



Special Considerations in the Management and Education of Older Persons with Diabetes AADE Practice Synopsis

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Diabetes is an important health consideration for providers and multi-disciplinary team members delivering health care services to an aging population. For simplicity, this practice advisory classifies those aged 65 or older as older adults. Life expectancy at birth in the United States was 78.8 years in 2014, with older adults expected to represent more than 20% of all Americans by 2036.¹ The Centers for Disease Control and Prevention (CDC) reports that approximately 26% of patients over the age of 65 years have diabetes and this number is expected to rise significantly in the following decades.² Diabetes self-management poses additional challenges with increasing age. Medical, functional, mental and social domains provide an essential framework for the clinical management and diabetes education of aging individuals, especially after age 75.³ Older adults can present with coexisting illnesses, including cardiovascular disease, cognitive impairment, falls and polypharmacy considerations, which directly impact clinical management and diabetes education approaches.

Role of Diabetes Educators

Diabetes educators have an integral role in assisting older persons with diabetes to set appropriate health behavior goals, learn required diabetes self-management skills and acquire knowledge about their disease. Diabetes educators assess and address age-related changes as well as other factors that may interfere with optimal diabetes self-management.⁴ The diabetes education plan incorporates regular assessments to evaluate changes in the patient's functional, cognitive and psychosocial status over time. Diabetes educators enhance self-management skills that are appropriate to the patient's diabetes-related symptoms, concomitant conditions and therapies.⁵ Within this context, diabetes educators must also educate caregivers, homecare, and clinical staff about the AADE7 Self Care Behaviors™ and their relevance to older persons with diabetes. The diabetes educators' role for older persons, within the AADE7 Self Care Behaviors frameworks, is as follows:

AADE7 Self Care Behaviors™	Key Diabetes Educator Roles
Healthy Eating	<ul style="list-style-type: none"> • Collaborate with the patient to set nutrition-related goals that avoid both hyper and hypoglycemia, while helping the patient maintain a reasonable weight.⁶ • Address individual nutrition needs based on personal and cultural preferences, health literacy and numeracy, access to healthful foods, willingness and ability to make behavioral changes, and barriers to change, with the goal of increasing quality of life, satisfaction with meals, and nutrition status.^{10, 25} • For older adult patients residing in Long Term Care facilities, consider risk for irregular and unpredictable meal consumption, undernutrition, anorexia, and impaired swallowing.¹⁰
Being Active	<ul style="list-style-type: none"> • Collaboratively set activity goals that accommodate the individual's access to activities, interests, mental and physical abilities.¹³ • Prior to designing any physical activity program, assess, through collaboration with the care team, cardiovascular status, co-morbid conditions (e.g. emphysema, osteoarthritis, retinopathy, neuropathy), risks associated with aging (i.e., frailty) and the possibility of hypoglycemia, developing and implementing the education framework based upon identified findings.^{6,14} • When possible, older adults with diabetes should be advised to work up to and continue at least 150 min per week of aerobic physical activity, with no more than 2 consecutive days without exercise. Encourage reduction in sedentary time to less than 90 mins by briefly standing, walking or performing upper body exercises.^{15,16} Consider referral to an exercise specialist if limitations are identified.
Monitoring	<ul style="list-style-type: none"> • Personalization of glycemic targets is critical. Patient and disease factors including disease duration, life expectancy, comorbidities, hypoglycemia risk, attitudes, resources and support systems are critical areas of consideration to determine optimal glycemic targets.^{8,9} • Consideration of patient and caregiver preferences is an important aspect of treatment individualization, with recognition that re-assessment is ongoing, given a patient's health status and preferences may change over time.⁶ • Assess the person's ability and need for blood glucose monitoring - Successful meter operation requires adequate vision, manual dexterity, and cognitive ability.^{21,22} • Recommend a glucose meter that will meet the person's physical and mental abilities, establish a blood glucose monitoring schedule based on the person's individual needs, financial status, and also provide instruction for caregivers when needed.^{7, 24} • Educators must encourage and teach problem solving among their patients with diabetes by using SMBG results to identify hypoglycemic and hyperglycemic events and, in turn, to make relevant medication, dietary and physical activity behavioral changes in order to achieve better diabetes outcomes.¹⁷

