

Practice Paper of the American Dietetic Association: Individualized Nutrition Approaches for Older Adults in Health Care Communities

ABSTRACT

It is the position of the American Dietetic Association that the quality of life and nutritional status of older adults residing in health care communities can be enhanced by individualization to less-restrictive diets. The Association advocates the use of qualified registered dietitians (RDs) to assess and evaluate the need for nutrition care according to each person's individual medical condition, needs, desires, and rights. Dietetic technicians, registered, provide support to RDs in the assessment and implementation of individualized nutrition care. Individual rights and freedom of choice are important components of the assessment process. An RD must assess each older adult's risks vs benefits for therapeutic diets. Older adults select housing options that provide a range of services from minimal assistance to 24-hour skilled nursing care. Food is an important part of any living arrangement and an essential component for quality of life. A therapeutic diet that limits seasoning options and food choices can lead to poor food and fluid intake, resulting in undernutrition and negative health effects. Including older individuals in decisions about food can increase the desire to eat and improve quality of life. The expansion of health care communities creates a multitude of options for RDs and dietetic technicians, registered, to promote the role of good food and nutrition in the overall quality of life for the older adults they serve.

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DESCRIPTION OF THE POPULATION

The number of older adults is expected to increase to 55 million in 2020 and the older than age 85 years population will reach 6.6 million, a 15% increase (1). The projected growth of this population challenges the health care system, as well as workforce demand for registered dietitians (RDs) and dietetic technicians, registered (DTRs), who provide nutrition care for an aging population residing in a variety of settings. Collaboration between RDs and DTRs will be important as they strive to implement the Nutrition Care Process (2).

In 2008, 4.1% of Americans aged 65 years or older (1.44 million) lived in an institutional setting such as a nursing facility where Medicaid is the primary payer for the care they receive (2). It is estimated that 83% of the Medicare beneficiaries residing in nursing facilities require assistance with one or more activities of daily living, and 67% have difficulty with three or more activities of daily living, including assistance with eating (2). Sensory impairments, including dentition, are prevalent in 32% of people older than age 85 years and 23% of people older than age 65 years, potentially leading to limited food selection (3).

The most common and costly chronic diseases diagnosed in older adults (older than age 65 years) are heart disease, stroke, cancer, and diabetes mellitus (4). These conditions contribute to decline in function and quality of life, and ultimately affect ability to continue to live independently.

HEALTH CARE COMMUNITIES

As a result of the growth of the older adult population in the United States, the range of housing accommodations and community services has ex-

panded. The type of food and nutrition care offered may depend on the living environment. RDs and DTRs must be flexible and willing to adapt their clinical skills to meet the needs of individuals in a variety of settings ranging from custodial care to skilled nursing care.

Long-Term Care and Short-Term Rehabilitation

The typical long-term care skilled facility changed dramatically when Medicare policy shifts created an influx of short-stay, post-hospitalization admissions with more medically complex conditions. In addition, state Medicaid policy modifications avoided or delayed admission for lower acuity long-term residents. These changes created two different patient populations: short-stay residents requiring intense rehabilitation and/or medically complex care; and older, more disabled long-term residents with medically complex conditions. The average length of stay for short-term rehabilitation residents is 33 days compared to 835 days for the longer-term stays (3).

A short-term stay resident is typically a younger person recovering from knee or hip replacement or a brief illness. An individual recovering from surgery requires additional energy and protein for healing vs a strict therapeutic diet. An RD has the opportunity to discuss the benefits of healthy eating before discharge or may assign this education component to a competent DTR. Offering specific recommendations focused on an individual's nutritional requirements, such as a consistent carbohydrate diet for a person with diabetes, is a proactive approach to improve chances for a positive recovery and improved future health. The educational process could include referral to an

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appropriate agency or program, such as home-delivered meals, or a postdischarge follow-up by an RD or competent DTR, as assigned by the RD.

The Centers for Medicare and Medicaid Services (CMS) and state agencies are the regulatory bodies for long-term care facilities. Licensed health care facilities, programs, and agencies must meet the conditions of participation to participate in Medicare and Medicaid programs and receive payment for beneficiary care. The conditions of participation are minimum health and safety legal requirements that are the foundation for improving quality and protecting the health and safety of beneficiaries and are published in the Code of Federal Regulations. The rules are available in Appendix PP—Guidance to Surveyors for Long Term Care Facilities of the CMS's State Operations Manual (5). Accreditation by The Joint Commission is voluntary and supplements the conditions of participation mandated by the CMS. In 2009 there were 1,100 long-term care facilities accredited by The Joint Commission, which conducts performance improvement surveys every 3 years (6).

