (similar across all programs)
<b>Nutrition Services Incentive Program</b> <sup>19,105</sup> Provides proportional share to states and tribes of annual appropriation based on number of meals serviced prior year	Same as Title III	Cash and/or commodities to supplement meals		Not available	<ul style="list-style-type: none"> <li>• Network with local hospitals and other medical and social services to ensure older adults are referred to available community food and nutrition programs</li> <li>• RDNs, NDTRs, and other food and nutrition practitioners to provide nutrition education services</li> <li>• RDNs, NDTRs be trained as Academy media spokespersons to enhance communication about the nutrition and health impacts of food and nutrition assistance programs</li> </ul>

← US Department of Agriculture—Food and Nutrition Service →

<b>Supplemental Nutrition Assistance Program (SNAP)</b> <sup>91</sup> <ul style="list-style-type: none"> <li>• Assists low-income families to buy food that is nutritionally adequate</li> <li>• Provides nutrition education; however, it does not require targeting older adults<sup>96</sup></li> </ul>	US citizens and legal residents who are most in need, gross income ≤130% federal poverty level; up to \$2,000 countable resources, \$3,000 if age 60+y or disabled	Benefits can be used to buy any foods and nonalcoholic beverages that are sold to be eaten at home and can buy plants and seeds to grow food	As of 2015, 45.6 million Americans were enrolled in SNAP <sup>91</sup> 81.6% of SNAP benefits redeemed at supermarkets and superstores <sup>106</sup> SNAP benefits redeemed at farmers' markets have increased 221% in the past 5 fiscal years <sup>106</sup>	<ul style="list-style-type: none"> <li>• Participants experienced a 10% decrease in food insecurity<sup>71</sup></li> <li>• 23% participants improved nutritious food intake<sup>73</sup></li> <li>• SNAP-Education for adults age 60 to 80 y, led to increased produce intakes among older adults<sup>77</sup></li> </ul>
--	--	--	--	--

(continued on next page)

**Table.** Overview of food and nutrition programs for older adults and opportunities for registered dietitian nutritionists and nutrition and dietetics technicians, registered (continued)

Program and purpose	Target audience/ eligibility	Services	Participation	Outcomes	Opportunities for RDNs <sup>a</sup> and NDTRs <sup>b</sup> (similar across all programs)
<p><b>Commodity Supplemental Food Program</b><sup>99</sup></p> <p>Works to improve the health of older adults age 60+ y by providing US Department of Agriculture (USDA) foods that supply the nutrients lacking in their diets.</p>	<p>Resident of designated reservations (n=2) or states (n=46) and the District of Columbia</p> <p>Requires that older adults have household incomes ≤130% of federal poverty guidelines</p> <p>Women, infants, and children at ≤185% of federal poverty guidelines who were eligible as of February 6, 2014 (being phased out by the Agricultural Act of 2014)</p> <p>States may also require that participants be at nutritional risk</p>	<p>Distributes both food and funds to participating States and Indian Tribal Organizations.</p> <p>Food packages do not provide a complete diet; they provide foods with nutrients typically lacking in the diets of the target population.</p> <p>Provides nutrition education</p>	<p>83% of those eligible in 2012 received benefits<sup>99</sup></p> <p>2012 Participation rates<sup>99</sup></p> <ul style="list-style-type: none"> <li>• 42% eligible older adults (600,000)</li> <li>• 56% eligible noncitizens</li> <li>• 88% rural-residing individuals</li> <li>• 77% urban-residing individuals</li> </ul>	<p>Not available</p>	
<p><b>Senior Farmers Market Nutrition Program</b><sup>100</sup></p> <ul style="list-style-type: none"> <li>• Provide older adults with limited resources with access to local foods from farmers' markets, roadside stands, and community-supported agriculture (CSA) programs</li> </ul>	<p>An applicant's gross household income ≤185% federal poverty income guidelines.</p>	<p>Provides older adults with limited resources vouchers that can be exchanged for eligible foods (fruits, vegetables, honey, and fresh-cut herbs) at farmers' markets, roadside stands, and CSA programs.</p> <p>Works with other agencies to provide older adults</p>	<p>Fiscal year 2013<sup>100</sup>:</p> <ul style="list-style-type: none"> <li>• 52 state agencies and federally recognized Indian Tribal Organizations received grants</li> <li>• 835,795 older adults with limited resources</li> <li>• 20,617 farmers</li> <li>• 4,247 farmers' markets</li> </ul>	<ul style="list-style-type: none"> <li>• Increased self-reported produce intake<sup>33</sup></li> </ul>	

(continued on next page)

**Table.** Overview of food and nutrition programs for older adults and opportunities for registered dietitian nutritionists and nutrition and dietetics technicians, registered (continued)

Program and purpose	Target audience/eligibility	Services	Participation	Outcomes	Opportunities for RDNs <sup>a</sup> and NDTRs <sup>b</sup> (similar across all programs)
<ul style="list-style-type: none"> <li>Increase intake of local agricultural commodities through domestic farmers' markets, roadside stands, and CSA programs</li> <li>Create or help in the development of new and additional farmers' markets, roadside stands, and CSA programs</li> </ul>		with nutrition education regarding fresh produce (eg, selection, preparation)	<ul style="list-style-type: none"> <li>3,083 roadside stands</li> <li>191 CSA programs</li> </ul>		
<b>The Emergency Food Assistance Program (TEFAP)</b> <sup>101</sup> Supplements the diets of those with limited resources, including older adults, by supplying them with free emergency food and nutrition assistance	Eligibility determined by states based on: <ul style="list-style-type: none"> <li>Consumption</li> <li>Income standards</li> </ul> Participation in other existing federal, state, or local food programs <sup>81</sup>	Provides food and administrative funds to states to supplement the diets of the target audience  Provides variety of nutritious, high-quality USDA foods, and makes those foods available to State Distributing Agencies (eg, food banks)	Fiscal Year 2013 \$228.5 million of food made available	Not available	
<b>Child and Adult Care Food Program (CACFP)</b> <sup>102</sup> <ul style="list-style-type: none"> <li>Provides funding to child and adult care institutions and family or group day-care homes for the</li> </ul>	$\leq$ 185% federal poverty level  Children $\leq$ 12 y; homeless and/or migrant children $\leq$ 15 y  Age 60+ y  Citizens who are functionally impaired	Provides nutritious meals and snacks for children and older adults participating in CACFP meal sites  Offered through: <ul style="list-style-type: none"> <li>At-risk afterschool care centers</li> </ul>	3.3 million children 120,000 adults	Not available	

(continued on next page)

**Table.** Overview of food and nutrition programs for older adults and opportunities for registered dietitian nutritionists and nutrition and dietetics technicians, registered (continued)

Program and purpose	Target audience/ eligibility	Services	Participation	Outcomes	Opportunities for RDNs <sup>a</sup> and NDTRs <sup>b</sup> (similar across all programs)
delivery of nutritious foods <ul style="list-style-type: none"> <li>Promote wellness, healthy growth, and development of young children, and the health and wellness of older adults and chronically impaired disabled persons</li> </ul>	and reside with family members Citizens who are disabled regardless of age	<ul style="list-style-type: none"> <li>Adult day-care centers</li> <li>Child-care centers</li> <li>Day-care homes</li> <li>Emergency shelters</li> </ul>			

<sup>a</sup>RDN=registered dietitian nutritionist.

