Position Paper



Position of the Academy of Nutrition and Dietetics: Individualized Nutrition Approaches for Older Adults: Long-Term Care, Post-Acute Care, and Other Settings



ABSTRACT

It is the position of the Academy of Nutrition and Dietetics that the quality of life and nutritional status of older adults in long-term care, post-acute care, and other settings can be enhanced by individualized nutrition approaches. The Academy advocates that as part of the interprofessional team, registered dietitian nutritionists assess, evaluate, and recommend appropriate nutrition interventions according to each individual's medical condition, desires, and rights to make health care choices. Nutrition and dietetic technicians, registered assist registered dietitian nutritionists in the implementation of individualized nutrition care, including the use of least restrictive diets. Health care practitioners must assess risks vs benefits of therapeutic diets, especially for frail older adults. Food is an essential component of quality of life; an unpalatable or unacceptable diet can lead to poor food and fluid intake, resulting in malnutrition and related negative health effects. Including older individuals in decisions about food can increase the desire to eat and improve quality of life.

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POSITION STATEMENT

It is the position of the Academy of Nutrition and Dietetics that the quality of life and nutritional status of older adults in longterm care, post-acute care, and other settings can be enhanced by individualized nutrition approaches. The Academy advocates that as part of the interprofessional team, registered dietitian nutritionists assess, evaluate, and recommend appropriate nutrition interventions according to each individual's medical condition, desires, and rights to make health care choices. Nutrition and dietetic technicians, registered assist registered dietitian nutritionists in the implementation of individualized nutrition care.

OST-ACUTE CARE (PAC), AS defined by the Centers for Medicare and Medicaid Services (CMS), is the skilled nursing care and therapy provided after an inpatient hospital stay.¹ According to CMS, PAC is provided in a variety of settings, including skilled nursing facilities (SNFs), inpatient rehabilitation facilities, long-term care hospitals, and in patients' homes through the use of home health agencies.1 Defined more generally, PAC includes a spectrum of care that follows acute care services, such as long-term care (LTC) settings, SNFs, inpatient rehabilitation facilities, longterm care hospitals, intermediate care facilities for individuals with intellectual disabilities, assisted living facilities, continuing care retirement communities, senior housing, adult day care, and hospice care.^{2,3}

The PACE (Program of All-inclusive Care for the Elderly) also called LIFE

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(Living Independence for the Elderly) in some states, is a Medicare and Medicaid program that helps people meet their health care needs in the community instead of going to a nursing home or other care facility. PACE/LIFE and Medicare Waiver programs can also provide post-acute and supportive care to individuals. Figure 1 describes the variety of programs and settings that are available to older adults that require post-acute care and other health care and supportive services in the United States. 1,3-13 Historically, the term health care communities was used to describe inpatient facilities that provided various levels of care. Patient care in many of the programs and settings that fall into the PAC spectrum differ from acute care in that long-term treatment and lifestyle goals generally take precedence over shortterm clinical goals.

NUTRITION IN LONG-TERM CARE, POST-ACUTE CARE, AND OTHER SETTINGS

Regulatory requirements related to nutrition care in LTC, PAC, and other settings vary. Not all individuals requiring PAC have access to nutrition care services provided by a registered dietitian nutritionist (RDN) or nutrition and dietetics technicians, registered (NDTR). Nursing facilities employ or contract with RDNs and NDTRs for services.¹⁴ Long-term care hospitals must meet Medicare's Condition of Participation for acute care hospitals.¹⁵ RDNs and other nutrition care practitioners are employed in long-term care hospitals, as dictated by their regulating organization. PACE includes an RDN as part of their interdisciplinary team.¹⁶ RDNs may be employed in other settings that provide care to older adults even if that care is not a regulatory requirement.

Care for older individuals must meet two goals: maintenance of health and quality of life.¹⁷ Practitioners sometimes have to choose one of these goals over the other based on the individual's goals and desires.¹⁷ Food and dining are an integral part of individualized care and self-directed living.¹⁸ Food must meet health and nutritional needs, but should also enhance

Type of facility	Overview of services provided	No. of facilities and people served
Adult day care	Centers offer supervision, social, and recreational activities, lunch, and oversight. Provides respite for those who care for a family member at home.	4,800 in 2012 serving up to 273,200 ⁴
Assisted living community	Provide residents with assistance with basic activities of daily living, such as bathing, grooming, and dressing. Services vary based on state licensure regulations. Complex medical services are not provided.	22,200 facilities in 2012 ⁴ ; nearly 780,000 people over 65 y resided in assisted-living communities in 2014 ⁵
Continuing care retirement community	Combination of independent living, assisted living, and skilled nursing options on one campus. If a resident's care needs increase over time, he/she will move to the next level of care. ⁶	1,861 in 2009 located in 48 states ⁷
Home and community-based waiver programs	A program that provides assistance with the costs of home and community-based services (such as homemaker services, personal care, and respite care) for those eligible for Medicaid. ⁸	300 active programs with nearly 1 million enrollees in 2009 ⁹
Home health agencies	Can include medical, nursing, social, or therapeutic treatment with daily activities, such as meal preparation, bathing, and dressing. Most patients are recovering, disabled, or terminally ill. ¹⁰	12,400 home health agencies ¹ treat 1.2 million patients annually ³
Hospice	Provides comfort and support to patients and their families as they approach the last stages of life. Services can be provided in a variety of post-acute settings, including at home.	4,000 hospice agencies ⁴ served 1,244,500 in 2012 ⁴
Inpatient rehabilitation facilities	Free-standing rehabilitation hospitals and rehabilitation units in acute care hospitals. Provide intensive rehabilitation therapy for patients who require and benefit from an inpatient stay and an interdisciplinary team approach to their rehabilitation. Patients have complex nursing medical management and rehabilitation needs. ¹⁰	No data available
Intermediate care facility for	Provides care for individuals with	Serves over 100,000 individuals with

