

Smiles for Life: A National Oral Health Curriculum

By Mark Deutchman, MD, Alan Douglass, MD, and Joanna Douglass, BDS, DDS

Smiles for Life is a comprehensive oral health curriculum designed for medical professionals. The seven modules of this curriculum encompass key aspects of oral health throughout the lifespan including the oral-systemic connection, child oral health, adult oral health, dental emergencies, oral health in pregnancy, fluoride varnish, and the oral, head, and neck examination. The curriculum is available for free through the Internet and has been widely implemented in primary care medical training programs. Implementation of this program provides a model for interdisciplinary education and collaborative care; this is important in implementing the goals of the patient-centered medical home.

The inter-relatedness of oral and systemic health and the artificial separation of medical and dental care are also gaining widespread recognition.^{1,2} However, physicians consistently feel that their oral health training is insufficient,^{3,4} a fact which is recognized by the call for more oral health education in both the medical and dental curricula of our professional schools.⁵ The need for medical professionals to appreciate the importance of oral health is heightened by the movement to create patient-centered medical homes⁶ that provide truly comprehensive, cost-effective care that is completely integrated and coordinated with all services and providers to promote health. (Table 1) Preventive aspects of oral health are logical components of care in Patient-Centered Medical Homes. First, medical clinicians are generally more widely distributed and available than dental providers. Second, medical insurance is more prevalent than dental insurance. Third, young children and adults with chronic diseases make frequent visits to medical clinicians during which oral screening and referral can be provided. Finally, primary care medical clinicians are already skilled in counseling techniques to foster positive health behavior change, which are readily applicable to oral health promotion.

Development of the Smiles for Life Curriculum

In 2001, Health Resources and Services Administration physician education grants were awarded to eight health

centers across the country, bringing together physicians and dentists to develop oral health curricula for the medical profession. In 2004, a group on oral health was formed within the Society of Teachers of Family Medicine (STFM) consisting of Family Physicians, a Ph.D. educator, and a pediatric dentist.* This group brought together many of the Health Resources and Services Administration grant participants along with others working on the same topic funded by private foundations.** STFM is an academic organization of the medical specialty of Family2 Medicine consisting of 5,000 members. Family Physicians are the most numerous and widely distributed medical specialists in the United States, and are frequently the main, and often only, medical providers in rural and underserved areas. There are 450 family medicine residencies and 125 family medicine medical school departments in the United States. One of the key roles of STFM is to develop and disseminate high-quality, evidence-based curriculum materials.

A national steering committee of physician and dentist authors developed the first edition of Smiles for Life around four themes: the oral-systemic connection, adult oral health, child oral health, and dental emergencies, with release in October 2005. At the same time, the Residency Review Committee (RRC) of the American Board of Family Medicine added oral health curricular requirements to the required content of training in Family

* Original members of the STFM Group on Oral Health: Alan Douglass, M.D. (Editor), Middlesex Hospital, University of Connecticut; Wanda Gonsalves, M.D., Medical University of South Carolina; Russell Maier, M.D. (Group Chair), University of Washington; Hugh Silk, M.D., University of Connecticut; Nancy Stevens, M.D., M.P.H., University of Washington; James Tysinger, Ph.D., University of Texas Medical Branch, San Antonio; A. Stevens Wrightson, M.D., University of Kentucky; Joanna Douglass, B.D.S., D.D.S., University of Connecticut.

** Funding for Smiles for Life has been made possible through these foundations (Listed in alphabetical order): Caring for Colorado Foundation, Central Massachusetts Oral Health Initiative, Connecticut Health Foundation, Delta Dental of Colorado, Delta Dental of Kentucky, Delta Dental of Massachusetts, DentaQuest Foundation., Robert Wood Johnson Foundation State Action for Oral Health Access Program, South Carolina More Smiling Faces in Beautiful Places, The Oral Health Foundation, Washington Dental Service Foundation.

