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Editorial

Smiles for Life: An Oral Health Education Resource

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The elderly, especially those who reside in long term care facilities, are particularly vulnerable to poor oral health, which negatively impacts their overall health. This article introduces a tool to aid medical directors in addressing their patients' oral health needs. Smiles for Life: A National Oral Health Curriculum has been widely used by physicians, medical residents, advance practice registered nurses, and physician assistants since its initial release in 2005. The newest module, Geriatric Oral Health, was released in October 2011. This module addresses the oral health needs of the elderly, oral health assessment, common oral conditions of the elderly, oral-systemic links particular to elderly, drug effects, caregiver issues, and encourages medico-dental collaboration.

Background

In 2000, David Satcher, then Surgeon General proclaimed, "You are not healthy without good oral health."¹ Dental care is the greatest unmet health need in US and can significantly impact an individual's overall health.¹ Healthy People 2020 includes an oral health measure, the utilization of the oral health care system by those over 2 years of age, including the elderly, as one of its 12 Leading Health Indicators.² The Healthy People 2020 Oral Health Objectives are:

- Increase awareness of the importance of oral health to overall health and well-being.
- Increase acceptance and adoption of effective preventive interventions.
- Reduce disparities in access to effective preventive and dental treatment services.³

Long term care residents are particularly vulnerable to poor oral health, which often negatively impacts their quality of life and overall health status.⁴ Long term care residents are much more prone to dental decay than their community dwelling counterparts, having three times the prevalence of dental caries.⁵ Cognitive impairment and physical disability make it difficult or impossible for many

institutionalized elders to maintain good oral hygiene. The result is an overgrowth of plaque and bacteria that contributes to periodontal disease and dental decay. In addition, many medications cause hyposalivation, which contributes to dental decay and periodontal disease.

Oral disorders may affect self image and discourage socialization, leading to isolation and depression.^{6–11} Those with more dental decay have lower socialization.⁶ Ill-fitting dentures may cause difficulties in talking⁷ and elders report embarrassment caused by ill-fitting dentures dropping during social contact.⁸ The same study found 40% of elders were embarrassed by the length of time it took them to eat a meal with inadequate teeth or dentures. Many of the elders, in fact, avoided the company of others at mealtime, perhaps the most important social time for nursing home residents. These factors may contribute to depression and social isolation.⁹ Elders with oral problems are often self conscious of the appearance of their teeth.⁸ Interviews with elders provide insights into the importance of a clean mouth. One woman interviewed, equated not having your mouth clean to "not having your hair done you just feel awful, awful." Another responded, "you just don't like yourself, you have no self-worth, when your mouth is unclean."¹⁰ Significant improvements in self esteem, morale, and psychological well being were found among institutionalized elders who participated in an oral hygiene intervention program. Similar interventions among moderately depressed nursing home elders increased socialization and group communication.¹¹

Dental problems may contribute to chewing impairments and increased risk of malnutrition.^{12–15} Broken, decayed, or missing teeth, ill fitting dentures, and oral pain affect food selection and negatively impact food choices.¹² Good sources of protein such as meat and nuts and vitamin-laden fruits and vegetables may be eliminated from meals with a tendency toward a more processed, high carbohydrate diet. Poor oral health decreases frequency of food intake¹³ with the number of oral problems strongly related to malnutrition in long-term care residents.¹⁴ In addition, a significant association has been documented between dry mouth and malnutrition, low BMI, and loss of appetite.¹⁵

Aspiration of oral bacteria in saliva is likely the main cause of aspiration pneumonia in nursing home residents.¹⁶ Poor oral hygiene significantly increases the risk of pneumonia in long term care residents ($P < .01$) and increases the number of febrile days ($P = .0012$).¹⁷ Research suggests oral health interventions reduce the incidence of aspiration pneumonia in institutionalized elders.¹⁸ In fact, a meta-analysis of 19 studies found that improved oral hygiene significantly

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decreases the risk of respiratory disease in institutionalized elders (relative risk reduction = 34% to 83%).¹⁹ Improved oral hygiene has also been shown to decrease death from pneumonia.²⁰

Periodontal disease has been shown to adversely affect glycemic control in diabetes patients.²¹ In addition, patients with diabetes who also have periodontal disease have a much higher risk of cardiovascular complications²² and death.²³ Oral health interventions have demonstrated improvements in HbA1c in those with diabetes and periodontal disease.²⁴

Smiles for Life: A New Oral Health Resource

Awareness of the risk and scope of oral problems in long term care residents is needed.²⁵ Inadequate education and knowledge in health care providers increases the risk of poor oral health in long-term care residents.²⁶ High quality educational resources have been developed to address the need for improved oral health. Smiles for Life, the nation's only comprehensive oral health curriculum, was designed for primary care, non-dental clinicians and caregivers.²⁷ After the Surgeon General's call to improve the oral health of the nation, several Family Medicine programs around the country developed individual oral health curriculum which they presented at the 2004 Society of Teachers of Family Medicine Annual Spring meeting in Toronto. A decision was made to join forces and develop a stronger curriculum that would be shared by all family medicine residencies. With funding from various dental and health foundations, "Smiles for Life" was launched in 2005 with modules on The Relationship of Oral to Systemic Health, Child Oral Health, Adult Oral Health, and Dental Emergencies. It has been well received by Family Medicine residencies, with up to 65% of those responding to a survey using the curriculum.²⁸ The curriculum has been endorsed by multiple national groups including the American Academy of Family Physicians (AAFP), American Academy of Physician Assistants, Gerontological Advanced Practice Nurses Association, American Association of Public Health Dentistry, and others. The National Interprofessional Initiative on Oral Health has funded dozens of projects across the country and uses Smiles for Life as its core curriculum.

Geriatric Oral Health Module

The initial Smiles for Life Adult Oral Health module briefly covered issues dealing with geriatric oral health, but it was clear that a separate module was needed. In response, the eighth module, Geriatric Oral Health,²⁹ was developed by an interprofessional group of physician assistants, nurses, dentists, and physicians. This module was developed as a resource for those who care for and educate others about the elderly. It includes an interactive web design and pull out cases for individual learning or group based discussion.

The Geriatric Oral Health module describes:

- Oral health needs of the elderly
- Oral health assessment
- Common oral conditions (caries, periodontitis, cancer)
- Oral-systemic links particular to elderly
- Drug effects
- Caregiver issues
- Medico-dental collaboration

The geriatric module, along with the entire Smiles for Life curriculum, is available free of charge at www.smilesforlifeforallhealth.org. Physicians, physician assistants, and nurses can obtain free continuing education credit from their various organizations by using Smiles for Life training.

The Smiles for Life geriatric module has been viewed by thousands of professionals, and 572 have taken this module for individual continuing education credit. The power-point course has been downloaded by hundreds of users and used for an even wider audience. Users rate the module very highly regarding content, organization, usability, and relevance to clinical practice.

Conclusion

Smiles for Life: A National Oral Health Curriculum provides an important resource for Medical Directors in long term care facilities as they strive to provide the best care for their patients. Addressing the oral health needs of the elderly is daunting, but with knowledge comes the opportunity to intervene for the benefit of long term care patients. Physicians can respond to the oral health issues in their patients with protocols that allow routine oral care for institutionalized elders, with understanding that many medications promote dental caries from xerostomia, and with skills that allow early diagnosis or prevention of oral cancer. Working with our dental colleagues, family members, and, most importantly, our patients, Medical Directors can improve the oral health of their patients, thereby promoting overall health and quality of life.

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