Long-term care facilities are surveyed by state or federal agencies at a minimum of every 9 to 15 months, with additional complaint surveys conducted in between if needed. Most state regulations mirror the federal survey and certification standards. Federal regulations require that "The facility must employ a qualified dietitian either full time, part time, or on a consultant basis." The CMS requires each facility to be licensed by the state to be certified for CMS payment. State facility licensure laws therefore meet or exceed CMS regulations. In the case of nursing facilities, all but two states expand on the CMS's definition of *qualified dietitian*. For example, some states require that the qualified dietitian be only an RD. Other states, particularly those with dietitian licensing or certification, may require a licensed/certified RD or an RD or licensed/certified dietitian. Other states require just education and training equivalent to RD training. All of these options technically meet CMS requirements.

State regulations may or may not define required RD hours each month. However, based on the cur-

rent medically complex population in long-term care facilities, an RD's required time often exceeds any minimum state requirements. Because each facility is unique, an RD should negotiate hours based on the time required to achieve the goals of nutrition services for the facility and its residents.

In the State Operations Manual, each federal tag number is associated with a regulation that provides interpretive guidance to assist surveyors in determining if a facility is compliant with the regulation. F 325 Nutrition loosely follows the American Dietetic Association's (ADA's) Nutrition Care Process to assist in the management of an individual's nutrition care. The Nutrition Care Process is designed to improve the consistency and quality of individualized care. There are four steps in the process: nutrition assessment, nutrition diagnosis, nutrition intervention, and nutrition monitoring and evaluation (7).

Interventions highlighted in F 325 interpretative guidance include resident choice, diet liberalization, weight related interventions, and meeting nutrition needs (8). Following the Nutrition Care Process, an RD or DTR as assigned, must individualize interventions, maintain or improve quality of life, and adhere to residents' rights. CMS tag F 150 Resident's Rights, which is linked to F 325 Nutrition, notes that facilities need to "determine if the resident's preference related to nutrition and food intake were considered" in making decisions related to his or her care (8). A resident has the right to refuse treatment, which may include a therapeutic diet.

Home- and Community-Based Services (HCBS)

HCBS, operated under the CMS Medicaid programs, include adult day care services, home care, home health/hospice programs, and the Program for All-inclusive Care for the Elderly. HCBS provide some overlapping but distinct services that differ from the 24-hour round-the-clock nursing care in a nursing facility (9). The HCBS waiver program established by the federal government under Section 1915 (c) of the Social Security Act may include home-delivered meals and nutrition counseling

(10). Only 29 states have chosen this option as part of the Medicaid waiver program. Programs for All-inclusive Care for the Elderly vary by state and include day programs with supportive services such as rehabilitation aides, speech, and occupational therapists and perhaps a medical director and/or nutrition services. In 2009, 2.8 million senior citizens in the United States received Medicaid HCBS services and 300,000 individuals were on waiting lists. States providing HCBS have evidence indicating that offering community-based services is less expensive than institutionalized care (11). Currently the role of RDs and DTRs is limited in HCBS. However, as the population ages, additional HCBS programs will open, providing potential opportunities for RD/DTR services. Availability of RD/DTR services may depend on reimbursement, making it imperative that RDs and DTRs work at the grassroots level to support public policy for these important services (12).

Assisted Living Facilities

The Department of Health and Human Services defines assisted living facilities as residential settings that provide either routine general protective oversight or assistance with activities necessary for independent living to mentally or physically limited persons. Assisted living is a philosophy of service that focuses on maximizing each individual's independence and dignity. It emphasizes flexibility, individualized supportive services and provision of health care. Involvement of the community, as well as the individual's family, neighbors, and friends, is encouraged (13). In 2009, there were approximately 5,000 assisted living facilities in the United States that were either stand-alone buildings or part of a Continuing Care Retirement Community (CCRC). During 2006, 882 RDs were employed in assisted living facilities.

In 2009, the majority of those residing in assisted living facilities were women (74%) requiring assistance with two or more activities of daily living, including eating (12%) and meal preparation (87%). According to the Assisted Living Resident Profile conducted by the National Center for Assisted Living, the average age of older adults in assisted living facili-

ties in 2009 was 86.9 years. Due to higher acuity levels, about one third of individuals who live in this setting spend the last month of their lives in the facility (14). There are no federal regulations governing assisted living facilities; however, every state has its own regulatory oversight. Private pay is the primary funding source, but 41 states have some type of Medicaid Waiver or Medicaid State Plan, which supplemented care for 131,208 beneficiaries in 2009 (13).

