



# Improving Nutritional Management of Type 2 Diabetes in Long-term Care

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hen we see the word “epidemic” being used as an adjective we know this describes something as widespread, wide-ranging, extensive, or pandemic. So what does it mean when the statement is made that there is “epidemic growth of type 2 diabetes among people aged  $\geq$  65 years of age.” Let’s look at some of the numbers:

- In 2012, the prevalence of diabetes among people aged  $\geq$ 65 (25.9 percent) was more than six times that of people aged 20–24 years (4.1 percent). In fact one out of four adults over age 60 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 2012 was \$245 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.

The American Diabetes Association (ADA) position statement published in February 2016 offers recommendations for diabetes management in long-term care and skilled nursing facilities. In addition, the



## KEY NUTRITIONAL RECOMMENDATIONS TO COMBAT TYPE 2 DIABETES IN OLDER ADULTS

Academy of Nutrition and Dietetics supports these guiding principles along with more than a dozen federal agencies and professional organizations.

The authors of the position paper state 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 is 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.

Understanding there are two types of diabetes, this article focuses on key nutritional recommendations directed towards type 2 diabetes since the vast majority of residents in LTC facilities have type 2 diabetes. Please note that the position paper published in 2016 also incorporates suggested specific recommendations for patients with type 1 diabetes when appropriate.

**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.

### **AGING: 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 individual's 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.

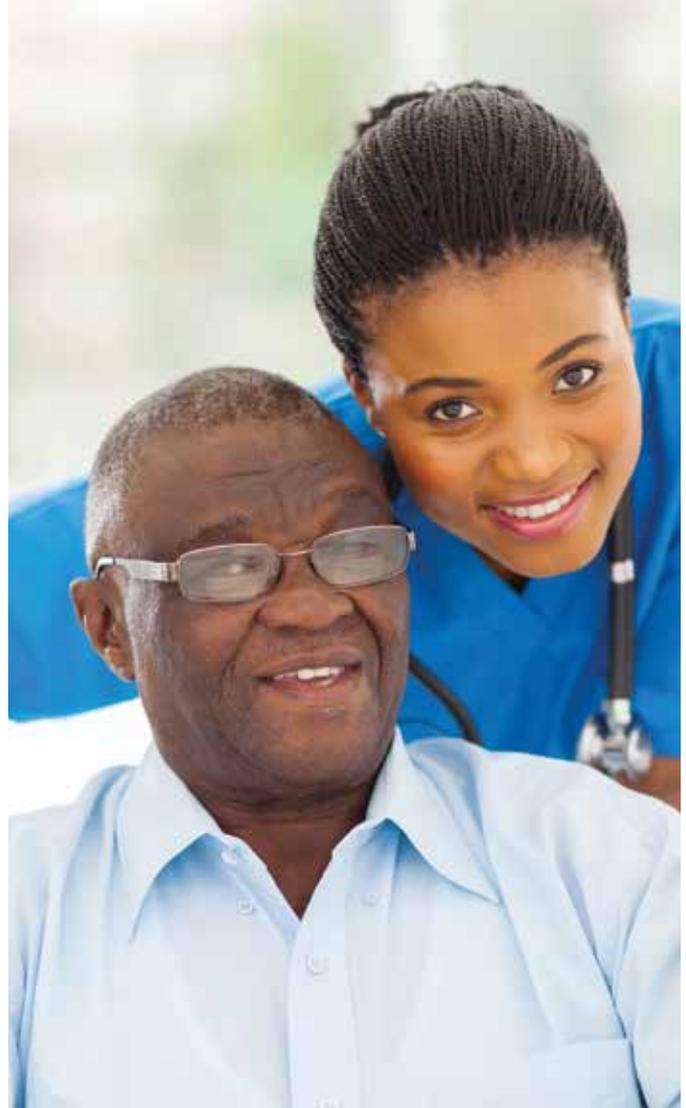
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## GENERAL GOALS AND NUTRITIONAL GUIDELINES

- 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.
- Sole use of the SSI should be avoided. (The position paper offers strategies to replace SSI in LTC.)
- 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.
- Physical activity and exercise are important and should depend on the current level of functional abilities.