Table 1.—Principles of the Patient-centered Medical Home

Personal physician—each patient has an ongoing relationship with a personal physician trained to provide first contact, and continuous and comprehensive care

Physician-directed medical practice—the personal physician leads a team of individuals at the practice level who collectively take responsibility for the ongoing care of patients

Whole person orientation—the personal physician is responsible for providing for all the patient’s health care needs or taking responsibility for appropriately arranging care with other qualified professionals. This includes care for all stages of life, acute care, chronic care, preventive services, and end of life care

Care is coordinated and/or integrated across all elements of the complex health care system

Quality and safety are hallmarks of the medical home

Enhanced access to care is available

Payment appropriately recognizes the added value provided to patients

Medicine as of July 2006, creating an immediate demand for Smiles for Life.

The Smiles for Life curriculum has undergone regular updates and is presently in its third edition. During the course of initial curriculum development, input was provided by three dentists with experience in educating physicians, an educational specialist, and an outcomes specialist. As revisions and new modules were added, each also received extensive interdisciplinary review.

The curriculum is currently available free at the following web address: www.smilesforlifeoralhealth.org. Educators can download PowerPoint versions of the educational modules with speaker notes, whereas individual learners can complete the modules in a web-based interactive format and receive continuing medical education credit. In addition to the original four modules, modules on oral health in pregnancy, topical fluoride varnish application, and the oral examination have also been added. Supporting materials such as educational videos, posters, patient handouts, physician pocket guides, and handheld computer applications are also available.

Importantly, the modules emphasize medical-dental collaboration and contain specific information on identifying oral conditions that should be referred to dentists, particularly childhood caries, infections, traumatic injuries, and periodontal disease. They also emphasize how physicians can encourage dentists to provide care for young children, pregnant women, and patients with complicated medical conditions such as diabetes.⁷ Engagement of dentists is critical to the full engagement of physicians in oral

Table 2.—Results of Family Medicine Residency Program Director Survey About Oral Health Education

Of 450 program directors, 183 responded, generating an overall response rate of 41%

Eighty-four percent were aware of the accreditation requirement for education of residents on oral health. Ninety percent indicated they provided dedicated instruction in oral health within their program

The most common amount of time devoted to the subject annually was 1 to 2 hours (52%), followed by 3 to 4 hours (21%), 0 hours (10%), 5 to 6 hours (6%), more than 12 hours (5%), 7 to 8 hours (4%), and 9 to 10 hours (2%)

Most program directors (74%) were aware of the Smiles for Life curriculum, and 65% reported using it

health promotion. Research in North Carolina around fluoride application by physicians for children has shown that physicians are less likely to implement oral health programs if they cannot locate local dentists to partner with.⁸

Implementation.—Initial dissemination of the curriculum was to US osteopathic and allopathic family medicine residency programs and family medicine medical school departments through a compact disc read-only memory (CD-ROM). Shortly thereafter, the curriculum was made available for download from the STFM’s Family Medicine Digital Resource Library and eventually on its own web page. Availability of the curriculum was advertised to educators through educational listserves, in published articles, by presentations at regional and national meetings, and through links on other oral health websites of national organization.^{7,9} Much of the content of each module was also published as stand-alone articles in *American Family Physician*, which is the most widely circulated medical journal in the world. In addition, endorsement was obtained from the American Academy of Family Physicians which has also granted continuing medical education credit for the program.

In 2009, a national survey of Family Medicine residency program directors showed widespread awareness and use of the Smiles for Life curriculum to fulfill the RRC oral health education mandate¹⁰ (Table 2).

In 2010, a national survey of Deans of Education of 126 allopathic and 28 osteopathic medical schools found that 46% of these schools were aware of the Smiles for Life curriculum. Although a minority had actually implemented an oral health curriculum, nearly half indicated that they would use an established curriculum such as Smiles for Life rather than develop their own materials.¹¹

The use of Smiles for Life materials has continued to expand. As of the writing of this article, the Smiles for Life curriculum has been accessed or downloaded over 107,000 times. Preliminary data from the third edition launched in July 2010 indicate that half of current users are now non-physicians in fields such as nursing, physician assistant, and dental hygiene.