One hundred fifty-three national aging and health experts were surveyed (15) on their perception of the state regulations for assisted living facilities' food and nutrition services. The 18 indicators on the survey included questions on dining room environment, food safety and sanitation, number of employees, meal quality, menu standards, and therapeutic nutrition service. The indicator, "menus have nutrition standards," was included in 40 states' regulations; 32 states include "therapeutic diet order must be provided and ordered by a medical director" and only 28 states' regulations noted "if the resident needs a therapeutic diet, the facility policy is to contract with an RD to plan menus and supervise meal preparations." The authors concluded that voluntary standards and best-practice models for food and nutrition services for assisted living facilities may improve the quality of food and nutrition services. Individuals residing in assisted living facilities, as well as the staff, benefit from inclusion of an RD on the interdisciplinary team.

CCRCs

CCRCs promote independent living through long-term contracts that provide for housing, services, and nursing care, usually in one location. Housing choices may include independent living apartments, assisted living, and nursing facility care. The goal of CCRCs is to provide a seamless transfer between levels of care as deemed appropriate for each individual. The number and type of CCRCs vary by state.

There are three basic financial contracts offered for residents of CCRCs: extensive contracts, with unlimited long-term nursing care at little or no increase in the monthly fee; modified contracts that include a specified

Old terminology	Suggested terminology
Allow	Encourage, welcome
Elderly	Elder, older adult, individual
Wing, unit	Household, neighborhood, street
Institutional care	Individual care
Feeder table	Dining table
Feeder	Person who needs help eating
Facility, institution, nursing home	Home life center, living center
Dietary service, foodservice	Dining services
Tray line	Fine dining
Nourishment	Snack
Bib	Napkin, clothing protector
Diabetic	Person who has diabetes

Figure. Culture change/person-centered suggested terminology for dining. Adapted with permission from reference 20: "The Language of Culture Change" by Karen Schoeneman. Pioneer Network. <http://www.pioneernetwork.net/CultureChange/Language>.

amount of long-term nursing care with additional care being the responsibility of the individual; or a fee-for-service contract that includes a daily rate for long-term-care services (16). Some CCRCs are accredited by the Commission on Accreditation of Rehabilitative Services, a non-profit accrediting organization (17). The accrediting process includes voluntary evaluation of the facilities. The role of RDs and DTRs can vary depending on the setting and how the CCRCs are licensed or regulated. Older adults residing in CCRCs may benefit from nutrition and fitness education for healthy aging.

CULTURE CHANGE AND PERSON-CENTERED CARE

Following the 1987 Omnibus Budget Reconciliation Act, The CMS issued the Medicare and Medicaid programs survey, certification, and enforcement of skilled nursing facilities final rule. The focus of the 1987 Omnibus Budget Reconciliation Act was to improve the quality of life for individuals and increase their role in making informed decisions about their own care. In 1998 the Prospective Payment System legislated how skilled nursing facilities received payment for specific services (18). The Prospective Payment System emphasizes the medical vs the social model of providing care and services. In recent years, the model for long-term care settings has gone through a major paradigm shift from the traditional institutional, medical environment to more interactive communities that focus on quality of life, individual choice, and a

more person-centered, home-like culture.

Culture change and person-centered care are national movements designed to transform services for older adults, regardless of their living arrangement. These movements are based on person-centered values. The core values are dignity, respect, self-determination, and purposeful living (19).

Culture change challenges health care providers to adapt terminology that embraces the four core values. Schoeneman's article (20) on the language of culture change offers expressions that communicate the changing philosophy. The Figure indicates the old terminology vs the suggested new terminology related to dining (20). Although culture change or person-centered care is encouraged in all senior housing settings, the CMS has included the concept in many of the revised interpretive guidelines for nursing home survey and certification. A CMS document published in 2008 acknowledged support of the culture change movement stating, "the principles behind culture change echo [the 1987 Omnibus Budget Reconciliation Act's] principles of knowing and respecting each nursing home resident and providing individualized care that best enhances each resident's quality of life" (21). A CMS Interpretive Guidelines memo dated April 10, 2009, outlines specific principles that embrace resident choice (22). Federal nursing home regulations, specifically 42 CFR §483.15(a) Dignity, addresses promoting resident independence and dignity in dining. For example, "Avoid using 'bibs' at meal

time which are not age appropriate for an older adult, and instead offer napkins or clothing protectors.” The interpretive guideline for PP/483.15(b), F242 Self-Determination and Participation states: “Resident should choose activities/schedules, including dining times.” PP/483.35(i), F371 Sanitary Conditions F Tag 371 Sanitation states, “The food procurement requirements for facilities are not intended to restrict resident choice. All residents have the right to accept food brought to the facility by any visitor(s) for any resident.”