## CONSIDERING CARE TRANSITIONS AND END-OF-LIFE

- Care transitions are high-risk times for residents with 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 admissions, 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); avoiding dehydration; avoiding emergency room visits, hospital admissions/institutionalizations; and preserving dignity and quality of life. It is important to respect the resident's right to refuse treatment and withdraw oral hypoglycemic agents and/or stop insulin if desired during the end-of-life 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.

## SUCCESSFUL DIABETES MANAGEMENT IN THE LTC SETTING

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, registered 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

## Fast Facts on Diabetes

29.1 million people or 9.3% of the U.S. population have diabetes.

**Diagnosed**  
21.0 million people

**Undiagnosed**  
8.1 million people

*(27.8% of people with diabetes are undiagnosed.)*

All ages, 2012.

Source: National Diabetes Statistics Report, 2014 CDC.

management of diabetes are practical recommendations for specific situations that need LTC management by staff.

Resident challenges in the LTC setting 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 setting for diabetes management include:

- Staff turnover and lack of familiarity with residents
- 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 the pharmacist

Common themes for nutrition throughout the position paper support:

- Individualizing meal plans to offer a wide variety of food and beverages

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## Diabetes: Diagnosed and Undiagnosed

In people aged 20 years or older, United States, 2012

	NUMBER WITH DIABETES (millions)	PERCENTAGE WITH DIABETES (unadjusted)
<b>TOTAL</b>		
20 years or older	28.9	12.3
<b>BY AGE</b>		
20-44	4.3	4.1
45-64	13.4	16.2
65 years or older	11.2	25.9
<b>BY SEX</b>		
Men	15.5	13.6
Women	13.4	11.2

Source: 2009-2012 National Health and Nutrition Examination Survey estimates applied to 2012 U.S. Census data.

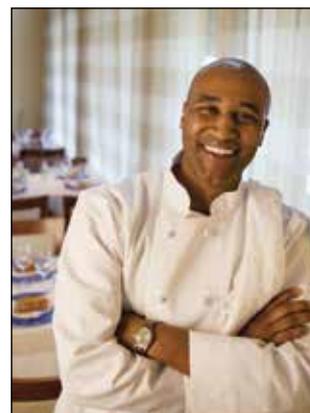
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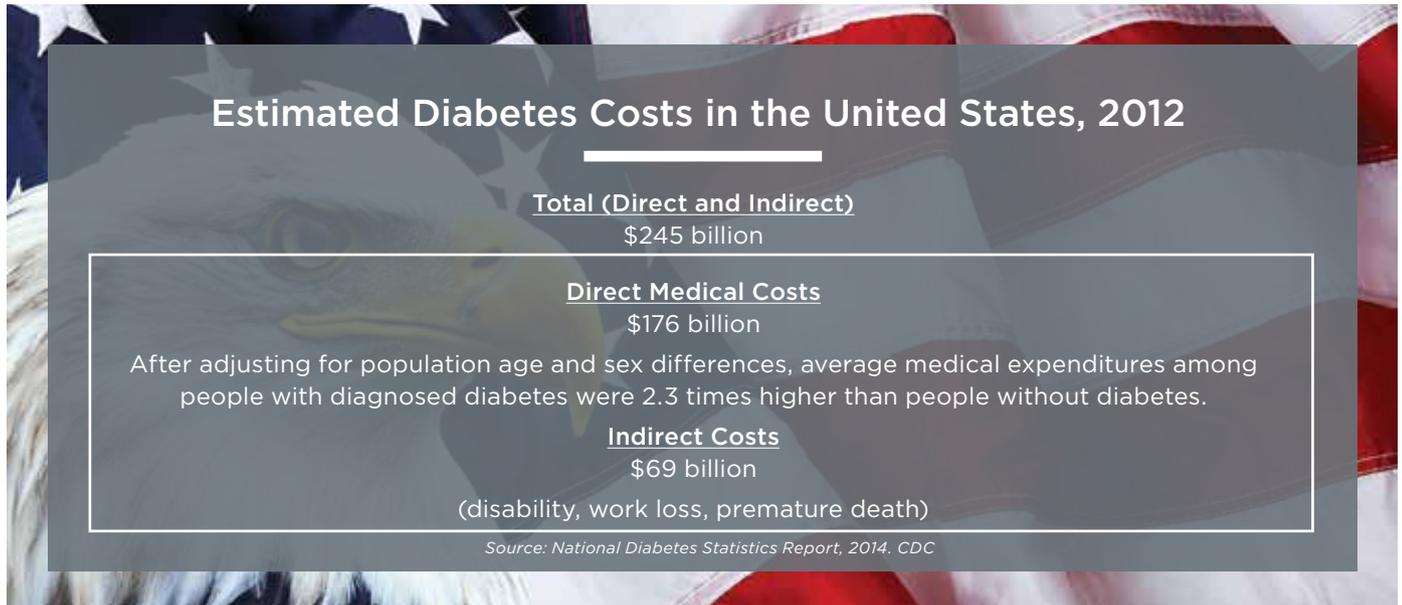