<sup>b</sup>NDTR=nutrition and dietetics technicians, registered.

process to ensure their services are included. In addition, RDNs and NDTRs can be instrumental in helping collect the outcomes necessary to illustrate the impact of these programs. Outcomes is the area most in need of improvement and measures range from reducing food insecurity, promoting socialization, and delaying adverse health conditions.<sup>82</sup> Helping collect program outcomes will help ensure evidence-based nutrition services are provided and program outcomes are assessed. In order to expand funding allocated to these programs, evidence of their impact on the health and well-being of older adults is needed. The Table summarizes current federal food and nutrition programs available for older adults. Each program is described further in the following sections.

### US Department of Health and Human Services

**The OAA Nutrition Program.** The OAA Nutrition Program is the primary federal food and nutrition program serving older adults by providing nutrition and social services in their own home or community rather than in institutions or other isolated systems. The OAA is comprised of OAA Titles I to VII and Nutrition Services Incentive Programs. It is a component of the HCBS system.<sup>68</sup>

The OAA Nutrition Program reaches less than one-quarter of older adults in need of its program and services. Those served receive on average three meals per week.<sup>19</sup> State and local agencies indicate that this unmet need may exist because the demand for meals is greater than available funding. Federal funding for CM and HDM has decreased considerably in the past 2 decades and expansion of support is required to serve the growing number of older adults.<sup>83</sup> Consequently, some older adults do not know about meal services.<sup>84</sup> To better meet food and nutrition needs of the increasing number of older adults, the OAA Nutrition Programs should act as a collaborator in order to organize and influence other local food and nutrition resources to combine their resources.<sup>85</sup>

Furthermore, better evidence supporting the OAA impact is needed. Program effectiveness is currently assessed using the DETERMINE

Checklist and the six-item food security questionnaire.<sup>58,74</sup> Program evaluation could be enhanced by conducting randomized controlled trials and identifying valid and reliable nutritional risk assessment tools that best meet local, state, and national needs.

Emerging evidence shows participation in OAA programs improves self-reported health, diet, and food security, and helps older adults remain in their homes (Table). Currently, most HDM outcome studies designed to assess potential benefits of HDM are not rigorously designed randomized controlled trials, nor have they evaluated the impact of multiple interventions, such as medical nutrition therapy or nutrition education with meals.<sup>68</sup> Thomas and Dosa<sup>86</sup> found daily HDM significantly reduced the prevalence of falls among those with a history of falling, decreased feelings of isolation among those living alone, and decreased worry about being able to remain in their home. Analyses of claims data, along with longitudinal studies and quasi-experimental design studies, also provide support for benefits of HDM.

Wright and colleagues<sup>87</sup> demonstrated after 2 months of receipt of HDM, participants had positive and significant improvements in their nutritional status, food security, energy and protein intake, emotional well-being, and loneliness. Lee and colleagues<sup>33</sup> reported among those wait-listed for HDM, the odds of becoming food secure after 4 months were greater for those receiving meals than those who did not. Thomas and Mor<sup>88</sup> proposed increasing the number of community-residing older adults receiving HDM would increase the number of those who would be able to remain in their homes, and reduce nursing home–related Medicaid programming costs.

Furthermore, the HCBS HDM program has produced evidence that HDM may reduce the likelihood of nursing home placement and/or hospital readmissions. Sands and colleagues<sup>89</sup> reported that Medicaid HCBS HDM recipients who received five HDMs weekly trended toward lower nursing home placement than those who did not. Similarly, Cho and colleagues<sup>90</sup> reported patients recently discharged from an inpatient hospital or emergency department who received an average of approximately six HDMs weekly had significantly fewer hospital

readmissions at 3 and 6 months than expected. Most patients also received medication management services, so the relative benefits related specifically to the meals vs the meals and medication management are not clear.

## USDA

**SNAP.** SNAP and SNAP-Education (SNAP-Ed) are the largest federal food assistance programs.<sup>91</sup> The primary SNAP goal is to decrease hunger in the United States by providing individuals with limited incomes with funds to purchase food. Eligible participants receive electronic benefit transfer cards to buy food at grocery stores, direct marketing farmers, treatment centers, farmers' markets, homeless meal providers, and group homes.<sup>91</sup> Participation in SNAP has decreased food insecurity by 10%.<sup>91</sup> SNAP may also decrease use and costs associated with nursing homes and hospitalizations in older adults.<sup>92,93</sup>

Despite the benefit SNAP participation has on food security, only 42% of older adults eligible for SNAP participate.<sup>94</sup> Reasons for low participation rates include the belief that the application burden outweighs the financial benefit, the stigma of welfare, mistrusting electronic benefit transfer cards, lack of outreach, feeling the process is overly intrusive, and confusion regarding eligibility.<sup>95</sup> SNAP has taken several steps to reduce participation barriers for older adults including: streamlining the application process and offering application assistance, which has been shown to increase SNAP access<sup>94</sup>; creating the recertification interview waiver, which waives the recertification interview for older adult households with no earned income in 11 states<sup>95</sup>; and conducting pilot projects that test the effect of simplifying the verification requirements for older adults with out-of-pocket medical expenses.<sup>95</sup>

Two additional proposed approaches intended to reduce SNAP participation barriers include: allowing SNAP benefits to be used for purchasing groceries with delivery services offered by non-profit groups and government agencies, and reducing the application burden for older adults by extending the certification period to 36 months for older adults with no earned income.<sup>95</sup>

