

Policy on Third-Party Reimbursement of Fees Related to Dental Sealants

Review Council

Council on Clinical Affairs

Latest Revision

2016

Purpose

The American Academy of Pediatric Dentistry (AAPD) recognizes that the placement of sealants and their continued maintenance are scientifically-sound and cost-effective techniques for prevention of pit and fissure caries and to prevent the progression of early noncavitated carious lesions.

Methods

This policy was developed by the Clinical Affairs Committee and adopted in 1999. This document is an update of the previous version, revised in 2011, and is based upon a review of current dental and medical literature related to dental sealants. The update used electronic database and hand searches of articles using the terms: dental sealants AND insurance; fields: all; limits: within the last 10 years, humans, English. Sixty-one articles matched these criteria. Papers for review were chosen from this list and from the references within selected articles. When data did not appear sufficient or were inconclusive, recommendations were based upon expert and/or consensus opinion by experienced researchers and clinicians.

Background

According to national estimates, by 17 years of age, 68 percent of children in the United States have experienced caries.¹ Data indicate that around 40 percent of children ages 2-8 years have experienced dental caries in their primary teeth, with 44 percent of carious lesions in the pits and fissures.^{2,3} As much as 90 percent of all caries in school-aged children occurs in pits and fissures.⁴ The teeth at highest risk by far are permanent first and second molars where fluoride has its least preventive effect on the pits and fissures. Any tooth, including primary teeth and permanent teeth other than molars, may benefit from sealant application due to fissure anatomy and caries risk factors.^{4,6} Caries risk may increase due to changes in patient habits, oral microflora, or physical condition, and unsealed teeth subsequently might benefit from sealant application.^{4,5} Placement of pit and fissure sealants significantly reduces the percentage of incipient noncavitated carious lesions that progress in children, adolescents, and young adults, compared to unsealed teeth, for as long as five years after sealant placement.⁷ When placed over existing caries, sealants lower the number of viable bacteria by at least 100-fold and

reduce the number of lesions with any viable bacteria by 50 percent.⁸

Current data show that, although initial sealant retention rates are high, sealant loss does occur.^{5,9} It is in the patient's interest to receive periodic evaluation of sealants for maintenance or replacement.^{9,10} Without recall and maintenance, sealant failure will compound over time, leaving previously sealed surfaces with a caries susceptibility equal to that of surfaces that never were sealed.¹¹ With appropriate follow-up care, the success rate of sealants may be 80 to 90 percent, even after a decade.^{2,10}

Although sealants are safe and effective, their use continues to be low.¹² Sealants are particularly effective in preventing pit and fissure caries. They provide cost savings if placed on patients during periods of greatest risk by delaying or avoiding invasive treatment and the destructive cycle of dental caries.^{5,13-15} However, initial insurance coverage for sealants often is denied based on the age of the patient, and insurance coverage for repair and/or replacement may be limited.¹⁶⁻¹⁸

Policy statement

The AAPD encourages all policy makers and third-party payors to consult the AAPD in the development of benefit plans that best serve the oral health interests of infants, children, adolescents, and individuals with special health care needs.

The AAPD advocates that the dentition periodically be evaluated for developmental defects and deep pits and fissures that may contribute to caries risk and that sealants be placed on primary and permanent teeth judged to be at risk for dental caries. AAPD encourages placement of dental sealants on early (noncavitated/incipient) carious lesions to inhibit lesion progression. Once sealants have been placed, they should be evaluated for repair or replacement as part of a periodic dental examination.

The AAPD encourages third-party payors to:

- recognize that dental sealants are scientifically-sound and cost-effective techniques for primary or permanent teeth at increased risk for caries and for early (noncavitated/incipient) carious lesions.

ABBREVIATIONS

AAPD: American Academy Pediatric Dentistry.

- base third-party coverage for sealants on a patient's caries risk rather than age. Timing of the eruption of teeth can vary widely. Furthermore, caries risk may increase at any time during a patient's life.