Freedom of choice encourages residents to determine when and where they will dine, what type and how much food they will select. Individualization of the diet provides RDs and DTRs a window of opportunity to promote healthy menus and choices that include foods abundant in nutrients, flavor, color, and variety.

DOES FOOD CHOICE IMPROVE CONSUMERS' PERCEPTION OF DINING IN HEALTH CARE COMMUNITIES?

Most people look forward to mealtime and the chance to enjoy good food and socialize with others. Eye-appealing, familiar menu options that meet nutritional needs may decrease the risk of undernutrition and unintended weight loss in older adults. Undernutrition has been defined as “protein and energy deficiency which is reversed solely by the administration of nutrients” (23). A strict, unappealing therapeutic diet is not beneficial unless it is actually consumed and can actually be detrimental to an older adult at risk of undernutrition or unintended weight loss (24).

The culture change movement expands dining options available in many health care communities. Surveys indicate a higher level of satisfaction when dining programs are individualized to meet a wide range of consumer expectations. Relaxing dietary restrictions and expanding choices includes consideration of several key areas. RDs and DTRs should collaborate with a facility's dining services director or chef to determine menu and food options and initiate an appropriate action plan. Staff training modules incorporated in the plan should include:

- dining options such as select menus, buffet dining, restaurant-

style service, and family-style dining;

- methods for seasoning food to enhance flavors such as using herbs and spices rather than high-sodium alternatives;
- menu options that offer consistent levels of carbohydrate;
- suggestions for increasing fiber and offering seasonal fresh fruits and vegetables;
- adhering to food safety and sanitation guidelines; and
- implementing budgetary and cost-control measures while maintaining quality.

Regardless of the setting, older adults should be involved in decisions regarding menus and creative dining programs. Two studies on creative dining in nursing homes, such as buffet dining or meal portioning on the resident floors, resulted in both increased food consumption and meal satisfaction (25,26). Menus should reflect the cultural, ethnic, and individual choices of the client population and should be approved by an RD before implementation.

Menu Options and Suggestions

Selective Menus. Some facilities choose to offer a selective menu rather than a traditional nonselective menu with multiple therapeutic diets. To allow for individualized diets, consider several menu options in addition to the regular diet, such as a consistent carbohydrate diet for those with diabetes and altered texture diets for individuals with chewing or swallowing problems. Rotate the options on the selective menu to allow more variety in choices. Adding a meaningful icon next to the foods on the menus that are moderate in fat, sugar, or sodium can allow for a subtle form of education, which may help individuals choose appropriate foods to help manage hyperlipidemia, diabetes, or hypertension.

Nonselective Menus. Although allowing for choice is the ideal option, if a facility offers only nonselective menus, there are still ways to enhance variety and choice. Keep individual food preferences up to date to allow for appropriate substitution and to ensure that individuals receive foods they enjoy. Consider establishing a

dining committee to incorporate favorite menu items or recipes into the menu plan. Expand the menu cycle beyond the traditional 4- or 5-week cycle to increase variety.

Restaurant-Style Menus. Restaurant-style menus provide the most popular foods from the community. Many facilities offer traditional daily cycle menus as the “special of the day” and add additional menu options such as vegetables, salads, sandwiches, or grilled items that can be prepared in advance or on demand. Waiter/waitress service allows for a more catered dining experience.

Dining Programs

Buffet-Style Dining. It is well known that the aroma of food stimulates the appetite. Consider relocating the steam table to the dining room for service or offering buffet-style service. Encourage individuals to participate in choosing foods from the buffet and provide assistance to those who need it. Individuals should be allowed to see and smell the food and select the type and quantity they desire. A choice of entrées, side dishes, desserts, soup, salad bars, and dessert bars allows for a variety of choices. Include a variety of soft foods for individuals on mechanical soft diets. Careful planning, flexible dining hours, and open seating allow for relaxed dining and reduce the need to rush meals. Several studies note increased meal consumption and weight gain with buffet-style vs tray service (27,28).