Each state has the option to provide nutrition education to participants regarding food choices, but guidance does not specify targeting older adults.<sup>94</sup> The Patient Protection and Affordable Care Act of 2010 provides an opportunity for RDNs, NDTRs, and community health educators to be instrumental in connecting eligible older adults who qualify for health benefits to gain access to SNAP.<sup>95</sup> Research indicates SNAP participation produces varied outcomes regarding intake of nutritious foods. More than half (54%) of older adults surveyed report their consumption of nutritious foods consumed stayed the same when enrolled in SNAP, and fewer than one-quarter (23%) reported an increase in the amount of nutritious foods consumed.<sup>36</sup>

The goal of SNAP-Ed is to increase the likelihood a SNAP participant will select healthy foods and incorporate physical activity into their lifestyle.<sup>96</sup> SNAP-Ed has targeted obesity prevention since the creation of the Healthy, Hunger-Free Kids Act of 2010.<sup>96</sup> Through this law, SNAP-Ed activities must be provided through group and individual strategies and be evidence-based.<sup>96</sup> Although, SNAP-Ed is moving toward an evidence-based education model, there is no consistent assessment tool used to measure the impact of SNAP-Ed for older adults. In addition, longitudinal SNAP-Ed evaluation studies with older adults are few. One quasi-experiment SNAP-Ed evaluation study conducted by Hersey and colleagues<sup>97</sup> reported a four-session nutrition education program (Eat Smart, Live Strong) that resulted in improved fruit and vegetable intakes among adults aged 60 to 80 years. This study used the modified food behavior checklist from the University of California Cooperative Extension to assess impact.<sup>98</sup> With the move toward more evidence-based education, RDNs with advanced degrees are well-positioned to help guide research efforts in this area. These research efforts can help inform policy decisions.

**Commodity Supplemental Food Program.** The Commodity Supplemental Food Program (CSFP) provides nutritious foods along with nutrition education to those 60 years and older with incomes  $\leq 130\%$  of the federal poverty level.<sup>99</sup> Nutrition education is a

required component of the CSFP. However, it is not stipulated that RDNs or NDTRs provide this education. RDNs and NDTRs, particularly those in private practice or cooperative extension, should be proactive and reach out to their local CSFP. Mutual contracts should encourage participants be provided with evidence-based nutrition education. Minimal outcome data are available regarding the efficacy of the nutrition education component of the CSFP.

**Senior Farmers' Market Nutrition Program.** The Senior Farmers' Market Nutrition Program provides fresh fruits and vegetables from farmers' markets, community-supported agriculture programs, and roadside stands to older adults. National funding varies, is limited, and benefits are available only during harvest seasons. This program is reported to increase consumption of fruits and vegetables by older adults.<sup>100</sup> However, there are limited data regarding its overall nutritional benefit.<sup>33</sup> A study reviewed three Senior Farmers' Market Nutrition Programs; two were rated as having Level II-3 evidence (evidence of impact gathers at multiple time points regardless of whether an intervention was provided) and one was rated as a Level III (descriptive studies).<sup>12</sup>

**The Emergency Food Assistance Program.** The Emergency Food Assistance Program distributes to individual states with allocations dependent on numbers of low-income and unemployed residents.<sup>101</sup> Each state administers their own distribution of food. This food is sent to local food banks, soup kitchens, and food pantries.<sup>100</sup>

**The Child and Adult Care Food Program.** The Child and Adult Care Food Program provides nutritious meals and snacks to eligible adults 60 years and older enrolled in adult day-care centers.<sup>102</sup> Community-residing adults living with family members are also targeted. To participate, a center must be licensed to provide day care and sign an agreement with a sponsoring organization. Low-income older adults may receive meals at no cost to the participant. Meal patterns vary depending on participant age and type of meal served, but all meals must meet federal dietary guidelines.<sup>102</sup>

In addition, positioning themselves as experts in the area of evidence-based nutrition education, RDNs can also help ensure federal and state programs remain relevant and useful to the growing and diverse older adult population. By 2043, it is projected that the combined minority population will become the majority.<sup>103</sup> Moving forward, it is important that these programs address the food preferences and practices of multiple cultures. Also, as use of technology increases, the traditional in-person nutrition education model may need re-examination.

## DISCUSSION

Participation in community-based food and nutrition programs should enable older adults to remain healthy and independent. RDNs and NDTRs play an integral role in coordinating efforts among all community entities. Community-based food and nutrition programs are ideal settings to determine nutritional health through screening, assessment, and outcomes-driven programmatic development and evaluation. Although there are survey data to support the need for both CM and HDM programs, evidence-based data are limited as to the programs' effectiveness on health outcomes and costs. Nutritional risk and food-security screening can provide a better understanding of this population and offer guidance for future evidence-based programmatic monitoring. Appropriate screenings and intervention are a vital part of reaching the national goals of eliminating health disparities, preventing and/or delaying chronic conditions, along with improving discharge recovery, functionality, and quality of life.<sup>104</sup>

The effectiveness of food and nutrition programs on health outcomes and cost containment is a major component of determining program viability. In 2012, the Academy of Nutrition and Dietetics Evidence Analysis Library found Grade II (fair) evidence on nutrition-related outcomes for older adults participating in OAA and USDA programs.<sup>42</sup> There is limited evidence to support improved food and nutrition intake, increased consumption of fruits and vegetables, improved nutritional status, and improved food security or socialization.<sup>25</sup> However, research is emerging that SNAP participation

among older adults may lead to reduced use and costs associated with nursing homes and hospitalizations.<sup>92,93</sup> This type of research is critical to the future activities and funding of community food and nutrition programs. It can guide programs in addressing evolving demographics, programmatic needs, technological advances, long-term care options, and health care outcomes.

## ROLES AND RESPONSIBILITIES OF FOOD AND NUTRITION PRACTITIONERS

Advocate for:

- development and implementation of national goals, recommendations, and strategies for prevention and treatment of malnutrition across care settings;
- inclusion of food and nutrition services in HCBS;
- establishment of coordinated screening and referral systems for food and nutrition services between HCBS and other health care systems;
- adequate and sustained funding for administration, evaluation, and documentation of food and nutrition programs outcomes;
- inclusion of RDNs and NDTRs in the transition of care process to ensure a person-centered approach (utilizes both health care systems and community-based programs as equal partners in assessing, planning, and monitoring health outcomes) to health and well-being for community-residing older adults;
- the inclusion of the RDN, NDTRs, and other nutrition practitioners in community food and nutrition programs;
- expansion of nutrition and aging content in current dietetics curriculum;
- access to community food and nutrition services across all care settings and provider types; and
- food insecurity screening questions for all seniors in all care settings separate from the malnutrition screen.

