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Guidance on Team-Based Care for Older Adults with Multiple Chronic Diseases:

Focus on Oral and Behavioral Health Management of the Older Adult Patient With Diabetes

NATIONAL CENTER
FOR EQUITABLE CARE FOR ELDERS

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National Center for Equitable Care for Elders: Mission

To improve the health and well-being of older adults (65 years and older) by leading the efforts to train more geriatrics providers, improving integrated health care for chronic conditions, and integrating enabling social services into health care delivery.

The National Center for Equitable Care for Elders provides innovative and culturally competent models of care, inter-professional training and educational resources, and technical assistance to health care professionals in community health centers who provide care to an increasingly vulnerable population: older adults.

1.0 The "Silver Tsunami" and its Impact on Health Care

The United States' aging population has been undergoing an exceptional shift. Adults 65 years and older have become a rapidly growing demographic; every day, approximately 10,000 "baby boomers" turn 65.[1] According to the U.S. Census Bureau, the 65 and older age group has increased almost 25% in the decade between 2003 and 2013, from 35 million to 45 million. Furthermore, census projection estimates expect this age group to reach almost 100 million in number by the year 2060.[2] There has been a small, steady increase in the percentage of patients age 65 and older that were seen in health centers and in 2014, 1.7 million older adult patients reported needing medical care in the past year.[3]

While many older adults are living longer, many do not experience good health in their retirement years. Data from the Centers for Medicare and Medicaid Services (CMS) Chronic Condition Data Warehouse showed that approximately 69% of older adults had two or more chronic health conditions.[4] There are some chronic conditions that stand out as problematic for older adult health – for instance, heart disease, stroke, pneumonia, cancer, and diabetes. Around 9.1 million Medicare beneficiaries have been diagnosed with diabetes.[5] Complications from uncontrolled diabetes can lead to heart disease, amputations, blindness, cognitive decline, oral manifestations, and loss of independence. Given that over two-thirds of older adults have multiple chronic conditions, health centers and their providers will be tasked with providing more complex care to this growing older adult population.

1.1 Defining Team-Based Care and Its Role in Older Adult Patients' Care

Team-based care has been defined as "the provision of health services to individuals, families, and/or their communities by at least two health providers who work collaboratively with patients and their caregivers — to the extent preferred by each patient — to accomplish shared goals within and across settings to achieve coordinated, high-quality care."[6] Although not universal across team-based care programs, three central qualities of team-based care are important in its provision – (1) patient-centered, (2) interprofessional, and (3) integrated.[7] Furthermore, the spirit of team-based care relies on communication, mutual understanding, respect, and support of each member's role on the team. Care teams are comprised of health care members that meet the needs of the patient and are managed by the patient's primary care provider. Other members of the team may include medical specialists, dental, behavioral, and pharmacy providers. Care teams may also include support and enabling service providers who might be within the health center or the community. Zawora et al. provide a 12-step checklist on building a successful team.[8]

In delivering care to older adults, a team-based care approach is not uncommon. Ensuring that the geriatric care team has a multidisciplinary group of health care professionals and supportive care members has been crucial to managing older patients' needs and multiple chronic conditions. For instance, older adults surveyed reported that receiving care through a team-based medical home model that includes enhanced care and provider coordination led to better health care outcomes.[9]

This resource describes the essential nature of oral health, behavioral health, and social determinants of health in managing older adults with diabetes. The next several sections provide information and case scenarios to highlight the roles of these specialists in a team-based care approach to diabetes management.

Note: A list of team-based care resources is provided on page 12.

2.0 Oral and Behavioral Health are Integral to a Team-Based Care Approach for Diabetes Management

Diabetes is one of the primary causes of morbidity and mortality globally.[10] According to the Centers for Disease Control and Prevention (CDC), 34.2 million people in the U.S. have diabetes (10.5%) and 7.3 million are undiagnosed.[11] Diabetes can negatively affect an individual's medical, oral, cognitive and emotional health, and relies on self-management to prevent further complications. An integrated approach to diabetic care can effectively help people cope with and manage this disease process.