Green House and Neighborhood Living. Assisted living facilities, CCRCs, and some nursing homes are developing “neighborhoods” where accommodations for up to 20 individuals are located around a central area that includes a kitchen, dining room, and living space. The Green House concept developed by William Thomas, MD, is generally a home with 10 bedrooms clustered around an open kitchen, dining, and living area with access to a courtyard. The staff who prepare and serve the food are often the same staff who assist residents with activities of daily living. Consistency in staffing assignments helps to create a family-like atmosphere. Individuals living in the facility may assume an active role in food selection and even food preparation as desired.

Relaxed individualized diet plans are appropriate since family-style dining is common practice in these living situations.

Five Meals vs Traditional Three. The five-meal-a-day plan offers a continental breakfast, usually served in a person's bedroom, a brunch at midday in the dining room, a moderate lunch at midday, dinner in the dining room about 4:00 or 5:00 PM, followed by a nourishing snack in the evening. Individual selection is the cornerstone of this menu style. Communities using this plan have reported increased satisfaction and reduced food waste. One small study to determine whether five meals vs three meals would improve energy intake among older adults with dysphagia resulted in similar energy intake but improved fluid intake (29).

Family-Style Dining. Family-style dining is similar to how most people eat at home: serving food in bowls or platters that are passed around the table. Staff and residents dine together, which helps increase socialization at meal time. This works particularly well for individuals who are able to eat independently and/or those who have dementia. According to several studies, family-style dining had a positive effect on the food intake of older adults primarily because of the interaction between staff and residents, which created a positive social atmosphere (30).

Social Functions. Social functions offer the opportunity to collaborate with older adults, families, and staff to incorporate popular food selections at social functions that are tasty and healthy. Beverage stations offering a variety of selections such as juices, coffee, or tea encourage consumption of fluids and nutrients. The aroma created by bread machines, soup kettles, or popcorn machines located in common areas can result in increased energy consumption. For individuals who participate in cooking activities, recipes that are moderate in energy can be enjoyed by most individuals. These in-between-meals foods can have a positive benefit, especially for individuals struggling to consume an adequate diet at meal time. A recent study on the benefits of snacking reported that snacking made a significant contribution in terms of total energy consumed. Snacking contributed

14% of daily protein and approximately 25% of energy intake (31). A study conducted by Meals-on-Wheels Association of America examined community residing adults aged 60 to 90 years who had experienced weight loss, and compared a test group that received three meals and two snacks daily with a group that received the traditional three meals a day. The study concluded that weight loss was reversed in the test group (32).

DO ALL OLDER ADULTS IN HEALTH CARE COMMUNITIES REQUIRE INDIVIDUALIZED NUTRITION INTERVENTIONS TO PROMOTE THE LEAST-RESTRICTIVE DIET?

Regardless of the living environment chosen by an older person, the aging process results in physiological, psychological, and social changes that may have an effect on appetite and food consumption. A number of studies indicate that there is an association between aging and declining energy intake (33,34). Comparisons between 25- and 70-year-olds estimated that men's intake declines by 1,000 to 1,200 kcal daily and women's by 600 to 800 kcal daily (35). The Third National Health and Nutrition Examination Survey demonstrated a decrease in total energy intake leading to decreased protein intake. Adults older than age 60 years scored only 68 out of 100 points on the 2005 Healthy Eating Index. Data from the 2000-2001 Healthy Eating Index indicated more than 80% of older adults consumed diets that needed improvement. Recommended dietary improvements included consuming more whole grains, dark-green and orange vegetables, and low-fat dairy products (36). The 2005 Dietary Guidelines for Americans emphasize the need to consume a variety of foods within and among the basic food groups while staying within energy needs, to be physically active daily, and to choose fats and carbohydrates wisely for good health (36). Considering the impaired physical functioning and poor or declining dietary intake that occurs with aging, individualized nutrition care and education is appropriate for the majority of older adults in health care communities. For frail older adults, referral to an RD and/or DTR for individualized nutrition in-

terventions to promote the least restrictive diet is appropriate.

PHYSICAL AND MEDICAL FACTORS AFFECTING NUTRITIONAL STATUS

Unintended Weight Loss

Unintended weight loss is defined as a gradual, unplanned weight loss that may occur slowly over time or have a rapid onset. In older adults, a 5% or more unplanned weight loss in 30 days often results in protein-energy undernutrition as critical lean body mass is lost (37). Skeletal muscle loss can occur from starvation, cachexia, or sarcopenia. Starvation is the inadequate consumption of protein and energy, which is reversed by intake of nutrients (37). Cachexia is severe wasting accompanying diseases such as cancer (37). Sarcopenia is the loss of skeletal muscle associated with aging, which leads to reduced strength and exercise ability (38). Thomas (39) noted that unintended weight loss in older adults is a significant risk factor for mortality, and Murden and Anslie (40) indicated a loss of 10% in 6 months was a strong predictor of mortality in older adults. Anorexia of aging factors that may lead to undernutrition includes weight loss, reduced appetite, and declining metabolic rate (39).

