



Nutritional Management

of Type 2 Diabetes in Long-Term Care

NUTRITION CONNECTION



RECOMMENDATIONS FOR DIABETES MANAGEMENT IN LONG-TERM CARE AND SKILLED NURSING FACILITIES

Diabetes in older adults continues to be a growing public health burden in the United States. The word *epidemic* used as an adjective means to describe something as “widespread,” “wide-ranging,” “extensive,” or “pandemic.” So when the statement is made that there is “epidemic growth of type 2 diabetes among people aged ≥ 65 years of age,” we can look at the numbers.

- In 2012, the prevalence of diabetes among people aged ≥ 65 (25.9 percent) was more than six times that of people aged 20–24 years (4.1 percent). In fact, 1 out of 3 adults over age 65 has diabetes with most of them having Type 2 diabetes.
- In the long-term care (LTC) population, the prevalence of diabetes ranges from 25 percent to 34 percent across multiple studies.
- The high prevalence of diabetes among older adults has contributed to the unsustainable growth of healthcare costs in the U.S.
 - > The estimated total cost of diabetes in 2017 was \$245.5 billion.
 - > Average medical expenditures for people with diagnosed diabetes were 2.3 times higher than among people without diabetes.
 - > LTC costs for people with diabetes were estimated at \$19.6 billion in 2012.



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The American Diabetes Association (ADA) published a position paper in February 2016 that offered recommendations for diabetes management in long-term care and skilled nursing facilities. The Academy of Nutrition and Dietetics supported these guiding principles along with more than a dozen federal agencies and professional organizations. The authors of the position paper stated the high prevalence of diabetes in older adults is due to age-related physiological changes, such as increased abdominal fat, sarcopenia, and chronic low-grade inflammation that lead to increased insulin resistance and relatively impaired pancreatic islet function. Diabetes then in turn increases the risk of cardiovascular and microvascular complications along with increasing the risk of common geriatric syndromes including cognitive impairment, depression, falls, polypharmacy, persistent pain, and urinary incontinence.

While previous statements from the ADA have addressed care for the elderly in community settings and diabetes care among hospitalized patients, this was the first

statement to specifically address the unique needs of patients in long-term care settings. Approaches to diabetes management often need to be dramatically altered in the long-term care setting from those in younger and healthier patients.

In 2017, the American Diabetes Association published updated Clinical Standards of Medical Practice for Medical Care in Diabetes, referred to as the “Standards of Care,” which was intended to provide clinicians, patients, researchers, payers, and other interested individuals with the components of diabetes care, general treatment goals, and tools to evaluate the quality of care. The Standards of Care from ADA are considered the most authoritative and current guidelines for diabetes care.

In the 2017 ADA standards were specific recommendations related to lifestyle management, obesity management, and diabetes care in the hospital. The Academy of Nutrition and Dietetics 2018 position paper “The Role of Medical Nutrition Therapy (MNT) and Registered Dietitian Nutritionists in the Prevention and Treatment of Prediabetes and Type 2 Diabetes” supports these

standards. The Academy position paper states that MNT provided by RDNs is effective in improving medical outcomes, quality of life, and is cost effective.

The certified dietary manager (CDM) should collaborate with the facility registered dietitian nutritionist (RDN), nutritionist diet technician registered (NDTR), and other members of the healthcare team to support positive outcomes and overall quality of life for those individuals diagnosed with diabetes.

Understanding there are two types of diabetes, this article focuses on key nutritional “best practice” recommendations from ADA directed towards type 2 diabetes, since the clear majority of residents in LTC facilities have this form of diabetes.

CHANGING ENVIRONMENTS REQUIRE DIFFERENT APPROACHES

Management of diabetes for the aging is challenging as there are many types of living arrangements, social support, and caregiver support that must be considered. The need to assess the individual’s

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level of ability to care for themselves is also a very important consideration.


In the LTC setting there is a general focus on individualizing the care goals and treatment related to diabetes, the need to avoid the use of sliding scale insulin (SSI) as a primary means of regulating blood glucose, and the importance of adequate training and facility protocols to LTC staff.

GENERAL GOALS AND NUTRITIONAL GUIDELINES

- Older adults who are cognitively and functionally intact and have significant life expectancy should receive diabetes care with goals similar to those developed for younger adults.
- Hypoglycemia risk is the most important factor in determining glycemic goals related to the catastrophic consequences in this population. Hypoglycemia is associated with longer stays in the facility, more transfers to the hospital, and a two-fold increase in mortality risk. Along with preventing hypoglycemia, there is also the need to avoid extreme hyperglycemia.
- Simplified treatment regimens are preferred and better tolerated in older adults.
- Sole use of the sliding scale insulin (SSI) should be avoided. (The 2016 ADA position paper offers strategies to replace SSI in LTC.)
- Screening for diabetes complications in older adults should be individualized and pay particular attention to those complications leading to functional impairment.
- Liberal diet plans have been associated with improvement in food and beverage intake.
- Restrictive therapeutic diets should be minimized to avoid dehydration and unintentional weight loss/undernutrition. Meal plans tailored to an individual's culture, preferences, and personal goals increases quality of life, overall satisfaction with meals, and improved nutritional status.
- Physical activity and exercise are important and should depend on the current level of functional abilities.