Lead:

- effective linkage of institutional-based and community food and

nutrition programs and/or services;

- food assistance, meals, nutrition education, nutrition screening and assessment, medical nutrition therapy, and care management for older adults;
- technical assistance to food and nutrition programs to improve cost-effectiveness and efficiency;
- evidence-based strategies to determine when to require a comprehensive geriatric nutrition assessment to identify appropriate interventions for malnutrition;
- nutrition risk screening and comprehensive assessments;
- evidence-based nutrition education programs for older adults and caregivers, including evaluation of models of education delivery;
- rigorous programmatic evaluations and outcomes research on the effectiveness of food and nutrition programs; and
- governmental legislation and institutional policy decision-making.

Educate:

- health care team members (eg, physicians, discharge planners, and other health/social service professionals), agencies, and organizations that provide services regarding nutrition-related disease management;
- older adults and caregivers about nutrition to promote health, reduce risk, and manage diseases, to improve independence, and quality of life;
- older adults and caregivers about food safety risks and ways to lower risk and provide them with access to publicly available food safety resources, such as [foodsafety.gov](http://foodsafety.gov) and [cdc.gov/foodsafety](http://cdc.gov/foodsafety);
- organizations, teams, and individuals on nutrition-related cultural competency; and
- nutrition students and RDNs in geriatric nutrition and aging.

## RECOMMENDATIONS

To enhance the overall relevance and increase funding of food and nutrition programs for community-residing

older adults, the following steps are recommended.

Improve evidence-based outcomes to:

- design and implement uniform outcome data collection and analysis procedures that can be shared across community and health care settings (eg, area agencies on aging, departments of public health, hospitals, long-term care) and research institutions;
- conduct nutritional screenings and assessments and document food and nutrition programs impact on food and/or nutrient intake and nutritional status using validated tools;
- determine the extent food and nutrition programs improve health, chronic disease management, and other functional health outcomes; and
- determine the extent food and nutrition programs contribute toward health care–related outcomes, such as decreases in avoidable hospitalization, emergency department visits, and long-term care.

Better target programs to:

- screen and assess those at highest risk for food and nutrition-related problems due to health and cultural disparities, poor function, illnesses, chronic diseases, poor cognition, social isolation, and other risk factors;
- increase malnutrition screening and assessment of older adults to decrease avoidable hospitalizations, readmissions, and other health care services;
- document needs for services, such as older adults who are on waiting lists for home-delivered meals and are food insecure or have other nutrition risk factors; and
- collaborate with nutrition programs and health care delivery systems to streamline transitions of care.

Communicate and coordinate:

- across the various food and nutrition programs and agencies; and
- among health, social, and food and nutrition practitioners and

their agencies to ensure coordination of services across the continuum of care.

Advocate for increased funding for programs to:

- increase the evidence base for effectiveness;
- improve targeting of programs to those most in need;S
- collaborate with policymakers and payers on budgetary decisions; and
- publicize the need for and benefits of food and nutrition services at the local, state, and national level to payers, policy makers, and other stakeholders.

As our nation undergoes changes in the health care system, there will continue to be a need to enable older adults to remain in their homes, navigate transitions of care, and decrease avoidable admissions to hospitals and other care settings. Community-based food and nutrition programs can improve their relevance through increased documentation of their effectiveness, improved targeting of services, enhanced coordination among all service providers, and advocacy to a wide audience of stakeholders for the benefits of these services to improve the independence, nutrition and health status, and quality of life of older adults.

## References

1. Federal Interagency Forum on Aging-Related Statistics. Older Americans 2016: Key Indicators of Well-Being. Washington, DC: US Government Printing Office. <https://agingstats.gov/docs/LatestReport/Older-Americans-2016-Key-Indicators-of-WellBeing.pdf>. Published August 2016. Accessed January 25, 2017.
2. US Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Older Adults: Overview. Healthy People 2020 website. <https://www.healthypeople.gov/2020/topics-objectives/topic/older-adults>. Accessed January 31, 2017.
3. US Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Older Adults: Objectives. Healthy People 2020 website. <https://www.healthypeople.gov/2020/topics-objectives/topic/older-adults/objectives>. Accessed January 31, 2017.
4. Mikkelsen L, Cohen L, Frankowski S. Community-centered health homes: Engaging health care in building healthy communities. *Nat Civic Rev*. 2014;103(1):57-59.
5. Mather M, Jacobsen LA, Pollard KM. Aging in the United States. *Popul Bull*.