Figure 1. Long-term care, post-acute care, and other settings: Overview of services provided and numbers of facilities and people served in the United States. Numbers may vary depending on reporting source and how programs and facilities were defined when statistics were published.

Type of facility	Overview of services provided	No. of facilities and people served
Long-term acute-care hospital	Provide care for patients who need longer than average hospital stays. Patients are usually very ill, with medically complex issues.	428 Centers for Medicare and Medicaid Services-licensed long-term acute-care hospital in the United States ⁸ providing service to 122,000 patients ¹
Program of all-inclusive care for the elderly (PACE) or LIFE (Living Independence for the Elderly)	Patients must be over 55 years old and certified as eligible for nursing home care by the appropriate state agency. PACE provides social and medical services primarily in an adult day health center and are supplemented by in-home and referral services as needed. ¹²	Available in 137 locations in 36 states ¹³
Skilled nursing facility	Provides 24/7 skilled nursing care. Patients have complex medical needs	16,000 licensed skilled nursing facilities in the United States ³ with approximately 1.6 million beds ³ ; approximately 1.2 million residents in 2014 ⁵

Figure 1. (continued) Long-term care, post-acute care, and other settings: Overview of services provided and numbers of facilities and people served in the United States. Numbers may vary depending on reporting source and how programs and facilities were defined when statistics were published.

quality of life. It is the position of the Academy of Nutrition and Dietetics that the quality of life and nutritional status of older adults in LTC, PAC, and other settings can be enhanced by individualized nutrition approaches. This includes the use of the least restrictive diet appropriate, particularly for older adults who choose to make quality of life and their right to make choices in daily living a priority over improving their health or increasing their longevity.

Trends in LTC, PAC, and Other Settings

An older adult is generally defined as someone older than 65 years, but those older than 65 years are sometimes categorized as young old (65 to 74 years), old (75 to 84 years), and oldest old (older than 85 years old).¹⁹ The largest generation, the baby boomers, started turning 65 years old in 2011. As a result, the percentage of people aged 65 years and older is increasing at a rapid pace. Currently, 15% of the population is 65 years or older, and by 2030 this will increase to 21% (74 million people).⁵ This equates to doubling the over 65 population since 2000. The number of people 85 years or older (the oldest old) is projected to increase to 20 million by 2060.⁵ These changes will have

dramatic effects on the nation's health care system, including the delivery of PAC in a variety of settings.

As people age, the number of chronic medical conditions they report increases. Estimates from the 2010 National Health Interview Survey indicate that 45.5% of those over 65 years of age report having two to three chronic medical conditions, and 17.1% of those over 65 years report having four or more chronic conditions, significantly higher than those in other age groups. ²⁰

As baby boomers age and the population in the United States becomes more ethnically diverse, service providers will need to adjust to changing consumer expectations for the level of services and care provided. Those expectations can generally be met by providing patient-directed care along with food choices and dining programs that reflect the culture of the individuals they serve.

Gathering data on patient demographics across various PAC providers is difficult. Available data regarding populations that reside in SNFs indicate that in 2013, approximately 4% of older Americans lived in LTC facilities, ranging from 1% of those 65 to 74 years to 15% of those 85 years and older.⁵ Thirty-six percent of those served by adult day-care services are under 65 years old; only 16.2% of those

served in 2013 to 2014 were over 85 years old.⁴ More individuals aged 85 years and older are served by residential care communities (52.6% of their total population), hospices (47.3% of their total enrollment), and nursing homes (41.6% of their total population).⁴

Among Medicare recipients, 95% of institutionalized older adults had difficulties with one or more activities of daily living (ADLs), while 81% had difficulties with three or more ADLs, such as eating, dressing, and bathing,²¹ including 58% who needed assistance with eating.⁵ In addition, 41% to 68% of nursing home residents had moderate severe cognitive impairment,⁵ which could result in physical and social problems that alter food intake and exacerbate poor health. The oldest old consume more medical services and require more assistance with ADLs than other older adults.5

Older adults in the PAC population present many challenges because this population is diverse and each individual may have unique goals for their care. Patients in health care facilities that provide PAC can range along a continuum, from an individual seeking short-term therapy (for a knee or hip replacement or strengthening after a long illness, for example) to needing long-term skilled nursing care (for someone with medically complex

chronic conditions), to end of life care. Many residents in these settings are frail older adults that are nutritionally vulnerable, meaning they have a reduced physical reserve that limits the ability to mount a vigorous recovery in the face of an acute health threat or stressor.²²