Many individuals with diabetes experience both periodontal disease and depression.[12] The National Institutes of Health (NIH) has recognized this important relationship and encourages those with diabetes to visit the dentist at least twice per year since diabetics have a decreased ability to fight bacteria that invade the gums.[13] Additionally, poor glycemic control may impact depressive symptoms which are associated with hyperglycemia in patients with type 1 or type 2 diabetes.[14] Physicians, dentists, and behavioral therapists have a shared responsibility to provide treatment (and referral to treatment) to reduce many of the complications for their patients with diabetes.

2.1 The Oral Health – Diabetes Connection

There is an increasing body of evidence that relates the bidirectional connection between diabetes and periodontal disease. Inflammation appears to be a key link between the two diseases.[15] Unmanaged, persistent poor glycemic control has been associated with the incidence and progression of diabetes-related complications, including gingivitis, periodontitis, and alveolar bone loss. Patients with diabetes, especially those with poor glycemic control have a more difficult time controlling and fighting off diseases, including oral disease. They are more susceptible to oral 'sensory', gingivitis/gum disease, and salivary disorders, which may increase their risk of developing new and recurrent dental caries, periodontal disease, alveolar bone loss/loose teeth, thrush (fungal infection of the mouth), bad breath, and xerostomia (dry mouth).

Diagnosis is identified based on a host of systemic oral signs and symptoms, such as gingivitis and periodontitis, recurrent oral fungal infections, and impaired wound healing **[See Box 2.1.1 Medical and Dental Indicators for a Potential Diabetes Diagnosis for Older Adult Patients]**. Based on National Health Examination and Nutrition Survey (NHANES) data, adults aged 50 years and older with diabetes have more missing teeth and more than twice as likely to be edentulous, compared with older adults without diabetes.[16] Conversely, controlling gum disease can promote better systemic management of diabetes, which may result in fewer oral health problems. It is very difficult for patients with diabetes to eat comfortably and efficiently with painful gums and loose and/or broken teeth. Often, they will eat softer foods with less nutritional value.

2.1.1 Medical and Dental Indicators for a Potential Diabetes Diagnosis for Older Adult Patients

Medical Indicators for a Potential Diabetes Diagnosis	• Excessive thirst • Increased hunger • Frequent urination • Vision changes	• Weight loss • Muscle weakness • Infections with delayed wound healing
Dental Indicators for a Potential Diabetes Diagnosis	• Sore gums can be caused by poor oral health and uncontrolled blood sugar levels. • Dry mouth can be caused by many medicines, including drugs for high blood pressure and depression. Reduced salivary flow can create an attractive environment for fungal growth. • Burning mouth can be caused by stress, poor oral health, medications, and uncontrolled disease. • Delayed wound healing in uncontrolled disease.	• Multiple periodontal abscesses can be associated with poor oral health and delayed wound healing. • Candidiasis caused by medications, dehydration, increased blood sugar levels, reduced saliva, and poor oral health. • Oral mucosal diseases, recurrent aphthous ulcers, lichen planus, and thrush may increase with uncontrolled disease. • Parotid gland enlargement in uncontrolled disease.

2.2 The Depression – Diabetes Connection

Almost one-fifth of older adults experience mental and cognitive health issues such as anxiety, depression, and cognitive impairment/decline. Some of the effects directly attributable to diabetes include cognitive impairments prompted by glucose fluctuation (hypoglycemia), and the numerous vascular risks related to metabolic syndrome and type 2 diabetes.[10]

Depression is a common and significant chronic condition among older adults, and can be associated with:

- Emotional distress, cognitive decline, and reduced quality of life
- Physical decline including falls and activity limitations and restrictions
- Increased health costs
- Increased morbidity and mortality

Depression can be also a risk factor for diabetes (specifically type 2 diabetes), either through direct effect (i.e., influence on insulin production or utilization) or indirect effect (i.e., failure of self-care regimens on medication compliance, good eating habits, and exercise).

