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Best Practice Guidelines for Community/School Population-Based Oral Health Programs

Community/School Oral Health Programs

School-based programs in the United States generally target low income, vulnerable populations less likely to receive private dental care such as children eligible for free and reduced lunch programs. Providing sealant programs in all eligible, high-risk schools could reduce or eliminate racial and economic disparities in the prevalence of dental sealants and yet they are underused.¹ School-based sealant programs typically prevent tooth decay by more than 70 percent on the chewing surfaces of posterior teeth after sealant application.²

Though the majority of the population receives continuous dental care in private practice settings, there is a significant number, those at highest-risk for dental disease, who rely on population-based public health programs for dental services. Therefore, it is important to provide oral health services that are appropriate with demonstrated and well-documented effectiveness for large groups of people. Reliability should be higher in public health programs because a dental procedure that could be “watched” and/or monitored over time in a private dental office is unacceptable in a school-program where the children may be transient, and the parents uniformed or unknowledgeable about the procedures being provided. As a health department, we advocate for all community/school-based oral health programs to follow the national standard of care for population-based oral health programs following evidence-based practices, appropriate for the population being served.

Resin-Based Sealant Material

In community/school-based oral health programs the Massachusetts Department of Public Health (DPH) supports the use of resin-based dental sealants and requires their use in all DPH funded programs. The choice of appropriate dental materials is important in a community/school oral health program. Materials should be proven effective, not only in a private clinical setting, but also in a community/school setting; in other words, there should be well-established scientific evidence to support their use.

This decision is supported by a recently released report by the American Dental Association Council on Scientific Affairs, printed in the March 2008 issue of the *Journal of the American Dental Association*, which cites the highest category of evidence and strength of recommendation for the use of resin based sealants. The report in fact concludes that “**resin-based sealants are the first choice of materials for dental sealants.**”³

Dental sealants cover the occlusal or top surface of a tooth, where the majority of decay (90%) occurs and are 100% effective if they are fully retained on the tooth.⁴ A dental sealant is only as good as its retention in the prevention of dental cavities. The longer it lasts the less likely tooth decay will occur.

The report notes that “the effectiveness of sealants for caries prevention depends on long term retention”³ and that resin-based sealants have been found to have superior retention. The report goes on to cite studies finding that “resin-based sealants are more effective in caries reduction at 24 – 44 months after placement than is glass ionomer cement in permanent teeth of children and adolescents.”³

Placement of sealants on partially erupted teeth

If the mandibular molars have gingival tags that are even partially on the occlusal surface, it is difficult to get good retention of a sealant. Knowing that the worst thing that can happen is the sealant is not retained, programs may make the determination to place the resin-based sealant or wait until the gingival tag is gone. For these instances, the consent form should be written in such a way that allows the program to seal/reseal at the reassessment/retention check the next year. For maxillary molars, MDPH recommends sealing the mesial pit and then sealing the distal pit the following year if the tooth has not completely erupted. Documentation in the child’s record of a partial seal on a maxillary molar is imperative so unapplied sealants one year are not counted as lost sealants the next year.

Glass Ionomer Materials

The Massachusetts Department of Public Health does not support the use of glass ionomer materials as dental sealants as part of a population-based oral health program. The effectiveness of glass ionomer as sealants has not been well established and the few studies done on glass ionomers demonstrate they have a poor retention rate.⁵ The American Dental Association Council on Scientific Affairs cites its lowest category of evidence and strength of recommendation for the use of glass ionomers as dental sealants.³ In fact, it states these compounds should only be used on an interim-basis where there are concerns that moisture control may compromise the placement of a resin-based sealant.³ This would apply, however, only to partially erupted teeth under limited conditions, and only in a private practice setting as an interim measure, where the child would be monitored and expected to return for further care; not on high-risk patients when continuity of care cannot be guaranteed.

Along similar lines, the report states that “there is limited and conflicting evidence that glass ionomer cement reduces caries incidence in permanent teeth of children.”³

Supporters of glass ionomers claim that one benefit of these compounds is their purported release of fluoride, which in turn has been thought to prevent or slow the progression of decay. The ADA report, however, concludes, “the clinical effect of fluoride release from glass ionomer cement is not well established. Clinical studies have provided conflicting evidence as to whether these materials significantly prevent or inhibit caries and affect the growth of caries-associated bacteria compared with materials not containing fluoride.”³

Sealant Delivery

Typically, sealant programs target children in the second grade (for sealing the first permanent molars) and the sixth/seventh grade (for sealing the second permanent molars).

