Oral Health and Chronic Disease Management in Older Adults: Promising Practices from Health Centers

NNOHA
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Older adults are the most rapidly growing demographic in the United States, with 10,000 individuals reaching the age of 65 every day.[1] The U.S. Census Bureau estimates that the older adult population will reach close to 100 million by 2060. Despite older adults living longer, many have not experienced good health with more than 68% having two or more chronic health conditions.[2] The burden of non-communicable chronic diseases (e.g., diabetes, cognitive disorders, and chronic kidney disease) and oral-systemic conditions coupled with aging has a multiplier effect on older adults, especially those experiencing one or more social risk factors. Older adults with complex medical conditions are at increased risk of chronic oral diseases, such as cavities, gum disease, tooth loss, dry mouth, and oral cancer.[3] Nearly all adults (96%) aged 65 years and older have had a cavity and about two out of three (68%) have gum disease.[4]

Living with multiple morbidities not only strains the individual and their family but also significantly impacts the healthcare system. A hyper-aging society places different demands on the healthcare system and requires different models of care. Oral health is often siloed from primary care, creating access barriers for older adults, inadequate understanding of the connection between chronic diseases and oral health, and poor chronic disease management. Oral health and primary care integration is an essential strategy to support older adults in improving their health outcomes.

Integrated care emphasizes whole-person health by recognizing the association between oral health and systemic health. A model that utilizes the 5-M's framework (**M**obility, **M**entation, **M**edication, What **M**atters Most, and **M**ulti-**M**orbidities)[5] ensures that older adults and their families are an inherent part of the decision-making process. The integrated care approach allows multidisciplinary healthcare providers to recognize and address common or shared risk factors for oral health and other non-communicable diseases, encourage early detection, establish a surveillance system for sharing data across disciplines and platforms, and allocate resources appropriately, i.e., financial and human capital, to meet the needs of the older adult population.[6]

Health centers are uniquely positioned to integrate care as many delivery sites have medical and dental services under the same roof. Examples of oral health and primary care integration include:

- Interdisciplinary training to understand the relationship between oral health and chronic disease
- Case management between primary care and dental teams
- Patient education about the relationships between oral health and chronic disease
- Primary care team members engage in oral health activities including risk assessments, oral evaluations, and preventive interventions
- Dental team members engage in chronic disease management including risk assessments, screenings, and support monitoring chronic disease status
- Bi-directional referrals between medical and dental departments

Creating an integrated healthcare system allows patients the opportunity to achieve optimum health outcomes. This publication will describe three chronic diseases that disproportionately affect older adults: **diabetes**, **cognitive disorders**, and **chronic kidney disease**, and their association with oral health. Each section highlights a health center that has integrated oral health and primary care to improve the management and care navigation for older patients experiencing these conditions.

Diabetes

There is growing evidence showing the association between oral health and diabetes. Individuals with diabetes have a higher risk of developing gum disease. As gum disease progresses, it can lead to pain, difficulties chewing and talking, loose teeth, and tooth loss. Diabetes, like gum disease, is an inflammatory condition. Diabetes reduces the ability to heal from infection, including infections in the mouth. Diabetes can also contribute to dry mouth, increasing the risk of infection, sores, and cavities.[7] According to the National Health and Nutrition Examination Survey (NHANES), the prevalence of periodontal (gum) disease was higher among adults with diabetes compared to adults without diabetes. In addition, people with diabetes were also less likely to visit a dentist for preventive dental care.[8] Treatment for periodontal disease reduces healthcare costs by reducing visits to the emergency room.[9] Older patients with uncontrolled diabetes or experiencing social risk factors (issues with cost, transportation, insurance, or dental care anxiety) may have difficulty improving their oral health status.

Program Highlight

Kintegra Health, a health center located in Gastonia, North Carolina, embarked on a groundbreaking initiative to integrate medical and dental teams, with a specific focus on addressing the unique needs of patients with diabetes. Recognizing a gap in dental care for patients with diabetes, Kintegra Health sought to establish a system that would ensure comprehensive care for those at an increased risk of developing gum disease. Through participation in the NNOHA Integrating Diabetes & Oral Health quality improvement collaborative, Kintegra Health started their initiative at a single site where medical and dental services were co-located. During the first collaborative effort, the organization saw a 16% increase in the percentage of dental visits by patients with diabetes.

Kintegra Health also introduced teledentistry via intraoral cameras in their medical clinics. This innovative aspect brought their integration efforts to new heights, allowing patients to receive problem-focused dental care while being seen by their medical providers. Using a simple point-and-shoot method, medical staff can capture photos of areas of concern identified by patients, which are then securely uploaded to a HIPAA-compliant chat platform along with basic patient information. Dental providers can then assess the visual images, determine the severity of any issues, and schedule the patient for an in-office dental visit. This approach has proven highly successful in diagnosing various conditions, including caries, trauma, potential sexually transmitted infections (STIs), fractures, and lymphadenitis. Kintegra Health's commitment to integrating medical and dental care has helped improve the overall health outcomes for its patients across the age spectrum.

