

Preventing Tooth Decay and Saving Teeth with Dental Sealants



Dental sealants are thin plastic coatings that are applied to the pits and fissures (grooves) on the chewing surfaces of molar teeth. Most tooth decay experienced by children and adolescents occurs on these surfaces. Sealants prevent dental caries (tooth decay) by creating a physical barrier against bacterial plaque and food.¹

Preventing Tooth Decay

Dental caries (tooth decay) prevention in children and adolescents involves a range of population- and individual-level strategies that may include dental sealants, community water fluoridation, topical fluorides (e.g., fluoride toothpaste, fluoride varnish), antibacterial rinses, education, and dietary interventions.²

Dental sealants are an effective tool in both preventing caries and stopping the progression of early caries (noncavitated lesions). Placing dental sealants on the chewing surfaces of molars with early signs of decay significantly lowers the probability that the decay will progress, compared with the progression for similar teeth that have not been sealed. This benefit may last as long as 5 years.^{3,4}



Access to Care

Since 2000, the prevalence of dental sealants among 8-year-old children and 14-year-old adolescents has increased, although it remains substantially below the *Healthy People* national objective target prevalence of 50 percent for both ages.²

Factors contributing to the increased prevalence of dental sealants among children from families with low incomes may include Medicaid reimbursement rates and the provision of sealants in school-based oral health programs.⁵

School-based dental sealant programs are an important and effective public health approach that complements clinical care systems in promoting the oral health of children and adolescents.⁶

Dental sealant programs typically target students in second grade, when the first permanent molars have generally erupted, and in sixth grade, when the second permanent molars have generally erupted.²



Disparities in Care

Non-Hispanic black and Mexican-American children and adolescents have a significantly lower prevalence of dental sealants than non-Hispanic white children and adolescents.^{2,7}

Children and adolescents from families with low incomes (less than 200 percent of the federal poverty level) are more than twice as likely to have untreated dental caries (tooth decay) in their permanent teeth as are their higher-income counterparts.^{4,7}

Children and adolescents from families with low incomes are almost 50 percent less likely to have received dental sealants than their higher-income counterparts.⁴

Public Awareness

Increased public awareness of dental sealants, and improved communication between parents and oral health professionals, will help parents make informed decisions about dental sealant application for their children and adolescents.⁸

Racial and ethnic minorities and individuals with low levels of formal education and low incomes are least knowledgeable about oral disease prevention, including the effectiveness of dental sealants.^{8,9} Because they lack insurance or access to preventive services, children and adolescents from these groups have fewer dental visits and fewer dental sealants.⁸

Cost-Effectiveness

Dental sealants are most cost-effective when provided to children and adolescents who are at highest risk for dental caries.¹⁰

School-based dental sealant programs have been proven to reduce oral health disparities in children and adolescents by providing this cost-effective preventive strategy to those who are at highest risk for dental caries.¹⁰



Programs

Based on a systematic review of evidence documenting the effectiveness of population-based interventions to prevent and control tooth decay, the Task Force on Community Preventive Services strongly recommended school-based or school-linked pit-and-fissure sealant delivery programs.¹¹

Ohio's targeted school-based dental sealant programs effectively reach children at high risk for tooth decay. Targeted schools are those in which at least 40 percent of students are enrolled in the Free and Reduced Price Meal Program (students from families with incomes of 185 percent or less of the federal poverty level).¹²⁻¹⁴

To help build more effective state, territorial, and community oral health programs, the Association of State and Territorial Dental Directors initiated the Best Practices Project, which includes examples of proven and promising school-based dental sealant programs.¹⁵

Dental sealant programs are an important component of, and should be linked with, broader systems of care. School-based dental sealant programs are one component of a broader system of care and, as such, should coordinate and have linkages with other system components, especially dental homes.¹⁶



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