CARE TRANSITIONS AND END OF LIFE

- Care transitions are high-risk times for residents having diabetes and an important time to revisit diabetes targets, medications, education, ability to perform diabetes self-care activities with close communication between transferring and receiving care teams to ensure resident safety and reduce readmission rates. At admission, transitional care documentation should include the current meal plan, activity levels, prior treatment regimen, prior self-care education, lab tests (A1C, lipids and renal function), hydration status, and previous episodes of hypoglycemia (including symptoms and the resident's ability to recognize and self-treat).
- End-of-life goals with diabetes should focus on promoting comfort, controlling distressing symptoms (including pain, hypoglycemia, and hyperglycemia); preventing dehydration; avoiding emergency room visits, hospital/institution admissions; and preserving dignity and quality of life. It is important to respect the resident's right to refuse



END-OF-LIFE GOALS WITH DIABETES

should focus on promoting comfort, controlling distressing symptoms (including pain, hypoglycemia, and hyperglycemia); preventing dehydration; avoiding emergency room visits, hospital/institution admissions; and preserving dignity and quality of life.

treatment and withdraw oral hypoglycemic agents and/or stop insulin if desired during end-of-life care.

- When palliative care is needed in older adults with diabetes, strict blood pressure control may not be necessary, and withdrawal of therapy may be appropriate.

SUCCESSFUL DIABETES MANAGEMENT IN LONG-TERM CARE

In LTC facilities, residents with diabetes are not generally seen daily by a physician so it is very important that a dedicated interprofessional team is in place to manage overall care. The certified dietary manager, registered dietitian nutritionist, and nutrition and dietetics technician should be part of the team. Other team members may include physicians, nurse practitioners, physician assistants, nurses, certified nursing assistants, diabetes educators, pharmacists, physical therapists, and/or social workers. Included in the position paper on management of diabetes are practical recommendations for specific situations that need LTC management by staff.

Resident challenges in LTC settings for diabetes management include:

- Polypharmacy management
- Increased risk of hypoglycemia
- Unpredictable meal consumption
- Comorbidities
- Psychological resistance to insulin
- Impaired vision and dexterity

Institutional-level challenges in the LTC settings for diabetes management include:

- Staff turnover and lack of familiarity with residents
- Lack of knowledge about diabetes and diabetes management
- Restrictive diet orders
- Inadequate review of glucose logs and trends
- Lack of facility-specific algorithms for blood glucose levels and provider notification
- Lack of administrative buy-in to promote the roles of the medical director, director of nursing, and pharmacist

Common themes for nutrition throughout the position paper supports:

- Individualizing meal plans to offer a wide variety of food and beverages
- Honoring personal food preferences
- Providing dining options in regard to the time and type of meals
- Considering a general diet meal plan that incorporates consistent carbohydrates with a wide variety of food choices

SUMMARY

Professional organizations and “best practice” support the vital role of the certified dietary manager as a part of the interprofessional team. Diabetes is a common, morbid, and costly disease in older adults. Collaboration with the healthcare team with a focus on person-centered care is critical for success.

Understanding diabetes as a disease, along with disease management principles and creating a personalized approach to food, nutrition, and dining, can improve diabetes management while also improving quality of life. **E**

SOURCES

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This Level II article assumes that the reader has a foundation of basic concepts of the topic. The desired outcome is to enhance knowledge and facilitate application of knowledge to practice.

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- In 2012, one out of every ____ people ≥ 65 years of age had diabetes in the United States.
 - Two
 - Four
 - Three
- Long-term care costs for people with diabetes in 2012 were estimated to be ____ billion.
 - \$19.6
 - \$20.2
 - \$22.4
- The majority of residents in long-term care have ____ diabetes.
 - Type 1
 - Type 2
 - Gestational
- The most important factor in determining glycemic goals related to catastrophic consequences in the aging population is:
 - Strict limitation of dairy products
 - Sliding scale insulin results
 - Hypoglycemia risk
- Diet plans that are ____ have been associated with improvement in food and beverage intake.
 - Therapeutic and tightly controlled
 - Personalized and liberal
 - Gluten- and sugar-free
- Care transition documents should include:
 - Current meal plans, activity levels, prior treatment regimens, appropriate labs, hydration status
 - Previous hypoglycemia episodes and ability to recognize and self-treat
 - Both A and B
- In general, restrictive diet plans are not recommended for effective diabetes management to avoid dehydration and _____.
 - Unintentional weight loss/undernutrition
 - Difficulty in purchasing needed food items
 - Customer dissatisfaction

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