

Evidence-Based Practice Guideline

Oral Hygiene Care for Functionally Dependent and Cognitively Impaired Older Adults

Oral health is essential to overall health and disease prevention, speech and alimentary functioning, and quality of life (QOL) (Institute of Medicine [IOM], 2011; Shay, Scannapieco, Terpenning, Smith, & Taylor, 2005). This is especially so for older adults, who should be able to live pain free, eat and talk comfortably, feel good about their appearance, and maintain social relationships and interactions. Unfortunately, when older adults become functionally dependent or cognitively impaired, their oral health and lifelong habits of oral care are often neglected, compromising their health, self-esteem, and QOL. Many community-living, functionally dependent, and cognitively impaired older adults move into long-term care settings, with periodic admissions to acute care settings as their general health deteriorates. As dependence increases, oral hygiene frequently declines, and incidence of oral diseases often increases (Chalmers, 2002; Chalmers, Carter, Fuss, Spencer, & Hodge, 2002; Chalmers,

Carter, & Spencer, 2003; Chalmers & Ettinger, 2008; IOM, 2011).

Oral problems experienced by older adults are mostly preventable



or can be detected early and are not the direct result of aging. Dental caries (tooth decay) and periodontal (gum) disease are plaque-related, preventable oral diseases. Although these diseases are generally not life threatening or seriously impairing for most older adults, they can have an effect on the management of medical conditions, general

health, nutrition, and QOL. Challenges still remain in determining a direct causal relationship between various oral conditions and bacteria on specific maladies; however, increasing evidence supports the impact these oral diseases can have on older adults, especially those with confounding medical factors. It is best to minimize the amount of oral pathogens and infections to avoid contributing to risk for illnesses and complications in an already burdened aging body system.

Reducing the number of bacterial pathogens—through good oral hygiene—will benefit the local oral environment as well as the overall health of the individual.

Research has demonstrated that chronic inflammation in the oral tissues, such as severe periodontal disease, places older adults at increased risk for cardiovascular disease which can lead to heart attack and stroke (Behle & Papapanou, 2006; Kinane & Bouchard, 2008; Mattila, Pussinen, & Paju, 2005; Mustapha, Debrey, Oladubu, & Ugarte, 2007; Niedzielska, Janic,

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Cierpka, & Swietochowska, 2008; Seymour, Ford, Cullinan, Leishman, & Yamazaki, 2007). Additionally, the accumulation of oral bacteria and food debris in the mouth, on teeth, or on dental prostheses due to oral hygiene neglect is one of the oral health-related risk factors for aspiration pneumonia (AP) (Awano et al., 2008; MacEntee, 2010; Shay et al., 2005). Bacteria found in the oral cavity can be aspirated into the lungs, which presents a risk for AP and other respiratory diseases in older adults (Azarpazhooch & Leake, 2006; Scannapieco, Bush, & Paju, 2003; Sjögren, Nilsson, Forsell, Johansson, & Hoogstraate, 2008). Numerous studies have identified poor oral health as a risk factor associated with this often fatal condition and cited the following factors in the development of AP: use of medications, particularly those that reduce salivary flow; salivary hypofunction; swallowing problems; caries and periodontal disease; lack of self and professional oral care; and poor oral function (Awano et al., 2008; Shay et al., 2005). Because it is difficult to isolate a specific oral condition as a direct contributing factor to AP, continued studies are needed to identify risk factors for AP (Langmore et al., 1998; Pace & McCullough, 2010; van der Maarel-Wierink, Vanobbergen, Bronkhorst, Schols, & de Baat, 2011).

Although regular oral care is important to overall health, it is often an overlooked health care service for older individuals. Any professional dental treatment will fail in the long run if adequate, daily preventive oral care is neglected. Frail older adults face various inevitable declines in health; however, the decline in oral health can usually be avoided with good routine oral care. Professional caregivers of older adults are crucial in the execution of oral care plans. How-

ever, the task of oral hygiene care is often viewed as an unpleasant task and frequently delegated to others who may not have adequate training or time to complete the task. Oral care is indeed a challenging task for caregivers, especially if the older person has dementia, communication and behavior difficulties, or is resistant to care.