As indicated in Figure 1, the majority of patients receive PAC from SNFs (which provide 1.6 million beds), home health agencies (1.2 million patients), and hospice (1.25 million patients).³ Nursing facilities have embraced philosophies that adopt person-centered (also referred to as person-directed) living in a home-like environment. According to the Pioneer Network, "Core person-directed values are choice, dignity, respect, selfdetermination purposeful and living."²³ These philosophies are supported by federal regulations.²⁴ Improving quality of life and quality of care, allowing choices in daily living, and assisting individuals to make informed health care decisions are all major goals of person-directed care.²⁴ Involving individuals in choices about food and dining, such as diet and supplement orders, texture and consistency modifications, food selections, dining locations, and meal times, can help them maintain a sense of dignity, control, and autonomy in every PAC setting.

CARE TRANSITIONS

Transition of care refers to the movement of patients between health care locations, providers, or different levels of care within the same location as their conditions and care needs change.4 A transition of care can occur within settings or between settings; for example, hospital to LTC.² The Improving Medicare Post-Acute Care Transformation Act of 2014 (IMPACT) was enacted by the US Senate and signed into law by President Barack Obama in October 2014.²⁵ The IMPACT Act allows a time frame from 2017 to 2022 to implement requirements, including submission and reporting of standardized specific clinical assessment and outcomes data by home health agencies, SNFs, inpatient rehabilitation facilities, and long-term care hospitals. Hospice care will also be subject to a standards survey by a state or local survey agency.²⁵ One goal of Overview of the IMPACT ACT

- Incorporates standardized assessment, including components of the Continuity Assessment Record and Evaluation tool, into existing assessment tools across PAC providers.
- Utilizes Measure Domains that are standardized and include functional status. cognitive function, integrity, falls or major injury, and hospital readmissions.
- Requires development and public reporting of quality measures across settings.
- Applies measures that are approved by the National Quality Forum or through notice and comment rulemaking.
- Requires hospitals and PAC providers to provide quality measures to consumers when transitioning to a PAC provider.
- Requires the Department of Health and Human Services and Medicare Payment Advisory Commission to conduct studies and reports to link payment to quality.

Adds \$11 million in funding for Centers for Medicare and Medicaid Services to use payroll data to measure staffing in the SNF setting.10

the IMPACT Act is to provide access to information for providers to improve coordinated care across settings and exchange data among post-acute providers.²⁶ The IMPACT Act incorporates standardized assessment and requires development of quality measures. The RDN can play a significant role in improvement of quality of care and can help achieve positive clinical outcomes, quality measure improvement, cost savings, and provide an improved quality of life for the individual.²⁶ Nutrition and hydration are related to skin integrity, falls, and hospital readmissions, three of the domains outlined by the IMPACT Act. As data are collected over time, the role of nutrition care and dining services in improving quality measures may be

better defined. See the sidebar "Overview of the IMPACT Act" for more information.

In 2012, Medicare spending for PAC exceeded \$62 billion.²⁷ Medicare's bundled-payment and shared-savings programs provide strong incentives to integrate acute and PAC.²⁷ The data collected from the IMPACT Act are among several pieces of legislation that will affect future payments to PAC providers.1 Preventing hospital readmissions is one focus of cost control. Appropriate nutrition assessment, intervention, and monitoring and evaluation can play a role in preventing hospital readmissions that are related to malnutrition.²⁸

The US Department of Health and Human Services has undertaken a project to advance the connectivity of electronic health information and interoperability of health information technology, known as health IT.²⁹ The Academy is one of several national and international professional organizations that are working on this effort to improve sharing and interoperability through electronic health records and information exchange.³⁰ As this project unfolds, transfer of medical and nutrition information during care transitions should become easier.

FACTORS AFFECTING NUTRITIONAL STATUS

For older adults in community settings, food insecurity, lack of transportation, and inability to purchase and/or prepare food can all contribute to inadequate nutrient consumption. Psychosocial factors, such as lack of independence, social isolation, and depression, can make food less appealing, which may result in reduced food consumption.

Physiological changes of aging result in reduced resting energy requirements and can reduce food intake and alter body composition and weight, even in healthy older adults.31 This anorexia of aging is a highly prevalent geriatric syndrome of decreased appetite and food intake and is a recognized predictor of morbidity and mortality in clinical settings. 31,32 It can be exacerbated by decreases in olfaction and taste and changes in levels of hormones that control satiety and food intake.31 As appetite diminishes, intake of energy and other

FROM THE ACADEMY

nutrients decreases, which can result in unintentional weight loss (UWL), a weight loss that is not planned or desired, and predisposes the individual to increased risk of illness and infection. In addition, chronic disease, including cerebrovascular accidents, Parkinson's disease, cancer, diabetes, and dementia, can contribute to changes in appetite, metabolism, and weight. Older adults can develop sarcopenia, a loss of muscle mass associated with aging; dynapenia, a loss of muscle strength associated with aging; and/or cachexia, a loss of weight and muscle mass associated with underlying illness.¹⁷ Conversely, obesity and the chronic conditions that often accompany excessive adiposity can contribute to reduced physical functional ability, impaired quality of life, and result in increases in nursing home admissions.33 Sarcopenia and obesity can occur simultaneously, and may combine to impact functional status.³⁴

Polypharmacy, drug—nutrient interactions or side effects, such as anorexia; nausea; vomiting; and sensory losses that affect ability to see, smell, and taste food, all affect nutritional status.³⁵ Oral or dental changes that affect chewing or swallowing ability, including dysphagia, can also affect nutritional status.

