



Type 2 Diabetes Care in the Elderly

April Bigelow, PhD, ANP-BC, and Barbara Freeland, DNP, ACNS-BC

ABSTRACT

Type 2 diabetes mellitus is a major chronic disease worldwide. Over the next decade, the largest increase in diabetes prevalence is expected to be in those > 75 years old. Diabetes self-care and prevention of complications can be challenging, but, when combined with the demands of self-care for other chronic conditions, it can become overwhelming to patients and caregivers. The glycemic targets and treatment options are unique to older adults. Clinicians should treat elderly patients with diabetes based on comorbid conditions, functional status, and life expectancy using a person-centered, team-based approach.

Keywords: diabetes, elderly, management, older adults

© 2016 Elsevier Inc. All rights reserved.

Both authors are affiliated with the School of Nursing at the University of Michigan in Ann Arbor. April Bigelow, PhD, ANP-BC, AGPCNP-BC, is a clinical associate professor. She can be reached at aballard@med.umich.edu. Barbara Freeland, DNP, ACNS-BC, CDE, is a clinical assistant professor. In compliance with national ethical guidelines, the authors report no relationships with business or industry that would pose a conflict of interest.

INTRODUCTION

Type 2 diabetes mellitus (T2DM) is a major chronic disease throughout the world. In the aging population, 1 in 4 adults over age 65 have been diagnosed with T2DM and another 50% have prediabetes, putting them a greater risk of developing diabetes in the future.^{1,2} Aging is considered a major risk factor for diabetes.¹ Over the next decade, the largest increase in diabetes prevalence is expected to be in those > 75 years old. Diabetes self-care and prevention of complications can be challenging, but, when combined with the demands of self-care for other chronic conditions, it can become overwhelming to patients and caregivers. Diabetes self-care presents specific challenges in the

elderly when up to half of them are also dealing with 2 or more other chronic conditions and about 40% have chronic pain as a further complication.³ The purpose of this study is to present special considerations for the care of diabetes in the elderly.

SCREENING AND DIAGNOSIS

Insulin production decreases with age while insulin resistance increases. Add to this impaired hepatic glucose metabolism and it is not surprising that T2DM prevalence increases with aging.⁴ The textbook signs and symptoms of new-onset T2DM can be subtle in the elderly. Unfortunately, overt symptoms of diabetes in the older adult are often absent. Traditionally, polyphagia, polydipsia, and

This CE learning activity is designed to augment the knowledge, skills, and attitudes of nurse practitioners and assist in their understanding unique factors involved in caring for elderly patients with Type 2 diabetes.

At the conclusion of this activity, the participant will be able to:

- Describe the screening and diagnosis of diabetes in older adults
- Identify barriers to glucose control and self-management in the older adult
- Explain treatment strategies for the older adult with diabetes

The authors, reviewers, editors, and nurse planners all report no financial relationships that would pose a conflict of interest.

The authors do not present any off-label or non-FDA-approved recommendations for treatment.

This activity has been awarded 1.0 Contact Hours of which 0.5 credits are in the area of Pharmacology. The activity is valid for CE credit until April 1, 2019.

polyuria have been considered the classic triad of symptoms for T2DM in adults. Unfortunately, these symptoms may not be as pronounced in the older population due to an impaired thirst mechanism and an increasing renal threshold for glucose increases with age.⁵ Symptoms may be mistakenly attributed another chronic condition or go on unrecognized. Fatigue and failure to thrive may be attributed to aging. Patients may present with other vague symptoms, such as urinary incontinence, dehydration, or confusion. Nocturia, especially in men, is sometimes seen as “normal” or related to an enlarging prostate. Poor wound healing and neuropathy may also be part of peripheral vascular disease and can further delay diagnosis. In addition, the thirst threshold is decreased in older adults, making the classic signs of hyperglycemia, namely increased thirst and urination, less remarkable in the elderly, and thus putting them at greater risk for dehydration and non-ketotic hyperosmolar state.⁵ Likewise, the signs and symptoms of hypo- and hyperglycemia may be masked by other conditions and medications, or even misinterpreted by both patients and providers. Because of the complex symptomology, many older patients receive a diagnosis of diabetes that results from routine screening or is delayed until the identification of diabetic complications.

The American Diabetes Association (ADA) recommends that routine screening for diabetes begin at age 45 for all individuals, regardless of weight; earlier testing for those overweight or obese with one or more risk factor.¹ Certain medications, such as thiazide diuretics, glucocorticoids, antipsychotics, and even statins, in the condition of prediabetes are known to increase the risk of diabetes.⁶ People may spend years with elevated glucose before developing even subtle symptoms. About one quarter of people with diabetes in the United States are undiagnosed. Almost half the Asian and Hispanic Americans are undiagnosed.¹

The diagnosis of diabetes in the older adult is consistent with its younger counterparts. Fasting plasma glucose (FPG), 2-hour plasma glucose after 75-g oral glucose tolerance test, and hemoglobin A_{1c} (HbA_{1c}, a reflection of estimated average glucose

over the previous 2-3 months; see Table) are all assessment options for diagnosis.¹ Although no one test is preferred, it is often more convenient in older adults to obtain HbA_{1c}, as fasting is not required.⁷ Using FPG will not readily identify those with impaired glucose tolerance or prediabetes. It is important to note, however, that interpretation of HbA_{1c} may be difficult if the patient has chronic anemia or chronic kidney disease.⁸ HbA_{1c} levels vary with race and ethnicity and “normal” for African Americans, for example, may be higher than for Caucasians.¹ Thus, clinicians should select the diagnostic test appropriate to their patient’s comorbid conditions. It is important to note that confirming the diagnosis with the same test and a new blood sample on a subsequent day is required. Point-of-care testing methods are not appropriate for diagnostic testing.

Criteria for diagnosis include all of the following: FPG \geq 126 mg/dL (7.0 mmol/dL); 2-hour plasma glucose \geq 200 mg/dL (11.1 mmol/dL); HbA_{1c} \geq 6.5% (48 mmol/mol); or classic symptoms of hyperglycemia and a random plasma glucose \leq 200 mg/dL.¹

ON-GOING MANAGEMENT

Glucose Control and Self-monitoring

Both the American Diabetes Association (ADA) and the American Geriatric Society (AGS) recommend that glucose targets be individualized. Measuring HbA_{1c} gives providers a gauge for overall glucose control. The AGS guidelines generally recommend an HbA_{1c} target of 7.5%-8%, depending on the patient’s characteristics, health status, life expectancy, and other chronic diseases.⁹ Lower targets of

Table. HgA1C to Average Glucose Conversion

HbA _{1c}	Estimated Average Glucose
6.5%	140 mg/dL
7%	154 mg/dL
7.5%	169 mg/dL
8%	183 mg/dL
8.5%	197 mg/dL
9%	212 mg/dL

Refer to: <http://www.diabetes.org/living-with-diabetes/treatment-and-care/blood-glucose-control/a1c/?referrer=https://www.google.com/>.

Download English Version:

<https://daneshyari.com/en/article/5569682>

Download Persian Version:

<https://daneshyari.com/article/5569682>

[Daneshyari.com](https://daneshyari.com)