The AAPD shall continue to work with other dental organizations, the insurance industry, and consumer groups to make the advantages of dental sealants understood and to seek reimbursement for fees associated with their placement, maintenance, and repair.

References

1. Beltrán-Aguilar ED, Barker LK, Canto MT, et al. Surveillance for dental caries, dental sealants, tooth retention, edentulism, and enamel fluorosis – United States 1988-1994 and 1999-2002. *MMWR Surveill Summ* 2005; 54:1-43.
2. Tinanoff N, Coll JA, Dhar V, Maas WR, Chhibber S, Zokaei L. Evidence-based update of pediatric dental restorative procedures: Preventative strategies. *J Clin Pediatr Dent* 2015;39(3):193-7.
3. Dye BA, Thornton-Evans G, Li X, Iafolla TJ. Dental caries and sealant prevalence in children and adolescents in the United States, 2011-2012. Centers for Disease Control and Prevention; NCHS Data Brief, no. 191. Hyattsville, Md.: National Center for Health Statistics; 2015.
4. Beauchamp J, Caufield PW, Crall JJ, et al. Evidence-based clinical recommendations for the use of pit-and-fissure sealants. *J Am Dent Assoc* 2008;139(3):257-68.
5. American Academy of Pediatric Dentistry. Guideline on restorative dentistry. *Pediatr Dent* 2016;38(special issue):250-62.
6. Unal M, Oznurhan F, Kapdan A, Durer A. A comparative clinical study of three fissure sealants on primary teeth: 24-month results. *J Clin Pediatr Dent* 2015;39(2):113-9.
7. Griffin SO, Oong E, Kohn W, et al. The effectiveness of sealants in managing caries lesions. *J Dent Res* 2008;87(2):169-74.
8. Oong EM, Griffin SO, Kohn WG, Gooch BF, Caufield PW. The effect of dental sealants on bacteria levels in caries lesions: A review of the evidence. *J Am Dent Assoc* 2008;139(3):271-8.
9. Gooch B, Griffin S, Kolavic Gray S, et al. Preventing dental caries through school-based sealant programs. *J Am Dent Assoc* 2009;140(11):1356-65.
10. American Academy of Pediatric Dentistry. Guideline on periodicity of examination, preventive dental services, anticipatory guidance/counseling and oral treatment for infants, children and adolescents. *Pediatr Dent* 2016;38(special issue):133-41.
11. Griffin SO, Gray SK, Malvitz DM, Gooch BF. Caries risk in formerly sealed teeth. *J Am Dent Assoc* 2009; 140(4):415-23.
12. U.S. Department of Health and Human Services. Healthy people 2010. Rockville, Md.: U.S. Department of Health and Human Services, National Institutes of Health; 2000.
13. Weintraub JA. Pit and fissure sealants in high-caries risk individuals. *J Dent Educ* 2001;65(10):1084-90.
14. Quiñonez RB, Downs SM, Shugars D, Christensen J, Vann WF. Assessing cost effectiveness of sealant placement in children. *J Pub Health Dent* 2005;65(2):82-9.
15. American Dental Association. Statement on preventive coverage in dental benefits plans. In: ADA Current Policies – Adopted 1954-2013. American Dental Association, Chicago, Ill.; 2013:89.
16. Neusser S, Krauth C, Hussein R, Bitzer EM. Clinical effectiveness and cost-effectiveness of fissure sealants in children and adolescents with a high caries risk. *GMS Health Technol Assess* 2014;10:Doc02.
17. Chi D, van der Goes D, Ney JP. Cost-effectiveness of pit-and-fissure sealants on primary molars in Medicaid-enrolled children. *Am J Public Health* 2014;104(3): 555-61.
18. Ney JP, van der Goes DN, Chi DL. Economic modeling of sealing primary molars using a “value of information” approach. *J Dent Res* 2014;93(9):876-81.