PURPOSE

The purpose of the guideline is to present practical information for health care providers and caregivers in the provision and documentation of oral hygiene care for functionally dependent and cognitively impaired older adults. The guideline has three main components: (a) tools for assessment of the oral cavity and oral problems; (b) practical preventive techniques and behavioral and communication strategies to use when providing oral hygiene care; and (c) use of an oral care plan to maintain long-term oral health.

The guideline focuses on functionally dependent and cognitively impaired older adults in long-term care settings and is applicable in hospital and community settings. Many functionally dependent and cognitively impaired older adults living in the community move into long-term care settings as their general health deteriorates and dependence increases. Likewise, oral disease and conditions tend to worsen. Research has validated clinical observations that deteriorating oral health starts before people are admitted to long-term care facilities and continues to decline over time, sometimes rapidly, in these settings (Chalmers, 2002; Chalmers, Carter, et al., 2002, 2003; Chalmers & Ettinger, 2008; IOM, 2011).

The full text of the guideline is available for purchase from The University of Iowa Hartford Center of Geriatric Nursing Excellence at <http://www.nursing.uiowa.edu/Hartford/nurse/ebp.htm>. (John-

son & Chalmers, 2011). Providing oral hygiene care and identifying appropriate behavioral and communication strategies should be an interdisciplinary effort involving dentists, dental hygienists, nurses, physicians, and other allied health professionals. Such expertise and collaborative efforts can address the unmet oral health needs of this vulnerable population (IOM, 2011; Jablonski, 2010; Jablonski, Swecker, Munro, Grap, & Ligon, 2009; Pace & McCullough, 2010). Use of the guideline's oral assessment tool and recommended oral hygiene care techniques is most effective when accompanied by hands-on training by a dental hygienist or dentist (Chalmers & Ettinger, 2008). Oral health is best accomplished when the oral hygiene care objectives in the **Figure** are met.

KEY TERMS

Dental caries: Tooth decay that occurs on the tooth surface. A cavitation occurs when sufficient bacteria are exposed to a diet rich in refined carbohydrates and left undisturbed for a prolonged period of time. Dental caries can occur in four general areas: chewing surfaces; between/on sides of the teeth; exposed root surfaces; and around fillings, crowns, and bridges.

Tooth surface + dental plaque + refined carbohydrates + time = dental caries

Dental plaque: A natural bacterial biofilm composed of various microorganisms tenaciously attached to teeth and other oral surfaces (Harris, Garcia-Godoy, & Nathe, 2009).

Periodontal disease: "Gum disease" is a chronic, inflammatory disease of the periodontium. In its early stage, inflammation of the gingiva can be reversed with oral hygiene care. If the inflammation is left to progress, the periodontium is destroyed, and tooth loss can occur (Harris et al., 2009).