In October 2009, ADA's unintended weight loss task force completed guidelines for the ADA Evidence Analysis Library. The target population for these evidence-based guidelines is adults aged 65 years and older with unintended weight loss. The overall objective of the recommendations is to provide medical nutrition therapy guidelines for unintended weight loss that will increase energy, protein, and nutrient intake, improve nutritional status, and improve quality of life. Nutrition recommendations within the guideline include these topics: medical nutrition therapy, instruments for nutrition screening, assessment of food, fluid and nutrient intake, collaboration for modified diet texture, eating assistance, and monitoring and evaluating nutritional status (41). The unintended weight loss guideline debuts the first nutrition diagnosis. Nutrition interventions associated with individualized diet plans include feeding assistance, dining environment, collaboration of texture-

modified diets, evaluation and treatment of depression, and appetite stimulants. Access the guidelines on www.adaevidencelibrary.com.

Research supports a positive association between poor nutritional status, weight loss, and eating dependency, in particular for older adults requiring modified-texture diets (42, 43). Simple interventions may include opening packets, removing container lids, cutting meat at the point of service, buttering bread, and ensuring eye glasses or dentures are available as applicable. The key areas for individualized diet plans for older adults receiving texture-modified diets include increasing food choice, including snacks, attention to presentation, correct preparation, and enhanced taste (44-47). Based on studies reporting dissatisfaction and decreased enjoyment of texture-modified diets, RDs should collaborate with speech-language pathologists to ensure care plans are individualized (44-46).

As previously mentioned, creative dining programs can improve quality of life and meal intake. After reviewing 238 studies, Stroebele and De Castro (48) concluded that eating with others in a comfortable environment improved nutritional status. Playing music during meals had a positive effect on appetite and decreased feelings of anxiety and depression.

The relationship between weight loss, poor nutritional status, and depression is supported by research (48-50). When individualized interventions fail to improve or stabilize weight or meal intake, an RD should recommend that a patient's physician consider a depression evaluation and antidepressant therapies as appropriate.

Unintended Weight Loss Case Study. An 80-year-old woman moved from her home of 40 years to an assisted living facility. Upon admission, the health care practitioner interviewing her and her son discovered the woman had gradually lost weight during the past year. Admission anthropometric values included height 63 in, weight 115 lb, and usual body weight 130 lb. When she lived at home, her advancing Parkinson's disease hindered her from preparing meals, so she usually ate soup or cereal. Since her hus-

band's death several months ago, she was lonely and depressed. The physician ordered a 1,500-kcal diet, based on her diagnosis of type 2 diabetes. Two weeks after admission, her blood glucose levels were normal, but her weight was down to 110 lb and she rarely came to the dining room for meals. The assisted living facility staff contacted the staff RD and requested a nutrition assessment. During the initial interview, the RD discovered that the resident didn't come to the dining room due to difficulty chewing and the embarrassment it caused in front of others. She enjoyed desserts that were not offered on her current diet plan and rarely ate meat. The RD requested a regular diet, based on the 2008 position of the American Diabetes Association that food containing sucrose can be substituted for other carbohydrates in a meal plan (51). Evidence guidelines contain little research to support restrictive nutrition interventions for diabetes in older adults (52).

Problem Inadequate intake of protein and/or energy based on recommended needs.

Etiology Difficulty chewing, restrictive diet plan, and symptoms of depression.

Signs and symptoms Gradual weight loss, rarely comes to the dining room, avoids difficult-to-chew protein foods, limited food choices, symptoms of depression.

Nutrition diagnosis Unintended weight loss related to intake inconsistent with estimated energy and nutrient requirements as evidenced by continued weight loss of 5 lb in 2 weeks, limited diet prescription, and difficulty chewing; symptoms of depression evidenced by remaining in room at meal time.