Targeting these grades maximizes the availability of susceptible molar teeth. These guidelines maximize the number of erupted, caries-free molars.⁶

Infection Control

Just like in private dental settings, community/school oral health programs must follow the Recommended Infection-Control Practices for Dentistry published by the US Centers for Disease Control and Prevention as mandated in the Massachusetts Board of Registration in Dentistry Rules and Regulations; 234 CMR 2.04(18). Training of staff should comply with Occupational Health and Safety Administration regulations, which are detailed in *Practical Infection Control for Dental Sealant Programs in a Portable Dental Care Environment*, and can be viewed at http://www.mchoralhealth.org/Seal/PDFs/Step7_PracticalInfectionControl.pdf

Informed Consent

All community/school oral health programs must provide complete and thorough information as part of the programs informed consent for a parent/guardian before any clinical dental services are provided. The informed consent should be provided in the languages necessary to be deemed culturally sensitive for the population being served. The consent should include at a minimum: 1. all procedures that could be provided as part of the program and include an explanation of each applicable term/service (example: dental sealant); 2. what teeth the dental sealants may be placed on; and 3. what steps will be taken by the program to ensure referral and follow-up if dental treatment is indicated. The form should also include 4. information on the time-frame for reassessment and retention checks and reapplication of dental sealants if needed; and 5. an explanation of any preventive services not provided by the program and the reason why those services should be obtained from a dentist. Additionally, the consent should include: 6. contact information for a parent/guardian to receive additional information and/or to refuse to participate or withdraw from the program; 7. the cost of the program to the parent/caregiver, if any; 8. a request for the name and location of their current dentist, if there is one; and 9. the following statement, "This program does not take the place of getting a check up at a local dentist."

Information should also be provided to the parent/guardian outlining what dental services were provided and if follow-up examination and treatment needs to be provided by a licensed dentist. At a minimum, this information for the parent/guardian should explicitly state the child's dental treatment needs. The information should include a list of local dentists, including those who accept MassHealth or a person who the parent can contact for assistance in finding a dentist to provide further care.

Referral for Treatment

A. For all participants: The Massachusetts Department of Public Health recommends that all individuals who participate in community/school population-based oral health programs and who are identified as having dental disease be referred to their own dentist or a dental provider in their community for continuous care. If a dental provider is not listed on the consent form, the program will provide a list of community providers including identification of those accepting MassHealth. All individuals referred for follow-up care will receive a written explanation of why it is important, including the consequences of not obtaining timely follow up.

B. For children identified as having immediate dental needs due to pain and/or oral infection, the program should follow the guidelines outlined in Section A. In addition, the program must

ensure the parent/guardian is aware of the child's condition and need for immediate dental care. Specifically, if after communicating with the child's parent/guardian about the need for immediate dental care the program determines the child does not have a dental provider, the program must provide the name and contact information of at least one dentist/dental program willing to provide oral health services for the child within a reasonable amount of time. If the child is a MassHealth recipient, they must be referred to a MassHealth provider. Finally, within a reasonable amount of time and to the best of their ability, follow-up by the oral health program should be done to see that the child has received the needed dental care and documentation of this follow-up should be recorded in the child's dental record.

Reassessment/Retention Checks

The Massachusetts Department of Public Health recommends all community/school oral health programs reassess one year after the sealant application to determine its retention and the need for reapplication.⁶ This provides an opportunity to reassess general oral health needs, as well as the effectiveness of the referral and follow-up by the program.

Conclusion

The Massachusetts Department of Public Health is responsible for improving and protecting the oral health of Massachusetts residents. The Department promotes the use of effective, evidence-based population-based preventive measures, including community/school oral health programs to increase access to needed preventive services. As such, we advocate for resin-based dental sealants as part of a national standard of care to be used in these programs. Additionally, we advocate that all individuals who are in these programs and identified as having dental disease are referred to a dental provider in their community for continuous care and that to the best of their ability, follow-up by the oral health program is done to ensure access to care has been made available. Finally, community/school-based oral health programs should follow a national standard of care for population-based programs and utilize Best Practice⁷ models and recognized guidelines for community/school-based oral health programs⁸.

¹ Weintraub JA, Stearns SC, Burt BA, Beltran E, Eklund SA. A retrospective analysis of the cost-effectiveness of dental sealants in a children's health center. *Social Science and Medicine* 36 (1993, 11): 1483-1493.

² National Institutes of Health (NOH). Consensus Development Conference on Diagnosis and Management of Dental Caries Throughout Life. Bethesda, MD. March 26-28, 2001 Conference Papers. *Journal of Dental Education* 65 (2001): 935-1179.

³ Beauchamp J, Caufield P, Crall J, Gooch B, Siegal M, 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. *Journal of American Dental Association* 139 (2008, 3): 257-268.

⁴ US Department of Health and Human Services, Centers for Disease Control and Prevention. *Preventing Dental Caries*. Atlanta, GA: US Department of Health and Human Services, Centers for Disease Control and Prevention, 2002. http://www.cdc.gov/OralHealth/factsheets/dental_caries.htm

⁵ Ahovuo-Saloranta A, Hiiri A, Nordblad A, Worthington H, Mäkelä M. Pit and fissure sealants for preventing dental decay in the permanent teeth of children and adolescents. *Cochrane Database of Systematic Reviews* 3 (2004): CD001830.

⁶ Association of State and Territorial Dental Directors. Best Practice Approach: School-based Dental Sealant Programs. North Carolina: Association of State and Territorial Dental Directors, 2003.

<http://www.astdd.org/index.php?template=bestpracschoolsealant.php>

⁷ <http://www.astdd.org/index.php?template=bestpracschoolsealant.php>

⁸ <http://www.mchoralhealth.org/seal/index.html>