Periodontium: Supporting structure surrounding the teeth. It in-

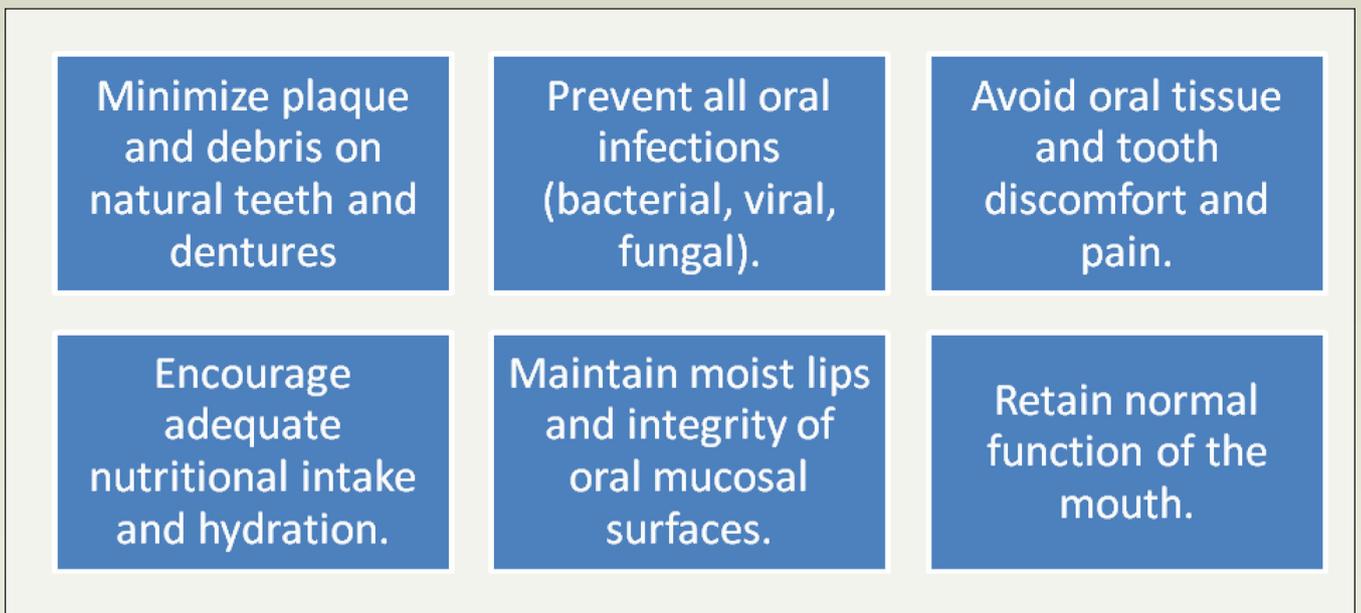


Figure. Objectives of oral hygiene care. Modified from Rawlins and Trueman (2001) by V. Blanco Johnson ©2011.

cludes the gingiva, periodontal ligament (fibers supporting the tooth root within the bone), cementum (surface layer of the tooth root), and alveolar bone (Harris et al., 2009).

Plaque-related oral diseases: Refers to dental caries and periodontal disease caused by the presence of pathogenic dental plaque on tooth surfaces and on gum tissues. These diseases are not caused by a single pathogenic microorganism. It is an accumulation of numerous bacterial species that comprise dental plaque (Harris et al., 2009).

Xerostomia: Patient's subjective complaint indicates dry mouth and difficulty eating or swallowing. Xerostomia is often a side effect of certain medications.

INDIVIDUALS AT RISK FOR ORAL PROBLEMS

Patient-Related Factors to Consider

Cognitive/Neurological Impairment. Oral health generally declines when cognitive impairment progresses. Overall, older adults who are cognitively impaired are found to have poor oral health, untreated dental decay, and accumulated plaque on teeth and dentures

(Chalmers et al., 2003; Chalmers & Pearson, 2005b; Ghezzi & Ship, 2000; IOM, 2011; Mancini, Grapasonni, Scuri, & Amenta, 2010). When identifying older patients at greatest risk for plaque-related dental diseases, level of cognitive impairment must be assessed. Examples of commonly used research-based tools include the Mini-Mental Status Examination (Folstein, Folstein, & McHugh, 1975), the Global Deterioration Scale (Reisberg, Ferris, de Leon, & Crook, 1982), and a clock-drawing test (Sunderland et al., 1989). These tests should be administered by a trained interviewer and placed in the patient's health record.

Disruptive Behavior/Resistance to Care. Caregivers have often cited cognitive impairment and resistive behavior in older adults as a major barrier to oral hygiene care. This is especially true when caregivers feel inadequately trained, are fearful of being injured, do not have the proper supplies and equipment to provide oral care, or lack an oral care protocol (Chalmers & Pearson, 2005a; Coleman, Hein, & Gurenlian, 2006; Jablonski, 2010;

Jablonski, Munro, et al., 2009). The use of "elderspeak" should be avoided to minimize resistive behavior. This refers to the content, pitch, and tone of voice that conveys a patronizing and infantilizing form of communication (Jablonski, 2010; Williams, Herman, Gajewski, & Wilson, 2009). Other specific communication techniques for use during oral hygiene care can be used and are included in the full guideline.

Functional Impairment. Functionally impaired dependent adults are at an increased risk for oral problems due to their limited physical dexterity and impaired sensory perceptions, which then leads to reliance on others for their care. Older patients can be assessed for level of dependency on others through assessment of activities of daily living (ADLs) and instrumental ADLs (Chalmers & Pearson, 2005a; Coleman et al., 2006; IOM, 2011; Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963). Assistive oral hygiene aids can be customized to maintain independence (e.g., modified toothbrush handles, electric toothbrushes).

