Surveillance Spotlight...

Translation of Oral–Systemic Science to Practice

By Anthony M. Iacopino, DMD, PhD

With increasing credible evidence linking oral health to overall health and well-being, the foundation for innovative health care models has been established. The International Centre for Oral–Systemic Health seeks to design and implement the first interprofessional model of care that makes oral health a critical component of overall health care. Three major recent developments provided impetus for this innovative approach to health care models.

World Health Organization and Oral Health

The World Health Organization (WHO) has reported that about 15% of adults worldwide have advanced periodontal disease (pocket depth of 6 mm or more) and that most countries need to establish a surveillance system for measuring progress in controlling periodontal disease and promoting oral health.[1,2] WHO believes that oral health is essential to quality of life and affects general health, particularly chronic inflammatory conditions such as diabetes, arthritis and cardiovascular/cerebrovascular disease. WHO promotes development and implementation of community-oriented demonstration projects, focusing on disadvantaged and poor populations in developed and developing countries. While it has called for more emphasis on interprofessional preventive models, to date WHO has not supported any specific pilot or demonstration projects.

Office of the Surgeon General of the United States and Oral Health

The U.S. Surgeon General's report on oral health in America[3] proclaimed that:

- oral health and general health are inseparable, oral health is integral to general health, and the mouth is a portal of entry for infections that can affect local tissues and may spread to other parts of the body
- too little time is devoted to oral health and disease topics in educating non-dental health professionals and there is a need to change non-dental health care provider perceptions of the importance of oral health
- oral examinations should be part of general medical examinations and health care providers should be ready, willing and able to work collaboratively to provide optimal health care for their patients
- changes in curriculum and interprofessional training are needed as a prerequisite for interprofessional practice models.

This clearly sounds like a credible mandate for change. Additionally, some studies by the insurance industry have demonstrated that preventive oral care early and throughout life result in significant health care spending reductions later in life.[4] There are also examples of partnerships between corporate sector and academic institutions to reduce overall medical costs by offering oral–systemic continuing education seminars to physicians and dentists, and dental/medical integration programs that combine educational outreach and enhanced benefits for high-risk populations.

However, there are still no existing pilot or demonstration projects in the United States. Barriers to changes in health care systems include silo approaches to health profession education, lack of interprofessional continuing education, disconnected practice models for health professions, and lack of access to medical care for high-risk populations.

Austrian Model of Federal Oral Health Care

In Austria, recent steps have been taken to launch a federal pilot program to screen for periodontal disease.[5] Austria's nearly universal health care system is similar to ours, and as in Canada, dental care as well as prevention and treatment of periodontal disease are currently excluded from national social insurance coverage. However, because of the large number of cases of undiagnosed and untreated severe periodontal disease and current scientific evidence regarding the oral–systemic

connection, the first steps are being taken to change the health care system to reflect interprofessional practice, raise public awareness about the connection and refer patients to a dentist for periodontal care.

Nationwide periodontal screening has been recently included as part of the annual physician health examination for all citizens, and the effectiveness of the screening and impact on public health outcomes are to be evaluated for the Austrian Ministry of Health. Preliminary data suggest barriers to effectiveness include poor physician education and training for oral health screening and periodontal evaluation, and resistance of physicians to perform the screening and evaluation. If these problems are addressed, the Austrian population is likely to benefit from the intervention through increased awareness of periodontal disease and a greater collaboration of medical and dental clinicians in diagnosis and prevention. ◆

References

1. Petersen PE, Ogawa H. Strengthening the prevention of periodontal disease: the WHO approach. *J Periodontol* 2005; 76(12):2187–2193.

2. Sheiham A. Oral health, general health and quality of life. *Bull World Health Organ* 2005; 83(9):641–720.

3. U.S. Department of Health and Human Services. Oral health in America: report of the Surgeon General. Rockville, Maryland: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.

4. Albert DA, Sadowsky D, Papapanou P, Conicella ML, Ward A. An examination of periodontal treatment and per member per month (PMPM) medicalcosts in an insured population. *BMC Health Serv Res* 2006 Aug 16; 103.

5. Luciak-Donsberger C, Piribauer F. Evidence-based rationale supports a national periodontal disease screening program. *J Evid Based Dent Pract* 2007; 7(2):51–9.

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