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- Honoring personal food preferences
- Providing dining options in regard to time and type of meals
- Considering a general diet meal plan that incorporates consistent carbohydrates with a wide variety of food choices

### SUMMARY

In summary, the 2016 American Diabetes Association Position Statement on Management of Diabetes in Long-term Care and Skilled Nursing Facilities supports the vital role of the certified dietary manager as part of the interprofessional team. Diabetes is a common, morbid, and costly disease in older adults.

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



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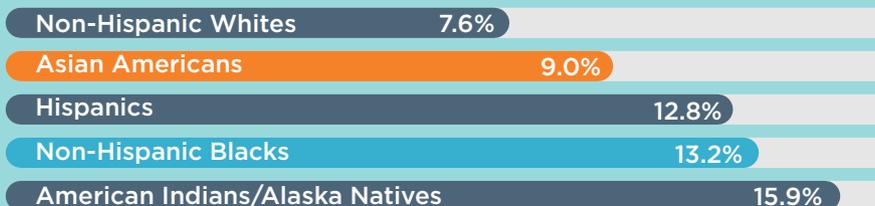
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### REFERENCES:

- Management of Diabetes in Long-term Care and Skilled Nursing Facilities: A Position Statement of the American Diabetes Association, American Diabetes Association, Feb. 1, 2016, Diabetes Care 2016;39:308-318 | DOI: 10.2337/dc15-2512. Accessed: <http://www.ncbi.nlm.nih.gov/pubmed/26798150> July 26, 2016.  
Authors: Medha N. Munshi, Hermes Florez, Elbert S. Huang, Rita R. Kalyani, Maria Mupanomunda, Naushira Pandya, Carrie S. Swift, Tracey H. Taveira, Linda B. Haas
- Infographic: Content source: Division of Diabetes Translation: National Center for Chronic Disease Prevention and Health Promotion—See more at: <http://www.diabetes.org/diabetes-basics/statistics/cdc-infographic.html#sthash.9LIHHWoZ.dpuf> <http://www.diabetes.org/diabetes-basics/statistics/cdc-infographic.html> or <http://www.cdc.gov/diabetes/data/statistics/2014StatisticsReport.html>
- Prevalence, quality of care, and complications in long term care residents with diabetes; a multicenter observational study. J Am Med Dir Assoc. 2013; 14(11):842-846. Accessed: <http://www.ncbi.nlm.nih.gov/pubmed/24055534> July 28, 2016.



## Age-adjusted\* percentage of people aged 20 years or older with diagnosed diabetes, by race/ethnicity, United States, 2010-2012



\*Based on the 2000 U.S. standard population.

Source: 2010-2012 National Health Interview Survey and 2012 Indian Health Service's National Patient Information Reporting System.



## Review Questions

### NUTRITION CONNECTION

Reading *Improving Nutritional Management of Type 2 Diabetes in Long-term Care* and successfully completing these questions online has been approved for 1 hour of CE for CDM, CFPPs. CE credit is available ONLINE ONLY. To earn 1 CE hour, purchase the online CE quiz in the ANFP Marketplace. Visit [www.ANFPonline.org/market](http://www.ANFPonline.org/market), select "Publication," then select "CE article" at left, then search the title "Improving Nutritional Management of Type 2 Diabetes in Long-term Care" and purchase the article.



- In 2012, the prevalence of diabetes among people  $\geq 65$  was more than \_\_\_ times that of people aged 20-24 years of age.
  - 2
  - 4
  - 6
- 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 improved food and beverage intake.
  - Therapeutic
  - Liberal
  - Gluten 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
  - Difficulty in purchasing needed food items
  - Customer dissatisfaction

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