Residence Location. The patient's location of residence influences the level of risk for oral diseases. For example, because institutionalized older adults generally have more severe impairments than their community-dwelling counterparts and are generally dependent on others for their care, they are at high risk for oral diseases. In fact, older individuals who are institutionalized or homebound have the poorest oral health among older adults (Chalmers & Ettinger, 2008). Additionally, facilities with high resident-to-staff ratios or high staff turnover likely have residents with poor oral health. When oral hygiene care in a facility is a low priority, when nursing personnel have not received adequate instruction in oral hygiene care, or when no oral care protocol or policy is established, dependent residents are not apt to receive daily preventive care (Berry, Davidson, Masters, & Rolls, 2007; Chalmers & Pearson, 2005a; Coleman et al., 2006).

Although it is difficult to assess the risk of community-dwelling homebound older adults, research has indicated that oral diseases occur at high levels in high-risk older adults while living in the community and that they then enter long-term care facilities with compromised oral health (Chalmers, Carter, et al., 2002; Ghezzi & Ship, 2000). In dental terms, that means wherever they reside, the probability is high that the majority of older adults will be in a high-risk group and experience severe oral diseases at some time in their lives (Chalmers, 2002; Chalmers, Carter, et al., 2002; Chalmers & Ettinger, 2008).

Medication Use and Radiation Therapy. Medications and radiation used for the treatment of systemic diseases can also influence risk for oral problems due to various side effects. Some medications can cause adverse oral effects such as salivary gland hypofunction (SGH); xero-

stomia; gingival overgrowth; lichenoid reactions (change in oral tissue); tardive dyskinesia (oral musculature movements); and problems with speech, swallowing, and taste. All are oral conditions that can compromise the effectiveness of daily plaque control and oral comfort. Most older adults take multiple medications and are at an increased risk for oral problems because of the variety of side effects, especially xerostomia. It is often difficult to evaluate oral side effects from one particular drug when multiple medications are being used. Consultation between primary care practitioners and dental professionals is especially important for those taking multiple medications and adults receiving head and neck radiation (Thomson, Chalmers, Spencer, Slade, & Carter, 2006).

Tobacco and Alcohol Use. Tobacco use has been estimated to account for more than 90% of cancers in the oral cavity. It is also a major risk factor for periodontal disease. Cigarette smoking is a direct cause for development and recurrence of cancer in the oral cavity and pharynx (Harris et al., 2009; Petersen, 2003). Other associated oral problems are an increased risk of dental caries, oral candidiasis, delayed healing following oral surgery, and periodontal destruction—especially in those with diabetes. When tobacco is used in conjunction with alcohol, the risk for developing oral problems increases (IOM, 2011; Petersen, 2003).

Attitude and Utilization of Dental Care. Self-perception of oral health, attitudes toward oral hygiene care, and dental-seeking behavior influence a patient's risk for oral problems. If there is a lack of perceived need for oral care, it is less likely to happen, whether it is daily oral hygiene or seeking regular, professional dental assessments and treatment (Chalmers & Ettinger, 2008; IOM, 2011).

Access to Dental Care. Patients who perceive the need for regular professional care, seek dental treatment, and are financially able to afford regular dental care are less likely to experience debilitating oral diseases in comparison with episodic dental care seekers. Patients who generally have regular preventive care are able to avoid extensive types of restorations and experience less oral disease. If patients become too cognitively impaired to initiate and maintain such behaviors independently, they are then at an increased risk for developing oral diseases and conditions, similar to individuals of low socioeconomic status with decreased access to dental care (Chalmers & Ettinger, 2008; Coleman et al., 2006; IOM, 2011; Sanders, Slade, Lim, & Resine, 2009).

Oral-Related Factors to Consider

Xerostomia and SGH. Low levels of saliva result in the oral environment becoming more acidic, and, together with decreased buffering capacity, result in dental caries. Oral symptoms that indicate a problem with saliva include difficulties with eating, swallowing, or speaking; changes in taste; burning or painful oral tissues; dry lips; unpleasant breath; microbial infections; tissue ulcerations; and swollen or red tongue. Other problems that can develop are new and recurrent caries and poor retention of dentures, which can lead to denture-related lesions. Many of the medications commonly taken by older adults can affect saliva and result in SGH and the perception of having a dry mouth. Antipsychotic, antidepressant, sedatives, diuretic, antihypertensive, anti-Parkinson, narcotic analgesic, anticonvulsant, and antihistamine medications have some of the most severe dry mouth and SGH side effects. Fluid balance problems, stress, smoking, and caf-

feine consumption are also related to decreased salivary flow. Medical conditions such as Sjogren's syndrome and other autoimmune diseases can directly cause dry mouth. In addition, older adults who have had radiation to the head and neck area may have reduced flow of saliva.