Cognitive Disorders

Cognitive disorders and dementia encompass a range of conditions characterized by an impairment of brain function, leading to memory loss, diminished cognitive capabilities, and altered judgment, reasoning, and communication. Nearly 40% of individuals over 65 years old report experiencing a physical or cognitive disability, and a significant portion may suffer from poor oral health and orofacial pain, conditions that seem to be more prevalent among older adults with cognitive impairments, contributing to an overall decline in health, quality of life, and behavioral changes.[10]

In individuals living with cognitive disorders, Alzheimer’s Disease, or Related Dementias (AD/ADRD), oral health can present unique challenges; preventive measures and early interventions through daily oral hygiene must be fundamental components of their care. Memory loss and other decreases in cognitive and physical functions can make daily oral hygiene difficult to maintain leading to an increased risk of tooth decay, gum disease, oral infections, and oral pain.

Additionally, medications commonly prescribed for AD/ADRD may reduce salivary flow leading to dry mouth, further heightening the potential for oral health problems, difficulty swallowing, or malnutrition. Therefore, it is crucial to integrate oral health care into the broader care strategy for older individuals with cognitive disorders to ensure good oral health and overall well-being.[11]

Program Highlight

North East Medical Services (NEMS) Program of All-inclusive Care for the Elderly (PACE) Center is located in the heart of San Francisco's Chinatown. NEMS PACE offers a wide range of health and community-based services that allow participants to safely age in place. Their interprofessional care team develops comprehensive and personalized care plans to meet the unique medical, social, and emotional needs of their patients.

For patients living with dementia, there is a strong focus on preventive dental care. Annual dental checkups are included in the NEMS PACE care approach, which includes cleaning, denture care, and oral disease screening. The use of electronic toothbrushes has been particularly effective for those experiencing difficulties performing their activities of daily living (ADLs), allowing patients to maintain their dental hygiene and sense of independence.

Education is provided to the family and caregivers of each participant to ensure adherence to a scheduled daily oral health routine, which is particularly important for the recall of a patient living with early stages of dementia. For those who have limited social support, NEMS PACE offers home care services that include personal care, offering dental hygiene reminders. Because many common medications used for chronic conditions can affect oral health concerns like saliva production, the NEMS PACE team works to identify action steps to address these side effects in their older adult dental participants, particularly for those with cognitive impairment.

Chronic Kidney Disease

Chronic Kidney Disease (CKD), characterized by the gradual loss of kidney function over time represents a significant health concern for older adults, ranking ninth among the top ten leading causes of mortality in the U.S.[12] CKD can also disturb the calcium, phosphorus, magnesium, and vitamin D metabolisms, and hormone activity that could affect the bones of the skull and face. It is notably linked to oral health, as the systemic inflammation inherent in CKD and renal function, along with the medications prescribed, can cause oral complications such as dry mouth and altered taste. These oral symptoms not only affect daily comfort and the ability to eat but may also lead to a decline in oral hygiene practices, increasing the risk for dental and gum diseases and affecting overall systemic health and quality of life. Moreover, the interconnections of CKD with diabetes, cognitive impairment, and cardiovascular health, underscore the need for a comprehensive approach to oral healthcare management that addresses the multifaceted needs of older adults with CKD.[13]

Program Highlight

Teche Action Clinic, a health center in Louisiana, has been very successful in its collaboration between dental providers, primary care providers (PCP), nephrologists, and dialysis treatment facilities to improve care for patients who have CKD. The patients are identified during their initial or recall examination appointments when the medical history is documented and reviewed. The stage of kidney disease and treatment modalities are documented. Teche Action Clinic uses eClinicalWorks as their electronic medical record (EMR). If dialysis is being received, a notation is made in the EMR (under the Patient Alert Tab) to coordinate future dental appointments. At the end of the visit, the patient is given a Medical Release for Dental Treatment form. The PCP or nephrologist overseeing their care will complete the form noting any need for antibiotic prophylaxis, restrictions on local anesthetics, blood thinners, etc.

The dentist receives and reviews the completed Medical Release for Dental Treatment form, notes recommendations, and updates the EMR. If the patient is in active treatment, the dialysis facility is contacted by the Expanded Duty Dental Assistant to schedule appointments on non-dialysis days, coordinate antibiotic therapy if needed, and communicate any changes in disease status or frequency of treatment from the nephrologist or PCP throughout the dental treatment. The patient's status is updated at every appointment to record changes that may impact their oral health. Clear and frequent communication with the dialysis facility supports improved care coordination for the patient.

Conclusion

The connection between chronic conditions like diabetes, cognitive disorders, and chronic kidney disease with oral health status underscores the importance of health center efforts that prioritize whole-person care. As the older adult population continues to grow, healthcare professionals must be prepared to provide tailored, appropriate, and high-quality care to this population. Integrated care within health centers is critical to ensure improved health outcomes for all older patients, but particularly those with multiple chronic conditions.

Resources

- Oral Health in America: Advances and Challenges
- Improving the Oral Health of Older Adults
- Older Adult Oral Health Resources for Collaboration
- Setting the PACE for Frail Older Adults in the Community
- Social Determinants of Health (SDOH) in Oral Health Care: A Step Towards Health Equity for Older Adults

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