With aging, physical changes can decrease ability to complete ADLs, including the ability to eat independently. Dependence for feeding requires caregiver availability and time, which translates to proper staffing

levels in settings, such as SNFs. Facility staff can have a major impact on nutritional status through the quality of food served and dining service provided, as well as tracking and early intervention when nutritional problems are identified. Restrictive diets may exacerbate poor food intake, leading to UWL and malnutrition. ¹⁸

MALNUTRITION IN OLDER ADULTS

Malnutrition, also known as undernutrition, is most simply defined as any nutritional imbalance.³⁶ The Academy provides a more detailed definition: "Inadequate intake of protein and/or energy over prolonged periods of time resulting in loss of fat stores and/or muscle stores, including starvationrelated malnutrition, chronic disease or condition-related malnutrition and acute disease or injury-related malnutrition."³⁷ Malnutrition can occur along a continuum from non-severe to severe, and UWL can occur at any point along that continuum. It can be categorized in three ways: starvationrelated malnutrition, chronic diseaserelated malnutrition, and acute disease or injury-related malnutrition. 38,39 The criteria used to identify malnutrition has changed in recent years; it can be diagnosed based on several key indicators, as outlined in Figure 2.3

Because of variations in criteria used to define and/or categorize undernutrition and malnutrition in past studies, determining the scope of the problem is difficult. In a recent systematic literature review that used the Mini Nutrition Assessment as a parameter, risk of malnutrition was observed in 47% to 62% of older adults in LTC.⁴⁰ A separate literature review identified leading modifiable risk factors of malnutrition (weight loss, low body mass index [BMI; calculated as kg/m²], and poor nutrition) in LTC, including depression, poor food/fluid intake, and impaired function, such as dependence on others for eating, impaired mobility, and insufficient staffing.41 Additional facility-associated factors that lead to poor oral intake include poor food delivery systems, timing of menu selection vs service, difficulty opening foods/beverages and handling dishes, and unappetizing food on overly restrictive therapeutic diets.²²

Consequences of malnutrition include loss of strength and function, increased risk of falls, depression. lethargy, immune dysfunction, increased risk of infection, delayed recovery from illness, pressure injuries, poor wound healing, increased chance of hospital admission and readmission, increased treatment costs. increased mortality.²⁸ Although pressure injuries have multiple causes, malnutrition is a contributing factor and is an important aspect of prevention and healing.42,43 Older adults are at higher risk for pressure injury development due to age, skin frailty, UWL, and other factors.

Close to 20% of post-acute Medicare patients are rehospitalized within 30

Because there is no single parameter that is definitive for adult malnutrition, identification of two or more of the following six characteristics is recommended, based on history and clinical diagnosis, physical examination, clinical signs and symptoms, anthropometric data, laboratory data, food/nutrient intake, and functional assessment.

- 1. **Insufficient energy intake:** Obtain or review food and nutrition history, estimate optimum energy needs, compare them with estimates of energy consumed, and report inadequate intake as a percentage of estimated energy intake over time.
- 2. **Weight loss:** Evaluate in light of other clinical findings, including the presence of under or over hydration. Assess weight change over time reported as a percentage of weight lost from baseline.
- Loss of muscle mass: Evaluate wasting of the temples, clavicles, and deltoids, interosseous muscles, scapula, thigh, and quadriceps.
- 4. Loss of subcutaneous fat: Evaluate loss of fat, such as triceps and fat overlying the ribs.
- Localized or generalized fluid accumulation that may sometimes mask weight loss: Evaluate generalized or localized fluid accumulation on examination (extremities, vulvar/scrotal edema, or ascites). Weight loss is often masked by generalized fluid retention and weight gain may be observed.
- 6. Diminished functional status as measured by hand grip strength.

Figure 2. Six characteristics recommended for diagnosis of adult malnutrition. Adapted from White and colleagues.³⁹ A full discussion of diagnostic criteria and how to categorize malnutrition as severe or nonsevere using the six criteria is outlined in White and colleagues.

days of discharge.⁴⁴ During the hospital stay, nutritional issues, including reduced food intake, orders for nothing by mouth, and delays in addressing nutrition needs, can result in a risk for malnutrition. Prevalence of malnutrition in older adults in acute care worldwide is estimated at 39%, along with another 47% who are at risk.4 Several publications have noted that malnourished older adults in acute care are at greater risk of loss of independence and/or mortality^{22,46}; if nutrition issues are not addressed at hospital discharge, the risks can continue to the next level of care.

