

Problem

Dental caries (tooth decay) is the most prevalent chronic childhood disease in the United States.¹ The caries process is influenced by multiple social, economic, environmental, and biological factors.² Dental caries disproportionately affects children from low-income families and minority groups.^{1,3,4,5} Although dental caries is largely preventable, it remains largely untreated in young children, especially those under three years of age.⁵

The caries process can begin as soon as the first tooth erupts, and decay in the primary dentition is a strong indicator for future decay in the permanent dentition.⁶ Pain associated with dental caries can affect children's ability to learn due to lack of concentration and increased school absences.^{7,8,9} In addition, progression of dental caries can contribute to difficulty eating, weight loss and impaired growth, poor speech development, disrupted sleep, and systemic infection.^{1,8,10,11} However, one in every 16 children in the United States – 4.6 million – do not receive needed oral health care because their families cannot afford it.¹² Despite the importance of establishing good oral health care early in life, data from the Medical Expenditure Panel Survey revealed that only 1.8 percent of infants and one-year-old children had visited the dentist, compared with 89 percent who had visited an office-based physician annually.¹³

Many individuals and health care professionals are unaware of risk factors and preventive approaches for oral diseases, and do not understand how oral health impacts overall health and well-being.¹⁴ Additional factors that can contribute to underuse of dental services by vulnerable groups include cultural values, education, prior experience with dentists, perceived value of dental care and access issues.¹⁵ Opportunities to promote oral health and intervene with children at high risk for dental caries often are missed during primary care visits¹⁶ and in other networks that serve children (e.g., Head Start, WIC, early childhood programs). In spite of national recommendations from dental and pediatric groups on the importance of routine and early dental care,^{17,18} a significant proportion of children do not receive any routine dental check-ups.¹³ In a national study, anticipatory guidance from a health professional on the need for routine dental check-ups was offered to less than half of all children ages 2-17 years.¹⁹ Primary care providers receive little training on oral health, but remain an important access point for preventive care.¹⁶

Methods

The American Association of Public Health Dentistry, American Academy of Pediatric Dentistry, American Dental Association, American Academy of Pediatrics, and American Public Health Association recommend that infants receive an oral evaluation within six months of the eruption of the first primary

tooth, but no later than 12 months of age.^{17,18,20,21,22} The American Academy of Pediatric Dentistry and the American Academy of Pediatrics recommend the first dental visit includes the following components:

- oral health risk assessment
- individualized oral care prevention plan based on caries-risk assessment
- emergency plan for dental trauma management
- anticipatory guidance for families and other caregivers related to the child's growth and development issues
- oral health counseling regarding oral hygiene and lifestyle modifications
- nutrition and dietary counseling
- comprehensive oral health care in accordance with recommended periodicity schedules for pediatric oral health
- referral to dental specialists for emergency or specialized oral health care, as needed.^{17,18}

Children who have their first preventive dental visits early in life are more likely to have subsequent preventive visits and less restorative or emergency visits. Consequently, these children incur fewer dental related costs than children who begin dental care at an older age.²³

Based on individual and community circumstances, there are multiple effective work force models and settings for ensuring the first dental visit by age one. Integrating oral health and coordinating oral health care services with care systems that support young children (medical, developmental and educational systems) can create an environment to help identify those at risk and facilitate early referral to establish a dental home and provide preventive/restorative dental care.²⁴ Pediatric primary care professionals are ideally positioned to significantly contribute to the prevention of oral problems and early recognition and detection of dental caries by providing oral health risk assessments, anticipatory guidance and dental home referrals in a timely manner.¹⁸ Pediatric primary care professionals, including pediatricians, family physicians, nurse practitioners, pediatric nurses, and physician assistants can be trained to easily and efficiently perform oral health risk assessments and identify risk factors for dental caries to educate caregivers and make an informed early referral to an oral health practitioner.^{18,25} A research study demonstrated pediatric practitioners could accurately identify dental caries in children with good specificity (92-100 percent) and sensitivity (87-99 percent) after receiving a two-hour training in infant oral health.²⁵ Several oral health training programs for health professionals have been developed, including: the *American Academy of Pediatrics' Oral Health Initiative*, *Washington's Access to Baby and Child Dentistry (ABCD) Program*, *Open Wide: Oral Health Training for Health Professionals*, and *Smiles for Life*.^{24,26}

A multi-disciplinary approach between pediatric healthcare professionals and oral healthcare professionals in conjunction with early intervention programs, early childhood education and child care

programs, and other public and private community partnerships has proven to be an effective method for connecting children to oral healthcare professionals in a timely manner.²⁴

Policy Statement

The Association of State and Territorial Dental Directors (ASTDD) recommends that every child have a first dental visit within six months of the eruption of the first primary tooth and no later than twelve months of age. Training dental and medical professionals in perinatal and infant oral care significantly contributes to early caries recognition and prevention through oral disease risk assessments and dental referrals in a timely manner. ASTDD strongly encourages early childhood programs to integrate oral health in interdisciplinary ways to facilitate the first dental visit by age one. This would include arranging for a caries risk assessment, providing anticipatory guidance and making timely referrals for the establishment of a dental home.

Examples of successful multi-disciplinary programs include: I Smile Dental Home Project, First Smiles - A First 5 Oral Health and Training Program, Klamath County Early Childhood Cavities Prevention Program, West Virginia University Childhood Oral Health Project, the Neighborhood Outreach Action for Health (NAOH) Program: Integrated Medical and Dental Health in Primary Care, Into the Mouths of Babes.

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¹² Institute of Medicine. *Improving Access to Oral Health Care for Vulnerable and Underserved Populations*. Report Brief. Washington, DC: National Academy of Sciences. July 2011.

<http://www.iom.edu/~media/Files/Report%20Files/2011/Improving-Access-to-Oral-Health-Care-for-Vulnerable-and-Underserved-Populations/oralhealthaccess2011reportbrief.pdf>. Accessed July 7, 2012.

¹³ American Academy of Pediatrics. Profile of pediatric visits: Tables 9-10 [based on 2004-2007 Medical Expenditure Panel Survey and 2004-2007 National Ambulatory Medical Care Survey]. <http://practice.aap.org/content.aspx?aid=1690>. Accessed July 7, 2012.

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