There is evidence to suggest a link between depression and glycemic control although it is unclear whether the link is bidirectional, as it is in oral health and diabetes.[17]

Depression can impact providers' diabetes management plans and goal setting as well as patients' self-care and adherence to the management plan.[17] Therefore, diabetes management may be difficult among older adults with depression. Conversely, older adults with diabetes may have a more difficult time managing their depression.

2.2.1 Screening for Depression Among Older Adults With Diabetes

It is recommended that older adults with diabetes be screened for depression.

List of Screening Tools for Depression in Older Adults:

- The 15-item Geriatric Depression Scale (GDS-15) has been used for community-dwelling, hospitalized, and institutionalized older adults. It is not useful for screening adults with dementia.
- Cornell Scale for Depression in Dementia (CSDD) is a validated and reliable depression severity measure. The CSDD can also be used to screen for depression among moderately to severely cognitively impaired adults.

2.2.2 Integrating Behavioral Health Into Team-Based Care for Older Adults

Many older adults today require complex health care that usually involves multiple treatments by multiple health care providers. One in four Americans has a mental health illness.[18] Additionally, many of these individuals have at least one comorbid chronic health condition. Integrating behavioral health into the care team continuum provides a seamless system approach and a vital voice for communicating key important areas, such as comorbid physical and mental health treatment, and self-management strategies for chronic disease.

Integrating behavioral health screening and management can:

- Lead to earlier identification of behavioral health concerns
- Establish a care continuum with comprehensive and well-coordinated care
- Increase knowledge/skills, capacity, communication, and collaboration among all providers
- Increase patient satisfaction and health outcomes

2.3 Talking Points: Diabetes and Oral and Behavioral Health are Connected

- Most medications that are used to manage patients with behavioral health problems can cause dry mouth (xerostomia). Table 2.3.1 lists medications that can cause or increase dry mouth, including those used in behavioral health treatment.[19]
- Dry mouth increases the rate of oral disease and periodontal inflammation.
- Unmanaged oral disease can negatively affect blood glucose, diabetes, and depression.
- Unmanaged diabetes and depression may negatively affect oral health.

2.3.1 Categories of Drugs Associated with Xerostomia

- Analgesics (centrally acting)
- Angiotensin-converting enzyme inhibitors
- Anorexiants
- Antacids
- Antiacne agents
- Antiallergy agents
- Antianxiety agents
- Anticholinergic/antispasmodic agents
- Anticonvulsants
- Antidepressants
- Antidiarrheal agents
- Antidysrhythmics
- Antihistamines
- Antihypertensives
- Antinausea agents
- Antiparkinsonism agents
- Antipsychotics
- Bronchodilators
- Calcium channel blockers
- Decongestants
- Diuretics
- Muscle relaxants
- Narcotic analgesics
- Nonsteroidal anti-inflammatory drugs
- Sedatives
- Smoking-cessation agents

2.4 Communicating About Oral and Behavioral Health With Older Adult Patients With Diabetes

- Review patient medications and their relationships to oral changes like dry mouth, bad breath, loose teeth, gum infections, enlarged gums, and strategies/ medicaments to resolve.
- Discuss connections between diabetes and oral and behavioral health.
- Counsel on self-management strategies for oral health, diabetes, and depression care.
- Develop diet and exercise protocols for management.
- Counsel on cessation of tobacco and smoking.
- Screen for symptoms of depression or other mood disorders.
- Screen for cognitive impairment or decline.
- Screen for food insecurity and other social needs.

The following two clinical scenarios highlight how health care providers can work as a team to address the multiple health concerns of the older adult patient with diabetes.

In the *Dental Visit with Dr. Johnston* scenario, the oral health provider identifies the need to connect with the patient's primary care provider around pertinent findings indicative of diabetes and depression.

Clinical Scenario: Dental Visit With Dr. Johnston

Mr. Wilbur Smith, a 78-year-old man, has been a dental patient of Dr. Johnston for many years. During the past five years, Mr. Smith has had difficulty reading and filling out the medical health history (HH) form. He writes "no change" across the top of his form in bold letters. Dr. Johnson's assistant carefully and verbally reviews the HH form. On further questioning, Mr. Smith complains of "being thirsty and hungry." He also lets the assistant know that he may need to "use the restroom a few times during the visit." He gets up frequently at night to urinate. "I am just getting old," he admits.