- 2015;70(2). <http://www.prb.org/pdf16/aging-us-population-bulletin.pdf>. Accessed January 25, 2017.
6. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of childhood and adult obesity in the United States, 2011-2012. *JAMA*. 2014;311(8):806-814.
  7. United Health Foundation. America's Health Rankings Senior Report: A call to action for individuals and their communities: 2016. <http://assets.americashealthrankings.org/app/uploads/final-report-seniors-2016-edition-1.pdf>. Published May 2016. Accessed January 25, 2017.
  8. Office of Policy Development and Research, US Department of Housing and Urban Development. Measuring the costs and savings of aging in place. US Department of Housing and Urban Development website. <https://www.huduser.gov/portal/periodicals/em/fall13/highlight2.html>. Published Fall 2013. Accessed January 25, 2017.
  9. Harris-Kojetin L, Sengupta M, Park-Lee E, Valverde R. Long-term care services in the United States: 2013 overview. National Center for Health Statistics. *Vital Health Stat*. 2013;3(37):1-107. [https://www.cdc.gov/nchs/data/series/sr\\_03/sr03\\_037.pdf](https://www.cdc.gov/nchs/data/series/sr_03/sr03_037.pdf). Accessed January 25, 2017.
  10. US Department of Health and Human Services. The Affordable Care Act and Older Americans. <https://www.hhs.gov/healthcare/facts-and-features/fact-sheets/aca-and-older-americans/>. Published March 19, 2015. Accessed January 25, 2017.
  11. Econometrica, Inc. Evaluation of the Community-Based Care Transitions Program. <https://innovation.cms.gov/Files/reports/CCTP-AnnualRpt1.pdf>. Published May 30, 2014. Accessed January 25, 2017.
  12. US Health and Human Services, US Centers for Medicare and Medicaid Services. Report to Congress: The Centers for Medicare & Medicaid Services' Evaluation of Community-based Wellness and Prevention Programs under Section 4202 (b) of the Affordable Care Act. <https://innovation.cms.gov/Files/reports/CommunityWellnessRTC.pdf>. Published 2013. Accessed May 2, 2018.
  13. Centers for Medicare and Medicaid Services. MACRA: What's MACRA. <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/MACRA-MIPS-and-APMs.html>. Accessed March 11, 2019.
  14. Wright NC, Looker AC, Saag KG, et al. The recent prevalence of osteoporosis and low bone mass in the United States based on bone mineral density at the femoral neck or lumbar spine. *J Bone Miner Res*. 2014;29(11):2520-2526. <http://onlinelibrary.wiley.com/doi/10.1002/jbmr.2269/epdf>. Accessed January 25, 2017.
  15. US Department of Agriculture. Center for Nutrition Policy and Promotion. Healthy Eating Index (HEI). <https://www.cnpp.usda.gov/healthyeatingindex>. Accessed November 13, 2017.
  16. US Department of Health and Human Services, US Department of Agriculture. 2015-2020 Dietary Guidelines for Americans. 8<sup>th</sup> edition. <http://health.gov/dietaryguidelines/2015/guidelines/>. Accessed December 18, 2015.
  17. US Department of Health and Human Services. Administration for Community Living. Nutrition Services. <https://www.acl.gov/programs/health-wellness/nutrition-services>. Accessed August 18, 2017.
  18. US Department of Health and Human Services. Administration for Community Living. Health, Wellness, and Nutrition. <https://www.acl.gov/programs/health-wellness>. Accessed August 18, 2017.
  19. US Department of Health and Human Services. Administration for Community Living. Older Americans Act. <https://www.acl.gov/about-acl/authorizing-statutes/older-americans-act>. Accessed August 18, 2017.
  20. Kicklighter JR, Dorner B, Hunter AM, et al. Visioning Report 2017: A preferred path forward for the nutrition and dietetics profession. *J Acad Nutr Diet*. 2017;117(1):110-127.
  21. Commission on Dietetic Registration. Board Certification as a Specialist in Gerontological Nutrition. <https://www.cdmnet.org/certifications/board-certification-as-a-specialist-in-gerontological-nutrition>. Accessed January 25, 2017.
  22. Association for Gerontology in Higher Education. Online Directory of Educational Programs in Gerontology and Geriatrics. <https://www.agherdirectory.org/>. Accessed January 25, 2017.
  23. Partnership for Health in Aging. Position statement on interdisciplinary team training in geriatrics: An essential component of quality healthcare for older adults. Academy of Nutrition and Dietetics website. <https://www.eatrightpro.org/-/media/eatrightprofiles/practice/position-and-practice-papers/position-papers/partnership-forhealthyagingpositionstatement.pdf>. Published March 2011. Accessed April 4, 2019.
  24. Partnership for Health in Aging. Position statement on interdisciplinary team training in geriatrics: An essential component of quality healthcare for older adults. *J Am Geriatr Soc*. 2014;62(5):961-965.
  25. Academy of Nutrition and Dietetics. Position of the Academy of Nutrition and Dietetics: Food and nutrition for older adults: Promoting health and wellness. *J Acad Nutr Diet*. 2012;112(8):1255-1277.
  26. Academy of Nutrition and Dietetics. Position of the Academy of Nutrition and Dietetics: Individualized nutrition approaches for older adults: Long-term care, post-acute care, and other settings. *J Acad Nutr Diet*. 2018;118(4):724-735.
  27. The Malnutrition Quality Collaborative. National Blueprint: Achieving Quality Malnutrition Care for Older Adults. Washington, DC: Avalere and Defeat Malnutrition Today. [http://defeatmalnutrition.today/sites/default/files/documents/MQC\\_Blueprint\\_web.pdf](http://defeatmalnutrition.today/sites/default/files/documents/MQC_Blueprint_web.pdf). Published March 2017. Accessed April 2, 2017.
  28. White JV, Guenter P, Jensen G, Malone A, Schofield M. Academy of Nutrition and Dietetics Malnutrition Work Group; A.S.P.E.N. Malnutrition Task Force, A.S.P.E.N. Board of Directors. Consensus statement of the Academy of Nutrition and Dietetics/American Society for Parenteral and Enteral Nutrition: Characteristics recommended for the identification and documentation of adult malnutrition. *J Acad Nutr Diet*. 2012;112(5):730-738.
  29. Kaiser MJ, Bauer JM, R msch C, et al. Frequency of malnutrition in older adults: A multinational perspective using the mini nutritional assessment. *J Am Geriatr Soc*. 2010;58(9):1734-1738.
  30. Guenter P, Jensen G, Patel V, et al. Addressing disease-related malnutrition in hospitalized patients: A call for a national goal. *Jt Comm J Qual Patient Saf*. 2015;41(10):469-473.
  31. Bales CW, Johnson MA. Nutrition in older adults. In: Ross AC, Cousins RJ, Caballero B, et al., eds. *Modern Nutrition in Health and Disease*. Philadelphia, PA: Wolters Kluwer Health, Lippincott Williams & Wilkins; 2014:744-756.
  32. Starr KNP, McDonald SR, Bales CW. Nutritional vulnerability in older adults: A continuum of concerns. *Curr Nutr Rep*. 2015;4(2):176-184.
  33. Lee JS, Johnson MA, Brown A. Older Americans Act Nutrition Program improves participants' food security in Georgia. *J Nutr Gerontol Geriatr*. 2011;30(2):122-139.
  34. National Research Council. Food Insecurity and Hunger in the United States: An Assessment of the Measure (2006). Washington, DC: The National Academies Press; 2006. <https://www.nap.edu/catalog/11578/food-insecurity-and-hunger-in-the-united-states-an-assessment>. Accessed May 5, 2018.
  35. Coleman-Jensen A, Rabbitt MP, Gregory CA, Singh A. Household food security in the United States in 2016. ERR-237. US Department of Agriculture, Economic Research Service website. <https://www.ers.usda.gov/webdocs/publications/84973/err-237.pdf?v=42979>. Published September 2017. Accessed May 3, 2018.
  36. Strickhouser S, Wright JD, Donley AM. Food insecurity among older adults. AARP website. [http://www.aarp.org/content/dam/aarp/aarp\\_foundation/2015-PDFs/AF-Food-Insecurity-2015Update-Final-Report.pdf](http://www.aarp.org/content/dam/aarp/aarp_foundation/2015-PDFs/AF-Food-Insecurity-2015Update-Final-Report.pdf). Published 2014. Accessed March 29, 2016.
  37. Gundersen C, Ziliak JP. Food insecurity and health outcomes. *Health Affairs*. 2015;34(11):1830-1839.
  38. Ziliak JP, Gundersen C, Haist M. The Causes, Consequences, and Future of Senior Hunger in America. March 2008. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.172.802&rep=rep1&type=pdf>. Published 2008. Accessed March 29, 2016.
  39. An R. Association of home-delivered meals on daily energy and nutrient intakes: Findings from the National Health and Nutrition Examination Surveys. *J Nutr Gerontol Geriatr*. 2015;34(2):263-272.