Many older individuals transitioning to, or residing in, health care settings are at risk for malnutrition because of poor intake of food. By one estimate, 50% to 70% of residents in nursing homes leave ≥25% of their food uneaten at most meals and 60% to 80% of residents have an order to receive dietary supplements. ¹⁸ Data on supplement consumption is difficult to obtain, but many clinicians observe poor consumption of oral nutritional supplements.

RISKS VS BENEFITS OF DIET RESTRICTIONS

In SNFs, person-centered care is focused on improving quality of life. This includes meeting personal and/or cultural food preferences, enhancing the dining atmosphere, and focusing on individualization for each person's unique needs and desires. The Pioneer Network's New Dining Practice Standards are supported by multiple health care organizations, including the Academy.¹⁸ The standards encourage liberalizing dietary restrictions and texture modifications that are not essential to a resident's well-being.18 A regular or liberalized diet that allows for resident choice is most often the preferred initial choice of diet.18 Additional benefits of individualizing diets may include cost savings as a result of decreased supplement use⁴⁷ potentially for overall health care costs, although data on this subject are not readily available.

Evidence indicates that therapeutic diet restrictions and texture-modified diets raise concerns of risk for dehydration and malnutrition. ¹⁸ An individual's diet should be determined with the person and in accordance

with his/her informed choices, goals, and preferences, rather than exclusively by diagnosis. Unless a medical condition warrants a restricted diet, consider beginning with a regular diet and monitor the individual's acceptance and tolerance. Many facilities and programs that provide post-acute care provide menus that are based on established national guidelines, such as the Dietary Guidelines for Americans, offering a regular or general diet that is moderate in sodium, fat, and added sugars and appropriate for the majority of their patient population.

A priority of nutrition care for most frail older adults is to consume enough food to prevent UWL and malnutrition. Although therapeutic diets designed to improve health, they can negatively affect the variety and flavor of the food offered. Older adults may find restrictive diets unpalatable, resulting in reduced pleasure in eating. decreased food intake, UWL, and malnutrition. In contrast, more liberal diets are associated with increased food and beverage intake.⁴⁸ For most older adults in LTC, the benefits of lessrestrictive diets outweigh the risks. When considering a therapeutic diet prescription, the health care practitioner should ask: Is a restrictive therapeutic diet necessary? Will it offer enough benefits to justify its use?¹⁷

Disease-Specific Conditions and Restrictive Diets

Medical conditions that affect nutritional status are common in all settings that provide PAC. Individuals with sarcopenia, UWL, and/or at the end of life require nutrition care to address their unique nutritional needs. Obesity, diabetes, chronic kidney disease (CKD), and cardiovascular disease (CVD) have historically been associated with therapeutic diet prescriptions. The current standard of care is that an individual's diet should be determined with the person and in accordance with his/her informed choices, goals, and preferences, rather than exclusively by diagnosis.18

Obesity and Desired Weight Loss

More than one-third (36.5%) of US adults are obese, with higher rates of obesity in the middle ages of 40 to 59 years (40.2%) and 65 to 74 years

(40.8%), and those over 75 years of age have slightly lower ranges (27.8%). ⁴⁹ Based on Minimum Data Set data in nursing facilities, 25.8% of newly admitted adults were obese (BMI \geq 30) in 2009, ⁵⁰ and 23.9% of nursing home residents had BMIs >35 in 2010. ⁵¹

Evidence suggests that intentional weight loss in obese older adults reduces inflammation, risk of type 2 diabetes, medical complications, and mortality, and improves cardiovascular risk, physical functioning, and quality of life.^{52,53} However, some experts suggest that the adverse health outcomes of obesity and benefits of weight loss in older adults have not been proven. In recent years, nutrition research has identified the obesity paradox, evidence that overweight and obesity appear to have a protective effect in some individuals. One study found reduced mortality over a 10-year period for overweight older adults vs normal-weight older adults.⁵⁴ Disease risks related to obesity and higher BMI levels diminish with advanced age. 55-57 For example, overweight and mild to moderate obesity is associated with improved survival in older adults with acute and chronic heart failure, and obesity appears to be protective in individuals with CVD, and those with type 2 diabetes.55-57 A recent metaanalysis found that adults older than age 65 years had the lowest rates of mortality at a BMI between 27 and $27.9.^{58}$

Weight loss in obese older adults results in potential loss of fat mass, lean body mass, and bone mass, which could contribute to the development of sarcopenic obesity, thus contributing to functional decline and frailty.³³ For older individuals, the care plan should focus on weight stability through an adequate, diet along with regular physical activity to help preserve lean body mass.³³ In most cases, usual body weight is the most relevant basis for weight-related interventions rather than ideal body weight.

For all older adults, diets should be individualized based on medical condition, physical ability/function, individual goals, and life expectancy, with the individual's decisions being the basis for the care plan. ¹⁴ If weight loss is an individual's choice, the care plan must include adequate protein and calories to prevent malnutrition and/or development of pressure injuries.