The assistant, who has known Mr. Smith for many years, observes that he has had a noticeable weight loss, seems a little lethargic, and does not display his usual jovial demeanor during his intake.

Dr. Johnston reviews the HH and does an oral exam. He notices a very dry mouth and sore areas that appear to be caused by candidiasis, with both red and white patches. Mr. Smith's gums are noticeably red and puffy. Dentally, Mr. Smith complains that food tastes poorly, his mouth aches, he has bad breath, and he has no spit. Socially, Mr. Smith shares that in the last few months he has not gotten out of his house very often, since eating out is not enjoyable due to his oral complaints.

Dr. Johnston recommends that Mr. Smith see his primary care doctor for a workup and diagnosis to discuss these new symptoms. Once Mr. Smith has seen his physician, Dr. Johnston will be able to review his treatment plan and set up restorative appointments. Dr. Johnston emphasizes the importance of improved oral care and demonstrates best protocols for oral hygiene.

Dr. Johnston calls Mr. Smith's primary care doctor to discuss his concerns about diabetes, as well as Mr. Smith's emotional well-being. The primary care team will follow up with Mr. Smith and be sure that he sets up an evaluation appointment for the medical and behavioral concerns shared by Dr. Johnston.

The primary care doctor confirms diabetes. She will be monitoring Mr. Smith's glucose levels. Medication is given for his candidiasis. The primary care doctor also conducts a brief depression screening with Mr. Smith. She refers him to a counselor for a more extensive assessment. Additionally, his primary care doctor recommends shorter, less stressful visits, if possible, and reinforces the need for excellent oral hygiene. She will update Dr. Johnston on Mr. Smith's progress.

In the *Medical Visit with Dr. Williams* scenario, the family physician identifies the need to connect the patient with an oral health provider along with providing oral hygiene instruction.

Clinical Scenario: Medical Visit With Dr. Williams

Miss Millie Roy, an 80-year-old woman, presents to her family physician, Dr. Williams, for a three-month check up to evaluate how successfully she is managing her severe arthritis, hypertension and depression. A stroke three years ago, left Miss Roy with difficulty using her right arm and hand. She continues to struggle with eating, dressing, brushing her teeth, and performing other activities of daily living. Dr. Williams feels that her vitals are good today but is concerned with her increasing depression.

At her last checkup, Miss Roy complained of decreased appetite, along with increasing feelings of "sadness and loneliness." She has stopped attending her church meetings (her only social activity) because of her poor smile and mouth pain. When her dose of antidepressant was increased three months ago to see if her mood would elevate, Miss Roy only noticed that her mouth developed a bad taste and mouth sores.

Dr. Williams recommends an oral exam as part of her medical follow-up appointment. Miss Roy is very happy to discuss her dental problems with her physician since finances have made seeing a dentist for treatment prohibitive. She was always very proud of her "best asset", her "beautiful" teeth". Tearfully, Miss Roy explains, "these awful teeth make me embarrassed."

Dr. Williams examines Miss Roy's mouth and finds generalized heavy plaque and food debris, very dry tissues, and multiple decayed lower teeth. Her upper denture drops when she opens her mouth for the exam. Dr. Williams counsels her on the importance of good oral health and instructs his health care coordinator to set up a dental evaluation through a local dental clinic.

Knowing that it might be a few months before she can be seen, he stresses the importance of brushing, flossing, and rinsing to minimize the advancement of her disease. He also discusses with Miss Roy the problems associated with reduce saliva caused by her medications, dry, sore mouth, decay, sore gums and loose dentures. He recommends a denture adhesive to hold her denture in place and a saliva substitute to relieve the irritation from dryness to allow her to enjoy eating nutritional foods. Lastly, he stresses the importance of cleaning her denture daily to remove food debris and germs.