<p>Taking Medication</p>	<ul style="list-style-type: none"> • Special consideration needs to be given to older adults and approaches to pharmacologic treatments - Assess medication adherence, beliefs about medications, and factors associated with nonadherence, including poly pharmacy and financial limitations.^{18,19} • Devise an education plan, advocate for simplified regimens, assess medication-related adverse effects, recommend screening for depression, determine financial barriers, and refer to other healthcare providers as appropriate.⁷ • Practitioners should also consider the significant expense and additional complexity and costs of multiple combinations of glucose-lowering medications.⁸ Thorough assessment of these parameters should be undertaken and overly burdensome regimens should be avoided.
<p>Problem Solving</p>	<ul style="list-style-type: none"> • Optimize the educational experience by focusing on the individual's most critical problems in diabetes self-management, sequencing instruction logically and in small steps, and providing opportunities for guided practice, feedback, and demonstrable success.⁷ • Carefully screen and monitor for cognitive decline, utilizing simple assessment tools such as the Mini-Mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA), incorporating results into DSME content and delivery.³ If cognitive decline is identified, education efforts should be targeted at the family or caregiver. • The needs of older adults with diabetes and their caregivers should be evaluated to construct a tailored care and education plan that meets the needs of the person with diabetes, their care giver(s) and living environment.^{6,20}
<p>Reducing Risk</p>	<ul style="list-style-type: none"> • Hypoglycemia prevention, symptoms, causes and treatment should be thoroughly assessed for and education provided given contributing comorbidities of impaired renal function, slowed hormonal regulation and counter-regulation, suboptimal nutritional intake and hydration, polypharmacy, and slowed intestinal absorption.¹¹ Assess for and address risk associated with hypoglycemia unawareness. • Hyperglycemia leading to symptoms or risk of acute hyperglycemic complications should be avoided in all patients, requiring focused education on prevention, symptoms, causes and treatment.⁶ • Given significant heterogeneity of older adults, setting and prioritizing treatment and self-care behavior goals must be individualized and re-evaluated over time.⁶ • Educate about the importance of daily foot care, yearly screening tests such as eye examinations for retinopathy and urine testing for microalbumin, preventive care such as immunizations and smoking cessation to reduce the risk for acute and the progression of chronic complications.⁷ • For patients receiving palliative care and end-of-life care, the focus should be to avoid symptoms and complications from glycemic

	management and provision of education of family, clinical staff and/or home health personnel. ¹²
Healthy Coping	<ul style="list-style-type: none"> • Older adults with diabetes are at greater risk of major depression and should undergo depression screening on initial evaluation and if there is any unexplained decline in clinical status.²³ • Assess levels of stress which may be magnified by increased social isolation and reduced psychosocial support, reduced physical mobility or required changes in residency.²⁶

The initial diabetes education assessment for the older adult includes the individual's cognitive and functional levels, ability to perform activities of daily living and diabetes self-care, educational preferences and place of residence. Older persons with diabetes in acute care settings should be referred for diabetes self-management education (DSME) as early as possible.¹² Survival skills should be assessed with required teaching and follow-up assessment undertaken. Short-term self-care learning needs are identified and appropriate DSME provided.²³ Referral for outpatient DSME should be made based on urgency of need.

Those persons residing in long term care or rehabilitation facilities have additional needs.²³ DSME in the long term care setting should be tailored to the person's condition and directed at caregivers during times of confusion. While limited in some institutionalized individuals, DSME should focus on preventing further deterioration from preventable causes, such as falls resulting from hypoglycemia or infection and dehydration resulting from hyperglycemia. The timing of meals, medications, and food choices at long term care facilities may affect the older resident's ability to self-manage their diabetes, necessitating education for the resident, family members, and staff.

While medical, functional, mental and social domains can be challenged with advancing age, there is significant heterogeneity across older individuals with diabetes, demanding an individualized approach to clinical care and education. Thorough assessment, collaborative partnerships, targeted clinical care, education interventions and timely follow-up are important components of achieving quality outcomes for older adults living with diabetes.

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