Diabetes Mellitus

According to the American Diabetes Association, diabetes is more common in older adults.⁵⁹ In the LTC population, the prevalence of diabetes ranges from 25% to 34%, depending on the source of the data and/or diagnostic criteria used.⁵⁹⁻⁶¹ Although there numerous evidence-based guidelines for diabetes, older individuals have often been excluded from randomized controlled trials of treatments and treatment targets. 59,60 In older adults, goals for glycemic control should be based on an individual's overall health, patient preferences and values, life expectancy, and anticipated clinical benefit. 61,62 For both healthy older adults (≥65 years) and older individuals with multiple comorbidities, cognitive impairment, and/or endstage illnesses, A1c (also referred to as glycated hemoglobin, glycosylated hemoglobin, or hemoglobin A1c) and blood glucose goals are generally higher than those for younger, healthier older adults. 60,62 Hypoglycemia risk is the most important factor in determining glycemic goals in the LTC population because it can have consequences such as confusion, delirium, and dizziness. 59,62 Relaxing A1c goals to <8.0% or <8.5% in patients with shortened life expectancies and significant comorbidities can help reduce hospital readmissions.⁶²

In LTC settings, dietary restriction is not an important part of diabetes management for older adults.⁶¹ Overly restrictive diets may contribute additional risk for older adults with diabetes, such as UWL and undernutrition. 59,60 Widespread use of no concentrated sweets or no added sugar diets perpetuate the notion that restricting sucrose will improve glycemic control.⁶¹ Most experts agree that using medication rather than dietary changes to control blood glucose, can enhance the joy of eating and reduce the risk of malnutrition for older adults. While carbohydrate intake should be taken into consideration, offering a diet that provides a variety of food choices (ie, a general or regular diet), may be more beneficial for nutritional needs and glycemic control in patients with type 1 diabetes or type 2 diabetes on mealtime insulin.⁵⁹ The RDN should develop the nutrition care plan to include education and counseling about appropriate food choices for managing diabetes, while respecting an individual's preferences regarding food choices and use of sucrosecontaining foods.

CKD

The leading causes of CKD are hypertension and diabetes. Approximately 33% of all people with CKD are older adults⁶³ who are at risk of malnutrition due to a variety of factors, including restrictive diets, anorexia, catabolic illness, metabolic or malabsorptive disorders, and nutrient loss from dialysis. ⁶⁴(p169-174) Malnutrition may be challenging to define in this population because changes in body weight can be caused by shifts in fluid balance.

Due to the absence of studies on the effects of low-protein diets in older adults and the risk of malnutrition associated with this diet, it may be prudent to provide a more liberal diet with an emphasis on adequate calories and high biological value proteins, especially for those who are eating poorly.⁶⁵ Individuals over 80 years of age and those with malnutrition should be assessed for more modest protein restrictions due to increased risk of morbidity and mortality.⁶⁵ CKD patients receiving dialysis have increased protein requirements. 64(p169-174),65 Individualizing the diet prescription may increase total calorie and protein intake and help prevent malnutrition.

In addition to protein management, reduced intake of sodium, potassium, phosphorus, and fluids should be individualized for each CKD patient based on clinical judgment. Clinical judgment based on comprehensive nutrition assessment, clinical status, and patient goals is necessary when recommending dietary restrictions for individuals with CKD. Anorexia and malnutrition are common in older adults with endstage renal disease,65 so a more liberalized diet may be recommended if in accordance with the individual's wishes and goals.

CVD

Prevalence of hypertension, a risk factor for CVD ranges from 64% to 78.5% of the older adult population.⁶⁶ Rates are higher among certain ethnic groups. Benefits of lowering blood pressure

include risk reduction for stroke, myocardial infarction, heart failure, and renal disease. ⁶⁷ Evidence-based guidelines indicate the blood pressure goals for people 60 years or older are <150 mm Hg systolic and <90 mm Hg diastolic, with a goal of <140 mm Hg and <90 mm Hg for those with diabetes and/or CKD. Lifestyle modification is recommended for all adults in conjunction with pharmacologic treatment. ⁶⁷ A liberal approach to sodium in diets may be needed to maintain nutritional status, especially in frail older adults. ¹⁸

The leading cause of hospitalization among older adults in the United States is heart failure.⁶⁸ In addition, >50% of patients with heart failure are readmitted within 6 months of hospital discharge.⁶⁸ Heart failure treatment includes medications, reduced sodium diet, and daily physical activity.⁶⁹ Health care providers typically prescribe a diet of 2,000 mg sodium and 2,000 mL fluid restriction per day⁷⁰; however, a recent evidence analysis project supports an intake of 2,000 to 3,000 mg sodium/day to decrease hospital readmissions and mortality in patients with compensated congestive heart failure.71

The benefit of modifying risk factors such as serum lipids to prevent CVD among older populations is unclear. Most findings are extrapolated from studies conducted on younger populations.⁷² Information on the relative risks and benefits of specific therapies for secondary prevention of heart disease in older adults are needed.73 Guidelines from the American Heart Association and the American College of Cardiology (published in 2013) indicate that a focus should be on an adult's overall risk factors for atherosclerotic heart disease, as opposed to setting specific parameters for blood lipid control.74

Health care providers should be aware of cardiac problems while balancing the individual's clinical status, prognosis, and increased risk for malnutrition when making nutrition recommendations. If aggressive lipid reduction is appropriate for the nursing home resident, it can be achieved more effectively using medications, while still allowing the individual to make personal food choices.¹⁸