Nutrition interventions

- Collaborate with speech-language pathologist to determine appropriate diet texture;
- recommend the physician change the diet order to a regular diet with ground meat based on nutrition diagnosis;
- recommend a high-energy/high-protein supplement for evening snack;

- collaborate with DTR/dining services director to identify food preferences and honor them;
- collaborate with staff to encourage and accompany the resident to dine in the dining room;
- collaborate with staff to offer assistance and monitoring at meal time to ensure adequate intake;
- collaborate with social services to complete a Geriatric Depression Scale;
- collaborate with physician to evaluate Geriatric Depression Scale and appropriate anti-depressive therapy;
- collaborate with staff to evaluate weekly weights until stable as determined by the RD; and
- collaborate with DTR/dining services director to complete a nutrient intake study.

Obesity

There is some evidence to support a planned weight loss program for obese older adults to improve their physical functioning and reduce medical complications (53). However, weight reduction in adults with obesity results in loss of both fat mass and lean body mass that may trigger sarcopenia (54,55) and functional decline (56). Individualized diet plans should be implemented with caution, using professional judgment based on the nutrition assessment and an individual's overall health goals and should include physical activity to assist with retention of lean body mass and increased losses of fat mass.

Obesity Case Study. After surgery for a total knee replacement, a 75-year-old man was admitted to a rehabilitation facility for physical therapy. Admission statistics included height 68 in, weight 285 lb, body mass index 43.3, and a physician's order for an 1,800-kcal diet. He expressed multiple food complaints, including hunger.

Problem Inadequate oral food intake.

Etiology Energy-restricted diet plan.

Signs and symptoms Reported food complaints.

Nutrition diagnosis Inadequate protein-energy intake compared to recommendation based on physiological needs.

Nutrition interventions

- Recommend the physician order a regular diet based on nutrition diagnosis;
- RD and individual will agree on an education plan that includes diet and physical activity goals before discharge; and
- RD will negotiate postdischarge follow-up for the individual to receive a nutrition evaluation.

Cardiac Disease/Hypertension

The risk of imposing a cholesterol-controlled diet on an older person with poor nutritional intake outweighs the positive effect of a lipid-lowering diet (57). Although the American Heart Association advocates a 2 to 3 g/day sodium diet as treatment for congestive heart failure, a randomized control trial of adults aged 55 to 83 years reported that a normal sodium diet improved congestive heart failure (58).

Nutrition interventions for older adults with cardiac disease who are at nutrition risk should focus on stabilizing blood lipid levels and blood pressure while preserving eating pleasure. RDs should collaborate with the dining services department and implement menus that work toward meeting the goals of the Dietary Guidelines for Americans and/or the Dietary Approaches to Stop Hypertension diet, which is rich in potassium, magnesium, calcium, protein, and fiber (59). Menus including whole-grain breads and cereals, juice-packed fruits, low-fat foods such as low-fat dairy, low-fat salad dressings, brown rice, seasonal fruits, and fresh or frozen vegetables can help to meet these guidelines. Season foods with salt-free seasonings such as fresh or dried bay leaves, basil, celery seed, thyme, garlic powder, onions, lemon juice, or parsley. Additional recommendations are included on the ADA Evidence Analysis Library's Hypertension Evidenced-Based Nutrition Practice Guidelines available at www.adaevidencelibrary.com.

Alzheimer's Disease

Alzheimer's disease is the fifth leading cause of death for individuals older than 65 years of age. Fifty percent of those suffering from Alzhei-

mer's disease are older than the age of 85 years (60,61). Walking, pacing, and wandering are common in earlier stages of the disease, and it is sometimes difficult for these individuals to sit long enough to finish eating a meal. Nutrition concerns for individuals with Alzheimer's disease include unintended weight loss, fatigue, and poor nutritional intake. As Alzheimer's disease advances, cognitive and functional declines require increased assistance with eating and texture-modified diets (62).

Alzheimer's Disease Case Study. A 70-year-old man with stage 4 (moderate cognitive decline) Alzheimer's disease was admitted to a secure unit in a skilled nursing facility. Assessment parameters included height 72 in, weight 150 lb, weight loss of 30 lb during the previous 6 months, a tendency to sleep in late and wander during the night. This individual would rarely sit down to eat and if redirected to go back and sit down, he became combative. He had a tendency to eat with his fingers, liked sweet foods, received antihyperlipidemic medication, and was receiving a low-cholesterol diet, but he was only eating about 40% of his meals.

Problem Increased energy expenditure and inadequate energy intake.

Etiology Wandering during the night, inability to sit down at meal time, becomes combative due to Alzheimer's disease.

Signs and symptoms Twelve percent weight loss in 6 months, 40% meal intake.

Nutrition diagnosis Increased energy expenditure related to excessive wandering and 12% weight loss in 6 months.