40. Lee JS. Food insecurity and healthcare costs: Research strategies using local, state, and national data sources for older adults. *Adv Nutr*. 2013;4(1):42-50.
41. Thomas KS. Outcomes matter: The need for improved data collection and measurement in our nation's home-delivered meals programs. *J Nutr Gerontol Geriatr*. 2015;34(2):85-89.
42. Academy of Nutrition and Dietetics. Food and nutrition for older adults promoting health and wellness evidence analysis project. Academy of Nutrition and Dietetics Evidence Analysis Library website. <https://www.andeal.org/topic.cfm?menu=5314&cat=4552>. Accessed April 4, 2017.
43. Fryar CD, Ogden CL. Prevalence of underweight among adults aged 20 years and over: United States, 2007-2008. Centers for Disease Control and Prevention website. [https://www.cdc.gov/NCHS/data/hestat/underweight\\_adult\\_07\\_08/underweight\\_adult\\_07\\_08.pdf](https://www.cdc.gov/NCHS/data/hestat/underweight_adult_07_08/underweight_adult_07_08.pdf). Published October 2010. Accessed January 26, 2016.
44. Houston DK, Nicklas BJ, Zizza CA. Weighty concerns: The growing prevalence of obesity among older adults. *J Am Diet Assoc*. 2009;109(11):1886-1895.
45. Porter Starr KN, McDonald SR, Weidner JA, Bales CW. Challenges in the management of geriatric obesity in high risk populations. *Nutrients*. 2016;8(5).
46. Locher JL, Goldsby T, Goss A, Gower B, Kilgore ML, Ard JD. Calorie restriction in overweight seniors: Do benefits exceed potential risks? *Exp Gerontol*. 2016;86:4-13.
47. Morley JE, Vellas B, van Kan GA, et al. Frailty consensus: A call to action. *J Am Med Dir Assoc*. 2013;14(6):392-397.
48. Collard RM, Boter H, Schoevers RA, Oude Voshaar RC. Prevalence of frailty in community-dwelling older persons: A systematic review. *J Am Geriatr Soc*. 2012;60(8):1487-1492.
49. Boulos C, Salameh P, Barberger-Gateau P. Malnutrition and frailty in community dwelling older adults living in a rural setting. *Clin Nutr*. 2016;35(1):138-143.
50. Starr KNP, McDonald SR, Bales CW. Obesity and physical frailty in older adults: A scoping review of lifestyle intervention trials. *J Am Med Dir Assoc*. 2014;15(4):240-250.
51. Fried LP, Ferrucci L, Darer J, Williamson JD, Anderson G. Untangling the concepts of disability, frailty, and comorbidity: Implications for improved targeting and care. *J Gerontol A Biol Sci Med Sci*. 2004;59(3):255-263.
52. Adams PF, Kirzinger WK, Martinez ME. Summary health statistics for the U.S. population: National Health Interview Survey, 2011. *Vital Health Stat* 10. 2012;10(255):1-110.
53. Naseer M, Forsell H, Fagerström C. Malnutrition, functional ability and mortality among older people age < 60 years: A 7-year longitudinal study. *Eur J Clin Nutr*. 2016;70(3):399-404.
54. Sanders C, Behrens S, Schwartz S, et al. Nutritional status is associated with faster cognitive decline and worse functional impairment in the progression of dementia: The Cache County Dementia Progression Study. *J Alzheimers Dis*. 2016;52(1):33-42.
55. Cruz-Jentoft AJ, Landi F, Schneider SM, et al. Prevalence of and interventions for sarcopenia in ageing adults: A systematic review. Report of the International Sarcopenia Initiative (EWGSOP and IWGS). *Age Ageing*. 2014;43(6):748-759.
56. Hanna JS. Sarcopenia and critical illness: A deadly combination in the elderly. *J Parenter Enteral Nutr*. 2015;39(3):273-281.
57. AIM Coalition Announces Establishment of an ICD-10-CM Code for Sarcopenia by the Centers for Disease Control and Prevention [press release]. Washington, DC: Aging in Motion Coalition; April 28, 2016. <https://aginginmotion.org/wp-content/uploads/2016/04/ICD-10-CM-Press-Release-2.pdf>. Accessed on January 31, 2017.
58. Posner BM, Jette AM, Smith KW, Miller DR. Nutrition and health risks in the elderly: The nutrition screening initiative. *Am J Public Health*. 1993;83:972-978.
59. Sahyoun NR, Jacques PF, Dallal GE, Russell RM. Nutrition screening initiative checklist may be a better awareness/educational tool than a screening one. *J Am Diet Assoc*. 1997;97(7):760-764.
60. Vellas B, Villars H, Abellan G, et al. Overview of the MNA—Its history and challenges. *J Nutr Health Aging*. 2006;10(6):456-463.
61. Kaiser MJ, Bauer JM, Ramsch C, et al. Validation of the Mini Nutritional Assessment short-form (MNA-SF): A practical tool for identification of nutritional status. *J Nutr Health Aging*. 2009;13(9):782-788.
62. Bailey RL, Mitchell DC, Miller CK, et al. A dietary screening questionnaire identifies dietary patterns in older adults. *J Nutr*. 2007;137(2):421-426.
63. Bailey RL, Miller PE, Mitchell DC, et al. Dietary screening tool identifies nutritional risk in older adults. *Am J Clin Nutr*. 2009;90(1):177-183.
64. Ferguson M, Capra S, Bauer J, Banks M. Development of a valid and reliable malnutrition screening tool for adult acute hospital patients. *Nutrition*. 1999;15(6):458-464.
65. Keller HH, Goy R, Kane SL. Validity and reliability of SCREEN II (Seniors in the community: Risk evaluation for eating and nutrition, Version II). *Eur J Clin Nutr*. 2005;59(10):1149-1157.
66. Flintbox. SCREEN: Seniors in the Community Risk Evaluation for Eating and Nutrition. <https://www.flintbox.com/public/project/2750>. Accessed November 13, 2017.
67. Huhmann MB, Perez V, Alexander DD, Thomas DR. A self-completed nutrition screening tool for community-dwelling older adults with high reliability: A comparison study. *J Nutr Health Aging*. 2013;17(4):339-344.
68. Campbell AD, Godfryd A, Buys DR, Locher JL. Does participation in home-delivered meals programs improve outcomes for older adults? Results of a systematic review. *J Nutr Gerontol Geriatr*. 2015;34(2):124-167.
69. Francis SL, MacNab L, Shelley M. A theory-based newsletter nutrition education program reduces nutritional risk and improves dietary intake for congregate meal participants. *J Nutr Gerontol Geriatr*. 2014;33(2):91-107.
70. Cottell KE, Dorfman LR, Straight CR, Delmonico MJ, Lofgren IE. The effects of diet education plus light resistance training on coronary heart disease risk factors in community-dwelling older adults. *J Nutr Health Aging*. 2011;15(9):762-767.
71. Taetzsch A, Quintanilla D, Maris S, et al. Impact on diet quality and resilience in urban community dwelling obese women with a nutrition and physical activity intervention. *J Aging Res Clin Practice*. 2015;4(2):102-108.
72. Sriram K, Sulo S, VanDerBosch G, et al. A comprehensive nutrition-focused quality improvement program reduces 30-day readmissions and length of stay in hospitalized patients. *J Parenter Enteral Nutr*. 2017;41(3):384-399.
73. Keller HH. Meal programs improve nutritional risk: A longitudinal analysis of community-living seniors. *J Am Diet Assoc*. 2006;106(7):1042-1048.
74. US Department of Agriculture, Economic Research Service. US Household Food Security Survey Module: Six-Item Short Form. <https://www.ers.usda.gov/media/8282/short2012.pdf>. Published September 2012. Accessed May 5 2018.
75. Gundersen C, Engelhard EE, Crumbaugh AS, Seligman HK. Brief assessment of food insecurity accurately identifies high-risk US adults. *Public Health Nutr*. 2017;20(8):1367-1371. <https://www.ncbi.nlm.nih.gov/pubmed/28215190>. Accessed August 20, 2018.
76. Mordarski B. Nutrition-focused physical exam hands-on training workshop. *J Acad Nutr Diet*. 2016;116(5):868-869.
77. Tappenden KA, Quatrara B, Parkhurst ML, Malone AM, Fanjiang G, Ziegler TR. Critical role of nutrition in improving quality of care: An interdisciplinary call to action to address adult hospital malnutrition. *J Parenter Enteral Nutr*. 2013;37(4):482-497.
78. Centers for Medicare and Medicaid Services. Your Medicare coverage: Nutrition therapy services (medical). <https://www.medicare.gov/coverage/nutrition-therapy-services.html>. Accessed May 5, 2018.
79. Samal L, Dykes PC, Greenberg JO, et al. Care coordination gaps due to lack of interoperability in the United States: A qualitative study and literature review. *BMC Health Serv Res*. 2016;16:143.
80. Sahyoun NR, Akobundu U, Coray K, Netteville L. Challenges in the delivery of nutrition services to hospital discharged older adults: The community