Dr. Williams also refers Miss Roy to a nutritional counselor to assist her in choosing healthy foods with lower sugar content and an occupational therapist to improve her dexterity for eating, tooth brushing, and overall personal care. Dr. Williams believes that when Miss Roy's oral disease is brought under control and her smile and self-confidence return, she will be encouraged to return to church, family events and other normal daily activities. He will consider reducing the antidepressant medication that negatively affects her mouth when she is stable, smiling, and responding favorably.

3.0 Support and Enabling Services are Integral to a Team-Based Care Approach for Diabetes Management

The World Health Organization (WHO) defines social determinants of health (SDOH) as "the conditions in which people are born, grow, live, work and age." [20] SDOH cover a wide range of social needs, including food security, transportation, financial resources, access to health care, housing, social support and community inclusivity, neighborhood conditions and physical environment, and access to a safe and toxin-free environment.

- The role of the health care provider in recognizing and identifying these unmet social needs is crucial, as it is likely that one out of two older adults will have at least one unmet need.[21]
- Providers generally lack the training to fully assess patients' unmet social needs, as well as to identify and work with community-based organizations.

The older adult patient with diabetes not only requires care from an expanded health care team (primary care, oral health, and behavioral health providers), but also requires services from local and state community support, including dependable and nutritious meals, convenient and reliable transportation, and social engagement activities. In addition, patient navigators, social workers, and community health outreach workers can aid the successful health care management of patients with diabetes.

3.1 Social Determinants of Health Screening Tools That Support/Enabling Service Providers Can Share With Health Care Providers

- Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) tool: This validated tool aids health centers in the collection of patients' social data. It was developed by the National Association for Community Health Centers (NACHC) – in collaboration with the Association of Asian Pacific Community Health Organizations, the Oregon Primary Care Association, and the Institute for Alternative Futures. The PRAPARE standardized assessment tool uses core measures such race, ethnicity, language, neighborhood, employment, housing, material security, social integration, and transportation to help health centers and other health care providers collect the data required to better understand their patients' social determinants of health, and establish action strategies.
- Health Leads, a nonprofit organization funded by the Robert Wood Johnson Foundation, developed a screening tool kit for providers to assess health-related social needs.

3.2 Work in Collaboration With Medical, Oral, and Behavioral Health Professionals

Support or enabling service providers can play a vital role in team-based care to the older adult patients with diabetes. These providers can work with the other health care team members to ensure that older adults know about and have access to support and services central to comprehensive, patient-centered care. Support and enabling services that are co-located within the health center can more easily engage with the health care team and share information within a common electronic health record (EHR). Support and enabling services within the community can reach out to health centers in their locale to make the center aware of their services and potentially engage in a formal agreement.

While there are several areas in which support and enabling services can assist health care providers with the social needs of older adult patients with diabetes, there are a couple of key areas that are particularly important for this patient group:

- **Access to regularly scheduled nutritious meals**
  Access to diabetic-friendly, nutritious meals (e.g., Meals on Wheels) helps the patient to maintain blood sugar levels without extreme peaks and valleys which can cause health complications over time.
- **Access to reliable and convenient transportation**
  Reliable transportation is important for older adults with multiple chronic conditions so they can attend the myriad of appointments for managing the conditions. Access and transport to social engagement centers and activities is also important.

The following clinical scenario highlights how social service providers can work as a team to address the multiple health concerns of the older adult patient. In the *Social Service Visit with Candice* scenario, the social worker identifies the need to connect with the patient's primary care provider around pertinent findings indicative of oral disease and loneliness.

Clinical Scenario: Social Service Visit With Candice

Sally has been living in an assisted care home since her husband, Robert, died three years ago of heart disease. Candice, her social worker, has noticed that during the past few years, Sally has consciously avoided meeting people and making friends at lunch and joining in most facility events. Cognitively, Sally has been doing very well, but she has great difficulty with her mobility and the ability to perform activities of daily living. She is fortunate to have providers that "make her feel secure and safe" and to have the assistance of others around her to participate in her personal health management. During the past 15 years, Sally has been unable to afford any dental treatment due to her family's limited finances. Gradually, she watched her teeth deteriorate.