Hypersalivation (Sialorrhea). Some older adults experience an increase in their salivary flow, which can be difficult to manage. Swallowing problems and problems with innervation of oral musculature can result in the accumulation and collection of saliva at the corners of the lips. Thus, older adults with neurological conditions such as Parkinson's disease or amyotrophic lateral sclerosis can experience saliva pooling and dribbling or drooling. Likewise, cholinergic agents may have a similar effect. Medications can be prescribed in consultation with a prescribing practitioner to try to reduce saliva flow; however, this is not routinely recommended because of the many other side effects of such medications.

Swallowing Problems. Older adults with dysphagia may often appear to have excess saliva, but this is often the result of their inability to retain contents in the oral cavity and to swallow adequately. Because of the inability to effectively clear the mouth of saliva or food, debris may accumulate within the oral cavity. This "pocketing" or "pouching" of food and debris in the vestibule of the mouth encourages bacterial growth. When left undisturbed or when oral hygiene care is inadequate, the patient risks aspiration of debris and bacterial growth that is detrimental to oral and systemic health.

Periodontal Disease. Older individuals are at increased risk for periodontal disease because of lifetime disease accumulation. If periodontal disease has already begun, even in its mildest form, the

lack of daily oral hygiene will exacerbate the condition. Once the disease has begun, it is difficult to manage without regular professional dental care, to which most dependent older adults do not have access. Another periodontal factor to consider is that dental treatment has increasingly included the placement of periodontal implants, which may be particularly challenging in older adults. Accumulation of plaque and debris around implants leads to peri-implantitis, affecting the periodontium in a manner similar to periodontal disease. The treatment is therefore similar to treatment for periodontal disease and underscores the importance of daily oral hygiene for those with implants (Chalmers & Ettinger, 2008; Harris et al., 2009). As previously discussed, the connection between periodontal disease and systemic health is relevant, particularly for older adults. There is sufficient evidence to develop comprehensive care planning that includes oral assessment and hygiene when seeking the best possible patient outcomes (Iacopino, 2006; IOM, 2011).

Dental Caries. Tooth loss has decreased through the years, which means older adults need continued routine, regular dental care (IOM, 2011). On the other hand, if older adults have had previous oral disease, they are more susceptible to oral problems when self-care is compromised. In addition, the integrity of previously restored teeth can become threatened when not kept clean, and recurrent caries can develop (Chalmers & Ettinger, 2008; Featherstone, Singh, & Curtis, 2011; IOM, 2011).

Dental caries can develop on different parts of the tooth. Chewing surfaces have deep pits and fissures that are high risk areas for caries. Areas around former restorations are also at risk because of the "unnatural" junction between the tooth surface and filling or crown.

Of greatest concern for older adults is the development of root caries. Root caries develop quickly because the root surface is less resistant to decay due to being less mineralized than the crown of the tooth. Gingival recession exposes the root surface and precedes the development of root caries. In the presence of xerostomia, poor oral care, and a diet high in refined sugar and fermentable carbohydrates, this disease process can encircle the tooth and is difficult to restore (Featherstone et al., 2011; Harris et al., 2009; IOM, 2011).

Fluoride is the most effective method for dental caries prevention (IOM, 2011), through fluoridated drinking water and daily use of oral care products. There is strong evidence that long-term exposure to an optimal level of fluoride results in reducing the amount of caries in the adult population (IOM, 2011; Petersen, 2003).

ASSESSMENT CRITERIA

Older adults who will benefit most from use of this guideline are those who meet the following assessment criteria:

- Have cognitive impairments or neurological conditions.
- Are functionally dependent and/or require assistance with performing daily oral hygiene.
- Report having xerostomia (dry mouth).
- Are undergoing treatment that causes oral side effects (e.g., medication, cancer treatment).
- Have chronic medical conditions that affect the mouth or teeth (e.g. diabetes, immunosuppressive conditions, Sjogren's syndrome).
- Have swallowing difficulties and nutritional intake challenges.