- connections demonstration project. *J Nutr Elder*. 2009;28(2):127-142.
81. Centers for Medicare and Medicaid Services. Readmission Reduction Program (HRRP). <https://www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps/readmissions-reduction-program.html>. Published April 18, 2016. Accessed January 26, 2016.
  82. Thomas KS. Potential research priorities and gaps. In: *National Academies of Sciences, Engineering, and Medicine. Meeting the Dietary Needs of Older Adults: Exploring the Impact of the Physical, Social, and Cultural Environment: Workshop Summary*. Washington, DC: The National Academies Press; 2016:109-117. <https://doi.org/10.17226/23496>.
  83. Lloyd JL, Wellman NS. Older Americans Act nutrition programs: A community-based nutrition program helping older adults remain at home. *J Nutr Gerontol Geriatr*. 2015;34(2):90-109.
  84. US Department of Health and Human Services. Administration on Aging, Administration for Community Living. FY 2013 Report to Congress: Older Americans Act. [https://www.acl.gov/sites/default/files/about-acl/2017-04/AOA\\_2013\\_AnnualReport.pdf](https://www.acl.gov/sites/default/files/about-acl/2017-04/AOA_2013_AnnualReport.pdf). Accessed May 14, 2018.
  85. Government Accounting Office. Older Americans Act: Updated information on unmet need for services. <http://www.gao.gov/assets/680/670738.pdf>. Published June 10, 2015. Accessed March 6, 2016.
  86. Thomas KS, Dosa D. More Than a Meal Pilot Research Study: Results from a Pilot Randomized Control Trial Of Home-Delivered Meal Programs. Meals on Wheels America website. <http://www.mealsonwheelsamerica.org/docs/default-source/News-Assets/mtam-full-report-march-2-2015.pdf?sfvrsn=6>. Published 2015. Accessed September 28, 2015.
  87. Wright L, Vance L, Sudduth C, Epps JB. The impact of a home-delivered meal program on nutritional risk, dietary intake, food security, loneliness, and social well-being. *J Nutr Gerontol Geriatr*. 2015;34(2):218-227.
  88. Thomas KS, Mor V. The care span: Providing more home-delivered meals is one way to keep older adults with low care needs out of nursing homes. *Health Affairs*. 2013;32(10):1796-1802.
  89. Sands LP, Xu H, Thomas J 3rd, et al. Volume of home- and community-based services and time to nursing-home placement. *Medicare Medicaid Res Rev*. 2012;2(3).
  90. Cho J, Thorud JL, Marishak-Simon S, Frawley L, Stevens AB. A model home-delivered meals program to support transitions from hospital to home. *J Nutr Gerontol Geriatr*. 2015;34(2):207-217.
  91. US Department of Agriculture, Food and Nutrition Service. Supplemental Nutrition Assistance Program (SNAP): Am I eligible for SNAP? <http://www.fns.usda.gov/snap/eligibility#Income>. Accessed January 5, 2016.
  92. Szanton SL, Samuel LJ, Cahill R, et al. Food assistance is associated with decreased nursing home admissions for Maryland's dually eligible older adults. *BMC Geriatr*. 2017;17(1):162.
  93. Samuel LJ, Szanton SL, Cahill R, et al. Does the Supplemental Nutrition Assistance Program affect hospital utilization among older adults? The case of Maryland. *Popul Health Manag*. 2018;21(2):88-95.
  94. US Department of Agriculture, Food and Nutrition Service. Fact sheet: USDA support for older Americans. <http://www.fns.usda.gov/pressrelease/2015/020215>. Modified March 16, 2018. Accessed May 9, 2018.
  95. AARP Foundation, Food Research and Action Center. Combating food insecurity: Tools for helping older adults access SNAP. [http://frac.org/wp-content/uploads/senior\\_snap\\_toolkit\\_aarp\\_frac-1.pdf](http://frac.org/wp-content/uploads/senior_snap_toolkit_aarp_frac-1.pdf). Accessed August 18, 2017.
  96. US Department of Agriculture, Food and Nutrition Service. Supplemental Nutrition Assistance Program Education (SNAP-ED): Fact Sheet. [https://snaped.fns.usda.gov/snap/SNAP-Ed%20Factsheet%20\\_August%202016.pdf](https://snaped.fns.usda.gov/snap/SNAP-Ed%20Factsheet%20_August%202016.pdf). Published August 2016. Accessed January 31, 2017.
  97. Hersey JC, Cates SC, Blitstein JL, et al. Eat Smart, Live Strong intervention increases fruit and vegetable consumption among low-income older adults. *J Nutr Gerontol Geriatr*. 2015;34(1):66-80.
  98. Townsend MS, Kaiser LL, Allen LH, Joy AB, Murphy SP. Selecting items for a food behavior checklist for a limited-resource audience. *J Nutr Educ Behav*. 2003;35(2):69-77.
  99. US Department of Agriculture, Food and Nutrition Service. Commodity Supplemental Food Program. <https://www.fns.usda.gov/csfp/commodity-supplemental-food-program-csfp>. Accessed May 10, 2018.
  100. US Department of Agriculture, Food and Nutrition Service. Senior Farmers' Market Nutrition Program (SFMNP). <https://www.fns.usda.gov/sfmnp/senior-farmers-market-nutrition-program-sfmnp>. Accessed May 12, 2018.
  101. US Department of Agriculture, Food and Nutrition Service. The Emergency Food Assistance Program (TEFAP). <http://www.fns.usda.gov/tefap/emergency-food-assistance-program-tefap>. Accessed May 10, 2018.
  102. US Department of Agriculture, Food and Nutrition Service. Child and Adult Care Food Program (CACFP). <http://www.fns.usda.gov/cacfp/child-and-adult-care-food-program>. Accessed May 10, 2018.
  103. Ortman JM, Velkoff VA, Hogan H. An aging nation: The older population in the United States: Population estimates and projections. P25-1140. US Census Bureau website. <https://www.census.gov/prod/2014pubs/p25-1140.pdf>. Published May 2014. Accessed May 4, 2018.
  104. National Academies of Science, Engineering, and Medicine. Meeting the dietary needs of older adults: A workshop. <http://nationalacademies.org/hmd/Activities/Aging/Dietary-Needs-Older-Adults.aspx>. Accessed April 7, 2017.
  105. Kowlessar N, Robinson K, Schur C. Older Americans benefit from Older Americans Act nutrition programs. Administration for Community Living website. <https://www.acl.gov/sites/default/files/programs/2016-11/AoA-Research-Brief-8-2015.pdf>. Published September 2015. Accessed May 14, 2018.
  106. US Department of Agriculture, Food and Nutrition Service. SNAP Retailer Management: 2014 Annual Report. <https://fns-prod.azureedge.net/sites/default/files/snap/2014-SNAP-Retailer-Management-Annual-Report.pdf>. Accessed May 16, 2018.

