School Dental Sealant Programs Policy Statement
Association of State and Territorial Dental Directors (ASTDD)
Adopted: December 15, 2010

Problem

The Centers for Disease Control and Prevention (CDC) reports that dental caries (tooth decay) affects more than one fourth of U.S. children aged one to five years and one-half of those aged 12 to 15, and is almost entirely preventable.[1] Although dental disease may affect any child, children from low-income households experience more tooth decay than those from higher-income families. Data show that children aged six through 11 years from families living below the poverty threshold are almost twice as likely to have developed tooth decay in their permanent teeth as are children from families with incomes greater than two times the federal poverty threshold.[2] Nearly 80 percent of decay is experienced by just 25 percent of U.S. school-aged children.[3] Most decay occurs on the pits and fissures of posterior tooth surfaces for which dental sealants are the most effective preventive approach. Other factors that increase the incidence of tooth decay in children are poor dietary habits, lack of dental insurance and access to dental care, as well as inadequate exposure to the benefits of fluoridated water and dental sealants.

The Healthy People 2010 goal is for 50 percent of U.S. 8 year olds (third graders) to have at least one sealant on a permanent molar, but more than 65 percent of these children do not.[4] Children from low-income families were only half as likely to have sealants as children from higher income families. Data show that only 20 percent of children aged six through 11 years from low-income families have received sealants compared to the 40 percent of children from families with incomes greater than two times the poverty threshold that received sealants.[2]

Methods

The U.S. Preventive Health Services Task Force has identified school-based dental sealant programs as an effective community approach to dental caries prevention. Systematic reviews have found strong evidence that sealants are effective in 1) preventing the development of caries on sound pit and fissure tooth surfaces in children and adolescents; 2) reducing the percentage of noncavitated carious lesions that progressed to cavitation in children, adolescents and young adults; and 3) reducing bacteria levels in cavitated carious lesions in children adolescents, and young adults. [5]

Dental sealants protect up to 90 percent of the pits and fissures where decay occurs in school-aged children's teeth.[6] Resin-based sealants are preferred due to their high retention rates. Sealants are not only beneficial for permanent molars, but also on primary teeth when determined that the tooth, or the patient, is at risk for experiencing caries. Radiographs should not be obtained for the sole purpose of placing sealants; nor is the use of other diagnostic aids, including a sharp explorer recommended.[7]

Dental sealants are most effective when placed on teeth of children at highest risk for tooth decay. [6] "School sealant programs can be an important intervention to increase the receipt of sealants, especially among underserved children."[5] Targeting higher risk schools to reach higher-risk children is a practical approach for increasing sealant prevalence through school-based sealant programs. Using the Free and Reduced Price Meal Program enrollment as risk thresholds provides the ability to reach higher-risk children. [8] Sealant programs could reduce or eliminate racial and economic disparities in sealant use if programs were provided to all eligible, high-risk schools such as those in which 50 percent or more of the children are eligible for the Free and Reduced-Price Meal Program.[9, 10] Additionally, school-based sealant programs have the potential to link students with treatment services in their community and facilitate enrollment in Medicaid and the Children's Health Insurance Program (CHIP).[11]

Access to dental sealants in school settings affords an opportunity for every child to grow, develop and learn free of pain from dental disease.[7] The CDC estimates that if 50 percent of children at high risk for dental caries participated in school sealant programs, more than half of their tooth decay would be prevented, and money would be saved on their treatment costs.[4] To ensure their effectiveness, school sealant programs should follow evidence-based recommendations, monitor sealant retention and reapply sealants if lost, if possible. A four-handed technique should be used when resources allow and teeth should be sealed, even if follow-up care cannot be assured.[5]

Policy Statement

The Association of State and Territorial Dental Directors (ASTDD) fully supports, endorses, and promotes expansion of school-based and school-linked dental sealant programs that follow evidence-based guidelines as part of a comprehensive community strategy to serve the greatest number of children and adolescents at highest risk for dental disease. The ASTDD recommends school-based and school-linked dental sealant programs as an important and effective public health approach that complements clinical care systems in promoting the oral health of children and adolescents.

---

[1] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *Oral Health: Preventing Cavities, Gum Disease and Tooth Loss*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. 2008. http://www.cdc.gov/nccdphp/publications/aag/doh.htm. Accessed March 18, 2009.

[2] Dye BA, Tan S, Smith V, et al. Trends in oral health status: United States, 1988-1994 and 1999-2004. *Vital Health Stat 11*. 2007;248:1-92.

[3] Kaste LM, Selwitz RH, Oldakowski RJ, et al. Coronal caries in the primary and permanent dentition of children and adolescents 1- 17 years of age: United States, 1988-1991. *J Dent Res*. 1996; Special Issue;75:631-641.

[4] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *Data 2010 … Healthy People 2010 Database*. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. 2009. http://wonder.cdc.gov/data2010/FOCUS.HTM. Accessed March 16, 2010.

[5] Gooch BF, Griffin, SO, Kolavic Gray S, et al. Preventing dental caries through school-based sealant programs: Updated recommendations and reviews of evidence. *J Am Dent Assoc*. 2009;140:1356-1365.

[6] U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *Preventing Dental Caries.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005. http://www.cdc.gov/NCCdphp/publications/factsheets/Prevention/oh.htm. Accessed March 18, 2009.

[7] Beauchamp J, Caufield P, Crall J, et al. Evidence-based clinical recommendations for the use of pit-and-fissure sealants: a report of the American Dental Association Council on Scientific Affairs. *J Am Dent Assoc.* March 2008; 139:257-268.
[8] Siegal M, Detty A. Targeting school-based dental sealant programs: who is a "higher risk?" *J Public Health Dent*. Spring 2010;70(2):140-147.
[9] Centers for Disease Control and Prevention. Impact of targeted school-based dental sealant programs in reducing racial and economic disparities in sealant prevalence among schoolchildren. Ohio 1998-1999. MMWR *Morb Mortal Wkly Rep*. 2001;50(34):736-738.
[10] Association of State and Territorial Dental Directors. *Best practice approaches for state and community oral health programs: school-based dental sealant programs.* June 2003. http://www.astdd.org/school-based-dental-sealant-programs/. Accessed Sept. 18, 2010.
[11] Zimmerman B. Improving the oral health of school-age children: strengthening school-based dental sealant program linkages with Medicaid/SCHIP and dental home—summary of an expert meeting convened by the Maternal and Child Health Bureau. Washington: Health Systems Research. 2006. Archived at: www.webcitation.org/5bOm8amsY. Accessed Sept. 18, 2010.