DESCRIPTION OF THE PRACTICE

The proposed intervention for assisting with and providing oral hygiene care includes the previously described identification of risk

factors for oral problems and the following components discussed in this paper:

- Oral Health Assessment Tool.
- Assessment of Current Oral Hygiene.
- Communication and intervention techniques for oral hygiene care.
- Development of oral hygiene care plan.
- Description of oral hygiene practices for preventing oral diseases.

Assessment Tools and Forms

Oral Health Assessment Tool (OHAT). The OHAT is a modification of the Brief Oral Health Status Examination (BOHSE) used to screen for oral problems (Chalmers, 2000b; Chalmers, Johnson, Tang, & Titler, 2004; Chalmers, King, Spencer, Wright, & Carter, 2005; Kayser-Jones, Bird, Paul, Long, & Schell, 1995). The BOHSE has been tested on older adults both with and without cognitive impairment. It has been modified and used with a population of cognitively impaired older adults and found to be useful for oral assessments by certified nursing assistants (CNAs) and nurses.

Similar to the BOHSE, the OHAT is an instrument used for screening purposes only. It is not a diagnostic tool and does not replace the need for a periodic examination by a professional dentist. Prior to using the OHAT, staff should receive inservice education from a professional dentist or dental hygienist. It should be completed prior to implementing an individualized oral hygiene care plan intended to reduce patients' risk for plaque-related oral diseases. Completing the OHAT helps health care professionals assess the patient's current oral status and factors that can contribute to risk for oral disease, making it possible to implement the most appropriate care plan for older individuals. The OHAT assesses the oral health of patients

at baseline and/or on admission and throughout the implementation of the oral care program. Components of the OHAT include evaluation of the lips, tongue, gums and tissues, saliva, natural teeth, dentures, oral cleanliness, and dental pain. Components are scored 0 (*healthy*), 1 (*changes*), or 2 (*unhealthy*). The total score is the sum of scores from all eight categories and can range from 0 (*very healthy*) to 16 (*very unhealthy*). While the cumulative score is important in assessing oral health, the score for each item must be considered individually. If any category contains a score of 1 or 2, referral to a dentist is recommended.

Assessment of Current Oral Hygiene. The Assessment of Current Oral Hygiene (modified from Chalmers et al., 2004, 2005; Johnson & Chalmers, 2011) is a tool used to assess patients prior to—and throughout the implementation of this guideline—by nurses or other health care providers who are primarily responsible for the specified patient's care. It is completed along with the OHAT to document the resident's current oral hygiene regimen. Information is collected and recorded on the form and placed in the record. Items in the tool include:

- Current oral status (dentures, natural teeth).
- Self-care ability (from complete independence to palliative care).
- Toothbrushing aids and frequency (including interproximal/between-teeth cleaning).
- Denture care (wearing times and cleaning).
- Dry mouth management (keeping mouth hydrated and buffered).
- Noted challenges with daily care.

Communication and Intervention Techniques for Oral Hygiene Care. This section is intended to assist caregivers and evaluators when working with patients with cognitive impairment or who present

behavior management challenges (Chalmers, 2000b; Kovach, Weissman, Griffie, Matson, & Muchka, 1999; Robinson, Spencer, & White, 1989). Any successful management techniques should be noted in the health record. Specific communication techniques and suggested interventions that will enhance the caregiver's ability to complete oral hygiene care are described in the guideline (Chalmers, 2000b; Chalmers et al., 2004).

Development of an Oral Hygiene Care Plan (OHCP). After completing the OHAT and the Assessment of Current Oral Hygiene, the OHCP becomes the framework for executing daily preventive oral hygiene care and enables providers to focus on appropriate care for each resident. Components of the OHCP include frequency of oral care, oral care product recommendations, and specific challenges encountered with residents during oral care. Necessary adaptations for the specific needs of individual residents should be incorporated and recorded. The OHCP should be completed once per week for the first month of implementation of the guideline and once every 3 months for the remainder of the program (Chalmers, 2000a; Chalmers et al., 2004, 2005; Chalmers & Spector, 2009).