## **AUTHOR INFORMATION**

This Academy of Nutrition and Dietetics position was adopted by the House of Delegates Leadership Team on November 9, 2009 and reaffirmed on March 20, 2013. The Society for Nutrition Education and Behavior Board of Directors approved the position paper. This position is in effect until December 31, 2026. Position papers should not be used to indicate endorsement of products or services. All requests to use portions of the position or republish in its entirety must be directed to the Academy at [journal@eatright.org](mailto:journal@eatright.org).

*Authors:* Susan Saffel-Shrier, MS, RDN, CD, Certified Gerontologist (University of Utah School of Medicine, Salt Lake City, UT); Mary Ann Johnson, PhD (University of Nebraska, Lincoln, Lincoln, NE); Sarah L. Francis, PhD, MHS, RDN (Iowa State University, Ames, IA).

## **STATEMENT OF POTENTIAL CONFLICT OF INTEREST**

No potential conflict of interest was reported by the authors.

## **FUNDING/SUPPORT**

The authors received no funding for this article.

*Reviewers:* Mary Beth Arensberg, PhD, RDN, FAND (Abbott Nutrition, division of Abbott, Columbus, OH); Sharon Denny, MS, RD (retired, Academy Knowledge Center, Chicago, IL); Mary Pat Raimondi, MS, RD (retired, Academy Policy Initiatives & Advocacy, Washington, DC); Constantina Papoutsakis, PhD, RDN (Academy Research, International & Scientific Affairs, Chicago, IL); Academy Healthy Aging dietetic practice group (Judy R. Simon, MS, RD, LDN, Maryland Department of Aging, Baltimore, MD); Carmen Castaneda Sceppa, MD, PhD (Northeastern University, Boston, MA); Ock K. Chun, PhD, MPH (University of Connecticut, Storrs, CT); Kathleen T. Morgan, DrMH, NDTR (Rutgers University, New Brunswick, NJ); Kelly A. Morrison, RD, CSG, LDN (self-employed, Groton, CT); Alyce D. Fly, PhD (Indiana University, Bloomington, IN); Bret Luick, PhD (University of Alaska, Fairbanks, AK); Gail Douglas, RD, (Balanced Senior Nutrition, Malabar, FL) Paula Ritter-Gooder, PhD, RDN, CSG, LMNT, FAND (consultant, Seward, NE).

*Academy Positions Committee Workgroup:* Karen R. Greathouse, PhD, RD (Western Illinois University, Macomb, IL); Mary Ellen Posthauer, RDN, CD, LD, FAND (MEP Healthcare Dietary Services, Inc, Evansville, IN); Julie L. Locher, PhD, MSPH (content advisor) (University of Alabama at Birmingham, Birmingham, AL).

We thank the reviewers for their many constructive comments and suggestions. The reviewers were not asked to endorse this position or the supporting paper.

The American Society for Nutrition partnered with the Academy of Nutrition and Dietetics and the Society for Nutrition Education and Behavior on the development of this statement and endorses the statement's recommendations.