The nutrition care plan for older adults with CVD should focus on maintaining blood pressure and blood lipid levels (as consistent with individual goals) while preserving eating pleasure and quality of life.¹⁷ Using menus that work toward the objectives of the 2015-2020 Dietary Guidelines for Americans (including Healthy US-Style Eating Patterns, Healthy Vegetarian, and Mediterranean-Style eating patterns)⁷⁵ and the Dietary Approaches to Stop Hypertension diet can help achieve those goals. The Dietary Approaches to Stop Hypertension eating pattern is known to reduce blood pressure and may also reduce rates of heart failure. 70,76 Individualized, less restrictive diets may be needed for LTC residents if oral intake is poor. Health care providers should also assess for malnutrition and cardiac cachexia with interventions as appropriate to improve nutritional status. Physical activity that is based on each individual's abilities can also help facilitate cardiac health.⁷²

Cognitive Impairment

Cognitive impairments, including moderate to severe Alzheimer's disease and other dementias, affect approximately 65% of LTC residents.⁷⁷ Unintended weight loss is common in people with Alzheimer's disease and may be associated with lower energy intake, higher resting energy expenditure, exaggerated physical activity, or a combination of these factors.⁷⁸ Meal intake is often poor, usually due to cognitive decline. The goal of nutrition care for older adults with Alzheimer's disease or other forms of dementia is to develop an individualized diet that considers food preferences, utilizes nutrient-dense foods, and offers feeding assistance as needed to achieve the individual's goals.

UWL

UWL can also occur in other older adults and has been linked with underlying illness, progressive disability, and increased morbidity and mortality. ^{64(p107-115)} In older adults experiencing UWL, the focus should be on addressing treatable causes. ¹⁶ This might include strengthening social supports, ensuring adequate feeding assistance, improving mealtime

ambiance, and reducing dietary restrictions.⁷⁹ Enteral feeding should be considered if other interventions have failed and it is consistent with advance directives.^{64(p107-115)}

Palliative Care

Goals for older adults who elect supportive care should focus on comfort and quality of life. The individual and/ or family/surrogate should be at the center of all decision making. Accommodating individual food and fluid preferences is essential for well-being and quality of life and is one aspect of care that the individual/surrogate can control.^{64(p107-115)} Advance directives regarding aggressive enteral feeding should be updated or obtained if they are not already on file. Education related to the risks vs benefits of enteral nutrition and the individual's right to refuse medical intervention should be provided and documented. Research does not support the use of enteral nutrition to prevent aspiration, improve wound healing, or prolong survival, particularly for end-stage dementia patients.⁸⁰ The New Dining Practice Standards and The American Geriatrics Society support careful hand feeding as a more compassionate alternative to tube feeding.^{18,79} However, the autonomy of the individual or their surrogate should be respected, and a final decision should be reached using a patient-centered approach.81 The nutrition care plan should reflect the individual's choices for nutrition care, and include provision of any food and beverage that the individual will safely consume. More information on end of life nutrition and hydration can be found in the "Position of the Academy of Nutrition and Dietetics: Ethical and Legal Issues in Feeding and Hydration."80

COMPLIANCE WITH FEDERAL LTC REGULATIONS

In November 2016, CMS released new federal rules that govern LTC facilities.²⁴ The new rules include an increased emphasis on quality of life and the rights of individuals to make choices, including choices in food and dining.

The State Operations Manual (SOM), Appendix PP—Guidance to Surveyors for Long Term Care Facilities states: "A facility must treat each resident with respect and dignity and care for each resident in a manner and in an environment that promotes maintenance or enhancement of his or her quality of life, recognizing each resident's individuality. The facility must protect and promote the rights of the resident." ¹⁴ Providing a therapeutic or texture-modified diet against a resident's wishes is a violation of a resident's right to make choices. ^{14,17,18}

The SOM requires that facilities "provide each resident with a nourishing, palatable, well-balanced diet that meets his or her daily nutritional and special dietary needs, taking into consideration the preferences of each resident" and that menus "reflect, based on a facility's reasonable efforts, the religious, cultural and ethnic needs of the resident population, as well as input received from residents and resident groups." 14

In an effort to enhance quality of life, respect resident rights, and promote person-centered care, many facilities are enhancing their dining programs to include creative ideas that demonstrate improvements in dining, food intake, and/or quality of life.

The CMS SOM also addresses nutrition, and recognizes the potential benefits of individualized diets.¹⁴ According to the CMS, "it is often beneficial to minimize restrictions, consistent with a resident's condition, prognosis, and choices before using supplementation. It may also be helpful to provide the residents their food preferences, before using supplementation."¹⁶ Providing a more liberal diet may help meet the SOM requirements to "maintain acceptable parameters of nutritional status, such as usual body weight or desirable body weight range and electrolyte balance, unless the resident's clinical condition demonstrates that this is not possible or resident preferences indicate otherwise."14

The CMS SOM also notes "(1) Therapeutic diets must be prescribed by the attending physician. (2) The attending physician may delegate to a registered or licensed dietitian the task of prescribing a resident's diet, including a therapeutic diet, to the extent allowed by State law."¹⁴

The CMS requires that conversations regarding a resident's right to make choices and education of the risks and benefits of specific choices be

documented by the facility.⁵ Documentation of these conversations in the medical record is a recommended standard of care.