Nutrition interventions

- Recommend the physician modify the diet to a regular diet with finger foods;
- collaborate with the DTR/dining services director to provide sandwiches, whole milk, ice cream sandwiches, and other high-energy snacks;
- collaborate with the staff to evaluate weekly weights until stable as determined by the RD;
- collaborate with staff to notify RD if unintended weight loss occurs;

- collaborate with staff to provide a finger food diet, monitor intake, and offer substitutes when oral intake <50% of needs; and
- collaborate with staff to provide assistance at meal time.

Palliative Care

The Position of the American Dietetic Association: Ethical and Legal Issues in Nutrition, Hydration, and Feeding supports an individual's right to request or refuse nutrition and hydration as medical treatment. When implementing nutrition care at the end of life, an RD should promote the rights of an individual in collaboration with the health care team (63). Terminally ill individuals experience loss of appetite and should be offered food and fluid as desired or requested. Contrary to popular belief, several reports indicate that absence of food at the end of life does not produce suffering or diminish quality of life (64,65).

Palliative Care Case Study. A frail, cachectic 90-year-old man with chronic obstructive pulmonary disease and failure to thrive was admitted to hospice. He was on continuous oxygen, drinking only 8 to 10 oz fluids daily, receiving routine pain medication, and according to his caregiver had lost 30 lb in 6 months. The caregiver expressed concern that he would die of starvation and requested an RD visit.

Problem Inadequate intake of energy over prolonged period of time.

Etiology Prolonged catabolic illness.

Signs and symptoms Thirty-pound weight loss in 6 months; underweight with muscle wasting; thin, wasted appearance; and terminal illness.

Nutrition diagnosis Inadequate intake of energy and fluids over a prolonged period of time resulting in loss of fat stores and muscle wasting.

Nutrition interventions

- Collaborate with the physician to coordinate medication and medication schedules, with a goal of maximizing the individual's food intake;
- collaborate with caregiver and hospice staff and develop a routine for offering sips of liquid to lessen

thirst sensations or small amounts of favorite foods and energy-dense foods, such as milkshake or commercial supplement, when alert and/or willing to accept nourishment;

- educate the family/caregiver about the metabolic changes and sedative effect of dehydration at end of life (64); and
- support caregiver's concern for client and suggest alternate ways to provide comfort, such as playing soft music or reading to him.

EDUCATION AND RESEARCH

As health care communities expand, RDs and DTRs have a responsibility to inform administrators, surveyors, policymakers, legislators, families, and members of health care teams on the value of individualized nutrition intervention, including nutrition care for older adults.

Declining food intake can lead to loss of weight and/or muscle mass, frailty, and functional disability, which can all decrease quality of life and increase the cost of care. As an older adult's health declines, health care costs can spiral due to increased need for assistance with activities of daily living, treatments, medications, and physician and hospital visits. Implementing the Nutrition Care Process, a standardized care process that incorporates the critical thinking and decision-making skills of RDs when providing care, can increase the reliability of outcomes measurement. RDs should document outcomes, including cost savings, associated with individualized diets for older adults and share these results with key administrative staff, policymakers, and other health care practitioners.

Important areas for research include evaluation of outcomes associated with RDs providing nutrition care and the cost benefits of applying the Nutrition Care Process in health care communities, including the positive effects of individualized nutrition interventions to promote the least-restrictive diet and culture change on quality of life. Research is needed to define appropriate energy and protein requirements for older adults, especially those older than age 85 years. As the minority population expands, research focusing on preserving ethnic values related to

food and foodservice practices while maintaining nutritional status is also important.

CONCLUSIONS

Most people eat 1,000 meals annually, which is equivalent to 75,000 meals over a lifetime for a 75-year old. Food selections are influenced by preference, habit, religious beliefs, ethnic values, traditions, and emotional comfort. Food nourishes the spirit as well as the body. When older adults move into health care communities, meal satisfaction may help to prevent weight loss and additional health problems. Relaxing diet restrictions can make it easier to implement enhanced dining programs and provide older adults opportunities to interact with others in an atmosphere that encourages both increased food consumption and meal satisfaction.

RDs should use the Nutrition Care Process to evaluate each individual and determine appropriate nutrition interventions while assessing the risks vs the benefits of individualized nutrition interventions to promote the least-restrictive diet. The emphasis on resident rights and freedom of choice are components of the assessment process. The shift toward person-centered care affords RDs and DTRs the opportunity to strengthen relationships with residents, families, and staff with the ultimate goal of enhancing the quality of life for older adults in their care.

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