Candice noticed Sally's avoidance of all personal interactions and talked with her about a dentist to help restore her smile. Being able to "visit and eat with her neighbors" is what Sally values most at this stage of her life to avoid loneliness and isolation. Candice planned with Sally's physician and a local dental school to have an initial dental exam and treatment plan scheduled for Sally. Sally is hopeful she will soon be a part of her community and make new friends.

4.0 Developing a Collaborative Team-Based Approach

Team-based management will provide the best health care results and support for older adults with diabetes through education, communication and treatment planning. The older adult patient with diabetes not only requires care from an expanded health care team (primary care, oral health, and behavioral health providers) but often requires services from local and state community support or enabling service providers such as nutritious and dependable meals and convenient and reliable transportation. In some instances, to achieve the intended transition into a team-based care approach, there will be necessary changes in culture and structure of the health care delivery system.

At the organizational level, a shared vision for effective team-based care needs to be match the availability of sustainable resources. Productive collaborations with medical, dental, behavioral, and support service colleagues provide a patient with a higher quality of care through shared information and treatment planning.

4.1 Strategies to Establish an Effective Interdisciplinary Team-based Health Care Approach

Create a patient-centered action plan to manage the disease and its symptoms. Successful team-based care for older adults with multiple chronic diseases is centered around creating patient-centered action plans to manage conditions and their related symptoms. It is important for the entire health care team to fully understand this approach and agree upon a set of shared patient care goals. Expectations should be clearly set around specific roles and required levels of effort, with opportunities provided for training and skill building that builds off existing team strengths.

Educate patients about the links between systemic, oral, and cognitive health. Health center providers should be able to identify the early signs of oral disease and behavioral health issues in their older adult patients with diabetes and educate their patients about the links between their systemic, oral, and cognitive health. Educating patients about these links and identifying early signs of disease will give patients a role in managing their symptoms and trajectory of health.

Introduce a built-in referral process for care coordination. Providers can make appropriate referrals to their dental and behavioral health colleagues for effective management. Clear communication with team members is essential in the creation and implementation of a built-in referral process for care coordination.

Establish follow-up protocols with patients and care team colleagues. Closing the loop with established workflows and follow-up protocols that encourage productive communication with patients and care team colleagues will reduce delays in needed treatment or support.

Develop a review process to evaluate care team success. The incorporation of a routine review process of the team-based approach that encourages reflection and feedback sharing can allow leadership to identify areas for improvement and adjust goals as needed.

Recommended Team-Based Care Resources

- Turning Team-Based Care into a Winning Proposition (includes 12-step checklist)
  https://www.mdedge.com/sites/default/files/issues/articles/JFP_06403_Article2.pdf
- Team STEPPS (Team Strategies and Tools to Enhance Performance and Patient Safety) from the Agency for Healthcare Research and Quality
  https://www.ahrq.gov/teamstepps/index.html
- Creating Patient-Centered Team-Based Primary Care: Agency for Healthcare Research and Quality
  https://pcmh.ahrq.gov/page/creating-patient-centered-team-based-primary-care
- Team-Based Health Care Delivery: Lessons from the Field
  http://www.ahaphysicianforum.org/resources/leadership-development/team-based-care/team-delivery-report.pdf
  - Team-based care core concepts
  - Case studies of three featured organizations employing a team-based care approach

Summary

Primary care providers should be able to identify the early signs of oral disease and behavioral health issues in their older adult patients with diabetes and make appropriate referrals to their dental and behavioral health colleagues for effective management. The older adult patient with diabetes not only requires care from an expanded health care team (primary care, oral health, and behavioral health providers) but often also requires services from state and local community support or enabling service providers. These services include dependable and nutritious meals, convenient and reliable transportation, and social engagement activities.

Successful collaborations with medical, dental, behavioral, and support service colleagues provide a patient with a higher quality of care through shared information and treatment planning. Team-based management will provide the best health care results and support for seniors through education, communication and treatment planning. Identifying the early signs of diabetes and working through a patient-centered, team-based approach will allow patients to successfully manage their symptoms, reduce potential diabetic complications, and improve their overall health and quality of life.

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