Description of Oral Hygiene Practices for Preventing Oral Diseases. Detailed tables in the guideline describe appropriate strategies for five oral hygiene care categories: behavior/communication/dementia challenges; dentures and denture-related oral lesions; natural teeth; xerostomia, hypersalivation, and swallowing difficulties; and palliative oral hygiene care. The tables list specific challenges, recommended strategies, and actions required to provide successful oral care. For example, when the patient does not understand a caregiver's directions about oral hygiene care, suggested actions may include enlisting the as-

sistance of another caregiver, evaluating communication techniques for effectiveness (e.g., avoiding elderspeak, approaching at eye level). A video and booklet with visual examples and demonstrations of the other described strategies are available to accompany the guideline (Chalmers, Colgate-Palmolive Pty. Ltd., Australian Dental Association, & Alzheimer's Association, 2002).

EVALUATION OF PROCESS INDICATORS

Process indicators are those interpersonal and environmental factors that can facilitate use of the guideline. Caregiving staff should complete the Oral Health Knowledge Assessment and the Process Evaluation Monitor.

Oral Health Knowledge Assessment

The Oral Health Knowledge Assessment is a brief, multiple-choice item set of questions specifically targeted to highlight important care aspects of the program. Nurses and staff caregivers involved with the implementation of the oral care program should be given the opportunity to complete this assessment, followed by reviewing answers with the person administering the test.

Process Evaluation Monitor

This nine-item set of questions is completed by caregivers involved with the implementation of the oral care program. Nurses and staff caregivers with higher scores on this monitor are indicating they are well equipped to implement the guideline and understand its use and purpose. On the other hand, nurses and staff caregivers who have relatively low scores are in need of more training, education, and support regarding use of the guideline. Feedback to each individual who completes this evaluation form should be provided by the person overseeing the implementation process.

EVALUATION OF OUTCOME INDICATORS

Documentation can help determine the success of the program with each resident. The following tools are intended to continuously audit the individual's oral health status and oral hygiene care

OHAT and Assessment of Current Oral Hygiene

These previously discussed tools provide information about the resident's current oral health condition and oral hygiene regimen. Changes recorded in these areas can monitor positive or negative outcomes, and they can highlight areas of success or need for modification.

Oral Hygiene Outcomes Monitor

Each resident receiving care detailed in this guideline should have a copy of the Oral Hygiene Outcomes Monitor in his or her health record. The monitor should be completed weekly, and it contains *yes/no* questions in the following six areas: oral problems, oral hygiene status, signs of oral discomfort/pain, record of oral hygiene recommendations, record of appropriateness of patient management strategies, and record of improvement or decline in oral hygiene care.

CONCLUSION AND RECOMMENDATIONS FOR GERONTOLOGICAL NURSING PRACTICE

Maintaining oral health can best be achieved through periodic oral assessments, regular and thorough daily oral hygiene care, and professional dental treatment on an ongoing basis. Through oral assessment and daily oral hygiene, the early detection and prevention of oral problems can be addressed and minimized (Chalmers & Ettinger, 2008). The early detection of oral problems can also prevent the development of oral pain, which can lead to behavioral problems in

older adults with cognitive impairment who are unable to verbally communicate discomfort and may instead become agitated. Identifying and treating oral and local infections can prevent other systemic problems that, in turn, lead to more serious outcomes.

A thoroughly outlined oral care protocol provides consistency of care and encourages individualized oral hygiene and behavioral management recommendations. From the recognition of individuals at increased risk for oral problems to the provision of palliative oral care, the *Oral Hygiene Care for Functionally Dependent and Cognitively Impaired Older Adults* guideline is not a "one-size-fits-all" endeavor. For example, specific, unique oral and dental conditions warrant individualized oral product use and cleansing techniques (i.e., some oral products are contraindicated in patients with xerostomia). Likewise, the guideline describes palliative mouth care, an often overlooked aspect of care, providing critical recommendations to promote quality of life and high-quality end-of-life care for older adults.

Oral care programs are optimally implemented when a dedicated team of care providers is educated, supported, and trained (didactic and clinical) with the ongoing assistance of a dentist and/or dental hygienist. Pharmacists and primary care practitioners play a crucial role in identifying long-term use of medications that may exacerbate oral problems such as xerostomia, candidal infections, gingival overgrowth, and tardive dyskinesia. Additionally, family caregivers should be educated about the risks of poor oral hygiene and the overall health benefits gained when oral health is maintained. The continuous collaboration of efforts and expertise of interdisciplinary health care teams benefits everyone

involved with oral hygiene programs, especially functionally dependent and cognitively impaired older adults.

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