Commentary

Oral Health in Children: A Pediatric Health Priority

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We all know what constitutes good health. In 1948, the World Health Organization defined health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."[1] In the United States, *Healthy People 2010* is the paradigm of our collective vision of specific national health objectives, with the overarching goals of increasing quality and years of healthy life and eliminating health disparities. The pediatric community understands what child health is all about, and we all know that child health includes oral health. As former US Surgeon General C. Everett Koop said, "You're not healthy without good oral health." Indeed, *Healthy People 2010* includes many indicators specific to children's oral health.[2]

This issue of *Academic Pediatrics* is devoted entirely to children's oral health. The importance of oral health must be understood; oral disease, primarily dental caries, is the most common pediatric disease and can lead to physical and psychological disabilities as well as significant morbidity in adulthood. Parents are concerned about their children's oral health.[3] Dr David Satcher's landmark report, *Oral Health in America: A Report of the Surgeon General,*[4] released in May 2000, highlighted the state of oral health for children and adults in the United States and offered strategies to improve oral health outcomes in this country. In March 2002, *Ambulatory Pediatrics* published a supplement documenting the state of children's oral health, with review articles prepared for the Surgeon General's Workshop and Conference on Children and Oral Health, The Face of a Child.[5] The current issue of *Academic Pediatrics* represents a "midterm examination" of how far this nation has come since the 2000 Surgeon General's Report in meeting the *Healthy People 2010* oral health objectives set for children and related goals, and also includes many papers from the American Academy of Pediatrics' National Summit on Children's Oral Health: A New Era of Collaboration. This retrospective also constitutes a powerful call to arms for taking the necessary steps to achieve well-defined oral health targets.

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Why should *Academic Pediatrics* devote an entire issue to children's oral health now? First, oral health *is* health, and children's oral health is part of pediatrics. Although we pediatricians believe this, we do not always act on it, as demonstrated in the 2008 Survey of Fellows of the American Academy of Pediatrics in this issue. Second, we are far from achieving our *Healthy People 2010* oral health objectives in reducing the prevalence of caries in children. Half of all children in the United States will develop caries, and some will experience severe disease. Third, substantial disparities exist in children's oral health and access to care. Poor and minority children have nearly three times the rate of caries compared with high-income or white children, in part because poor and minority children access dental care at lower rates than high-income or white children. This situation is unacceptable. Fourth, oral health represents an excellent paradigm in which the traditional pediatric community needs to work more closely with other health professionals—in this case dental professionals—to advance the health of children. Finally, making progress toward improving children's oral health will require 1) advances in clinical oral health care of children; 2) innovations in education of dentists, allied health professionals, and pediatricians and other primary care providers; 3) more research in both basic science of oral health disease and in translational science; and 4) public policies to promote children's oral health and to protect the most vulnerable children. These areas—clinical care, education, research, and policy—represent the four pillars of the Academic Pediatric Association.

These articles document that dental caries and other oral health problems continue to plague vulnerable populations, particularly low-income children and those with special health care needs. Despite tremendous advances in basic science and technology, as well as substantial progress in better understanding the pathogenesis and prevention of dental caries, evidence-based interventions are only sparsely implemented. Barriers to better oral health for children are multifaceted and include difficulties with access to the oral health system, insufficient collaboration across fields, insufficient training of both dental and pediatric professionals, and public policies that hinder access to oral health care. Nevertheless, progress has been made on all of these fronts; examples include application of fluoride varnish in selected medical provider offices; improvements in pediatricians' and dentists' understanding of oral health;

new and exciting educational programs for dentists, nurses, pediatricians, and family physicians; the potential to train and employ new types of oral health professionals; and effective policies, such as the Children's Health Insurance Program, which clearly benefit children's oral health care.

Yet we need to do more. For one, we need to increase our attention to children's oral health in both pediatrics and in dentistry. For pediatrics, this means a greater emphasis on oral health in clinical care, medical school and residency training, research, and policy. Other primary care fields—including family medicine and nursing—should do the same. Papers presented here outline steps needed to increase this focus and provide excellent educational resources. For the dental community, this means an increased focus on children in the same four areas, with special initiatives for predoctoral and residency training (especially in pediatric and general/hospital dentistry residencies). As a consequence of demographic shifts and changes in the makeup of the child population, oral health disparities may widen rather than narrow unless we make dramatic improvements with a special focus on oral health for low-income populations in which dental caries is rampant. And we all need to remember that children come in families and communities, and that cariogenic bacteria are transmitted from caregivers and flourish by certain dietary practices. Thus, efforts to improve children's health must include the adults taking care of them. Special initiatives should be directed toward helping pregnant women—and mothers of infants and toddlers in particular—understand the opportunity they have to protect their own oral health and that of their offspring.

Second, we need to enhance collaborations, daily interactions, joint research projects, mutual educational programs, and shared advocacy between the pediatric and the oral health communities. The historic separation of medicine and dentistry works against these collaborations, and we must be proactive in making them happen. The two fields have largely separate educational institutions, policies, finance mechanisms, professional organizations, research institutes, and scholarly publications (one more reason for *Academic Pediatrics* to give prominence to oral health with this special issue). This area of children's oral health is *different* from other areas because of the inertia we must overcome to bridge two almost entirely separate systems. It will take more work to accomplish this—by and large it is still not in the culture of most physicians, even pediatricians, to be engaged in their patients' oral health.

Third, we need to expand research in pediatric oral health. This involves more basic science research and far more translational research,[6] such as studies to implement evidence-based caries prevention interventions widely in pediatric practices, studies to promote optimal oral health habits among adolescents, research to evaluate innovative educational strategies, and studies of health policy levers to improve pediatric oral health. We should make a special effort to train oral health researchers. These individuals are drawn from many fields, such as dentistry, medicine, nursing, public health and others. There is work for epidemiologists, biostatisticians, and researchers in health services, program evaluation, social marketing, and psychology, among others.

Fourth, we need to re-examine and even reinvent training programs in both the medical and the oral health world because we need an interconnected health care delivery system. We should have interprofessional training initiatives so the next generation of health professionals understands each other's language and culture and has the skills and mutual respect to work together as part of a larger health team to benefit children, their families, and the whole community. Many training programs are now bringing together medical and dental trainees and faculty within interdisciplinary clinical settings.

Finally, we need to reassess health policies routinely, modify the ones that do not work, and expand the ones that do work. Examples include policies that provide insurance coverage for dental care or that reimburse primary care providers for oral health promotion and disease prevention activities in their offices. To achieve these policy objectives, public policy and advocacy leaders in both medical and dental fields should work closely together. The medical and dental communities can accomplish more together than in separate advocacy efforts. With these policies and all other innovations, we must continue to keep the lofty goals of the 2000 Surgeon General's Report and the specific objectives of *Healthy People 2010* in mind, and continuously assess, reassess, and improve our strategies to accomplish them.

Yesterday I had the pleasure of caring for patients in our primary care practice, which has a preponderance of low-income children and those with special needs. I saw some children and youth with perfect teeth and mouths, clearly the beneficiaries of good diets, dental hygiene, fluoride, and preventive pediatric and dental care. I also saw more than a half-dozen children (or their parents or grandparents) with dental caries, including some with fairly advanced tooth decay. I look forward to the day when a future issue of *Academic Pediatrics* or a future Surgeon General's Report proclaims victory on the plight of dental caries and declares that children's mouths are largely absent of dental or oral disease.

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