THE ROLES OF RDN AND NDTR

The roles of the RDN and NDTR vary by the PAC setting as well as state and/or federal regulations that govern them. A qualified dietitian or other clinically qualified nutrition care professional is required by federal law in CMScertified SNFs, and dietitians are required for the PACE/LIFE program. 12,14 A qualified dietitian or other clinically qualified nutrition professional, as defined by CMS, is one who is qualified based upon either registration by the Commission on Dietetic Registration of the American Dietetic Association (now the Academy of Nutrition and Dietetics) or as permitted by state law, on the basis of education, training, or experience in identification of dietary needs, planning, and implementation of dietary programs. 24,82 Directors of food and nutrition services who are not qualified dietitians must also meet minimum education and certified requirements.²⁶

RDNs must meet regulatory compliance standards set forth by CMS or other regulatory agencies for the particular health care setting, while achieving nutrition outcomes consistent with professional standards, personcentered care, and individual wishes.83 Each RDN has an individual scope of practice that is determined by education, training, credentialing, as well as demonstrated and documented competence to practice.84 An RDN's legal scope of practice is defined by state licensure law and differs from state to state.83 The RDN serves as a member of the interdisciplinary team and coordinates nutrition care, focusing person-centered, individualized diets that consider an individual's health care goals and preferences.⁸³

RDNs also play a critical role in developing facility policies and procedures and in educating patients and staff on the importance of individualized nutrition care. In SNFs, the intent of the regulation is to ensure that a dietitian is utilized in planning, managing, and implementing dietary service activities to assure that the residents receive adequate nutrition. 14,24 See the sidebar "Role of a

Role of a Qualified Dietitian or Other Clinically Qualified **Nutrition Professional**

A dietitian qualified on the basis of education, training, or experience in identification of dietary needs, planning, and implementation of dietary programs has experience or training, which includes 14:

- assessing special nutritional needs of geriatric and physically impaired individuals;
- developing therapeutic diets;
- developing regular diets to meet the specialized needs of geriatric and physically impaired individuals;
- developing and implementing continuing education programs for dietary services and nursing personnel;
- participating in interdisciplinary care planning;
- budgeting and purchasing food and supplies; and
- supervising institutional food preparation, service, and storage.

Qualified Dietitian or Other Clinically Oualified Nutrition Professional" for more information.

RDNs should utilize the Nutrition Care Process and develop an individualized care plan that is consistent with needs based on nutritional status, nutrition-focused physical findings,³ medical condition, personal preferences, and an individual's right to make choices. RDNs should assess nutritional status, determine a nutrition diagnosis, plan appropriate nutrition interventions, and monitor and evaluate outcomes. NDTRs support RDNs in the Nutrition Care Process and may complete parts of the process as assigned by the RDN.85,86 The RDN can delegate tasks to a competent NDTR as appropriate based on state law.85,86 Collaboration among the patient, family, and members of the health care team will help assure the nutrition plan of care is comprehensive and appropriate for each individual.

RDNs should develop and/or utilize appropriate communications systems across the continuum of care during care transitions. This might include when possible, communicating with other health care settings regarding an individual's diet prescription, preferences, and choices. Diet prescriptions that are appropriate in an acute-care setting may not be necessary or desired once an individual resides in PAC or is readmitted to an acute care hospital. As the national interoperability program (health IT) is implemented, this type of information will be shared more easily and routinely. In addition, reporting of data and outcomes from the IMPACT Act may help to better define the role of nutrition in improved patient outcomes and cost containment in PAC in

Recent federal regulations that oversee SNFs allow physicians to delegate writing of diet orders to qualified dietitians and other clinically qualified nutrition professionals.²⁴ This may help assure continuity of care; however, facility policies and procedures must be considered and state licensure laws may impact the ability of RDNs to write diet orders, even if privileges are granted by a physician.87 RDNs should be advocates for order-writing in their state with direction from the Academy. state affiliates, and state licensing boards.

SUMMARY

Nutrition care is an essential component of interprofessional care for older adults in LTC, PAC, and other settings that provide supportive services, and should be included as a reimbursable service for these settings in the future. Malnutrition, weight loss, poor food intake, food satisfaction, and acceptance are serious issues in this population. Given that many older individuals are at risk for malnutrition and may have different therapeutic targets for blood pressure, blood glucose, and cholesterol than younger adults, a regular or liberalized diet that allows for resident choice is most often the preferred initial choice.²⁰ Individualizing diets and incorporating choice in food selection and other aspects of food and dining can improve quality of life.

RDNs should evaluate each individual and assess the risks vs the benefits of a restrictive diet. Maximizing food intake can help prevent undernutrition/malnutrition and UWL, which can lead to additional health complications. Individualizing to the least restrictive diet can enhance nutritional status and improve quality of life, particularly for older adults in PAC settings.

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AUTHOR INFORMATION

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