Adoption of the Smiles for Life curriculum may have been spurred on by the proliferation of state-by-state Medicaid oral health programs that reimburse medical providers for specific dental services to children. These include screening examinations, referral, oral health education, and fluoride varnish application. Most of these programs require or encourage provider education to bill for these services, and some specify Smiles for Life curriculum materials as a way to fulfill that education. Currently, 39 states reimburse medical providers for certain oral health services to children.¹²

Conclusions.—Development and implementation of the Smiles for Life curriculum provides a model of how medical providers can be educated about integrating oral health into their practice. This is particularly important with the establishment of Patient-Centered Medical Homes, because of the interdependence of oral and systemic health. It also provides a mechanism for encouraging medical-dental collaboration.

Use of the Smiles for Life curriculum is extensive and growing within medical school and Family Medicine residency education. There is great opportunity for medical and dental schools to use these materials and for them to be adopted in post-graduate and continuing education of other medical professionals including advance practice nurses, physician assistants, and other medical clinicians including pediatricians, internists, and OB-Gyn's.

*Mark Deutchman, MD
Schools of Medicine, and Dental Medicine,
University of Colorado,
Aurora, CO*

*Joanna Douglass, BDS, DDS
Associate Professor, Division of Pediatric Dentistry,
University of Connecticut School of Dental Medicine,
Farmington, CT*

*Alan Douglass, MD
Director, Family Medicine Residency
Middlesex Hospital
Middletown, CT*

References

1. US Department of Health and Human Services: Oral health in America. A report of the surgeon general. Rockville, MD: US Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
2. Scientific American: Oral and whole body health Oct 2006. Available at: http://www.dentalcare.com/soap/products/index_promotion_sa.htm. Accessed Oct 10, 2010.
3. Lewis CW, Grossman DC, Domoto PK, Deyo RA: The role of the pediatrician in the oral health of children: A national survey. *Pediatrics* 106:E84, 2000.
4. Mouradian WE, Reeves A, Kim S, Evans R, Schaad D, Marshall SG, et al: An oral health curriculum for medical students at the University of Washington. *Acad Med* 80:434-442, 2005.
5. American Association of Medical Colleges. Report IX: Contemporary issues in medicine: Oral health education for medical and dental students. Washington, DC: Association of American Medical Colleges, 2008. Available at: http://services.aamc.org/publications/index.cfm?fuseaction=Product.displayForm&prd_id=238&prv_id=289. Accessed Oct 14, 2010.
6. American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Osteopathic Association. Joint principles of the patient-centered medical home March 2007. Available at: <http://www.medicalhoveinfo.org/downloads/pdfs/JointStatement.pdf>. Accessed Oct 14, 2010.
7. Douglass AB, Gonsalves W, Maier R, Silk H, Stevens N, Tysinger J, et al: Smiles for life: A National oral health curriculum for family medicine. A model for curriculum development by STFM groups. *Fam Med* 39:88-90, 2007.
8. Close K, Rozier RG, Zeldin LP, Gilbert AR: Barriers to the adoption and implementation of preventive dental services in primary medical care. *Pediatrics* 125:509-517, 2010.
9. Douglass AB, Maier R: Promoting oral health: The family physician's role. *Am Fam Phys* 78:814, 2008.
10. Douglass AB, Deutchman M, Douglass J, Gonsalves W, Maier R, Silk H, et al: Incorporation of a national oral health curriculum into family medicine residency programs. *Fam Med* 41:159-160, 2009.
11. Ferullo A, Silk H, Savageau JA: Teaching oral health education in U.S. medical and osteopathic schools: Results of a National survey. *Acad Med* (in press).
12. American Academy of Pediatrics Oral Health Initiative: States with and without medicaid reimbursement for primary care medical providers to perform caries prevention services. Available at: <http://www.aap.org/oralhealth/fluoride.cfm>. Accessed Oct 14, 2010.