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Tooth decay is one of the most common chronic diseases of childhood. If left untreated, it can have serious consequences, including problems with eating, speaking, and learning.

Dental sealants are thin coatings that when painted on the chewing surfaces of the back teeth (molars) can prevent tooth decay for many years. Sealants protect the chewing surfaces from cavities by covering them with a protective shield that blocks out germs and food. Once applied, sealants protect against 80 percent of cavities for 2 years and continue to protect against 50 percent of cavities for up to 4 years. Children ages 6–11 without sealants have almost three times more first molar cavities than those with sealants.


During 2011–2016, sealant prevalence was higher among:
- Children ages 9–11 (50 percent) compared to children ages 6–8 (32 percent)
- Mexican-American children (44 percent) and white non-Hispanic children (43 percent) compared to black non-Hispanic children (31 percent)
- Children from families with incomes of 200 percent or more than the federal poverty level (FPL) (44 percent) compared to children from families with incomes of less than 100 percent of FPL (37 percent)
During 2011–2016, sealant prevalence was higher among: ³
- Adolescents ages 12–15 (51 percent) compared to adolescents ages 16–19 (44 percent)
- White non-Hispanic children (53 percent) compared to Mexican-American children (45 percent) and black non-Hispanic children (37 percent)
- Adolescents from families with incomes of 200 percent or more (51 percent) compared to adolescents from families with incomes of less than 100 percent of FPL (43 percent).

Although dental sealant prevalence for children ages 6–11 and adolescents ages 12–19 increased by 10 percentage points between 1999–2004 and 2011–2016, this effective intervention remains underused. Less than half of children and adolescents have sealants. ³ Children and adolescents from families with low incomes are at least 7 percent less likely than their counterparts from families with higher incomes to have sealants and twice as likely to have untreated cavities.³

Depending on state laws and regulations, dental sealants can be applied by a dentist, dental hygienist, or other qualified dental professional. They can be applied in dental offices or using portable dental equipment in community settings like schools.¹ School-based dental sealant programs seek to ensure that children and adolescents receive sealants through an evidence-based approach. These programs are generally designed to maximize effectiveness by targeting children at high risk for tooth decay, such as those eligible for free and reduced-cost meal programs.⁴

Increasing dental sealant prevalence among children and adolescents from families with low incomes, especially non-Hispanic black children and adolescents, could substantially reduce the prevalence of tooth decay,⁵ leading to healthier and more productive lives.

References
The National Maternal and Child Oral Health Resource Center (OHRC) developed this publication, *Dental Sealants: A Resource Guide* (5th ed.), to provide information to health professionals, program administrators, educators, policymakers, and others about the use and application of dental sealants.

The resource guide is divided into two sections. The first section describes materials, such as briefs, fact sheets, guidelines, manuals, papers, reports, and videos, published from 2016 through 2021 and reflecting current science and practice, as well as seminal (i.e., very important or influential) resources published before 2016. The second section lists federal agencies, national professional associations, resource centers, and national coalitions that may serve as resources.

In the materials section, each resource includes an icon to help readers quickly identify materials. The key to the categories appears on the right.

For further information, we encourage you to contact the organizations listed in the second section of the resource guide. Your state and local departments of health, state and local oral-health-related associations and societies, state and local oral health coalitions, and university-based libraries are additional sources of information. OHRC will update the resource guide periodically, and we would appreciate hearing from you if you know of any relevant resources that are not included in this edition.
Acknowledgments

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Materials
Materials

Policy

Policy Frameworks Supporting School-Based Dental Sealant Programs and Their Application in Minnesota

This brief identifies laws and policies that could encourage consideration, adoption, and implementation of state-level school-based dental sealant programs. The brief highlights the state of the laws and policies in Minnesota. Topics include considerations for forming partnerships between schools and oral health professionals, overcoming policy barriers, and statewide coordination.


When Regulations Block Access to Oral Health Care, Children at Risk Suffer: The School Dental Sealant Program Dilemma

This brief describes state-based regulations or policies (e.g., related to dental practice acts, oral exams, employment requirements, procedures allowed under general supervision, Medicaid) that limit or prevent dental hygienists from applying dental sealants to children’s teeth at school or that create a financial burden for school-based dental sealant programs. The brief also discusses responses from a questionnaire for state dental directors.


Professional Education, Tools, and Training

Best Practice Approach: School-Based Dental Sealant Programs

This report discusses school-based dental sealant programs, assesses the strength of evidence for the effectiveness of these programs, and uses practice examples to illustrate successful and innovative implementation of the programs. The report provides guidelines and recommendations, research evidence, best practice criteria, and state practice examples.


Dental Sealant Permission Slip—Template

This template can be used to develop a permission slip to obtain consent from parents for their child to receive dental sealants as well as other related preventive oral health services from a school-based dental sealant program. The template can be customized with the program name and other information. Space to provide additional information that parents would like the program to know is included. The permission slip template is available in Arabic, Burmese, English, Hmong, and Spanish.

Dental Sealants

This fact sheet explains the purpose of dental sealants and discusses their efficacy in preventing tooth decay in children. It also addresses who can apply sealants, provides information about trends in sealant application, and discusses the purpose and importance of school-based dental sealant programs.


Dental Sealants Evidence-Based Guidance Standardized Training

This training about standardizing the process of selecting teeth for dental sealant placement is geared toward oral health professionals. It comprises a PowerPoint presentation and pre- and post-tests. The training reviews evidence-based guidance for sealant use, addresses questions, and presents findings and recommendations. Examples of sound, cavitated, and noncavitated lesions on tooth surfaces and discussions about whether to select them for sealants are included.


Environmental Assessment Guidelines

These guidelines provide information about an environmental-assessment tool that school-based dental sealant programs or those wishing to launch a school-based dental sealant program can use to help determine whether the environment is conducive to operating such a program. The guidelines explain the tool’s purpose and intended audience.


Evidence-Based Clinical Practice Guideline on Nonrestorative Treatments for Carious Lesions: A Report from the American Dental Association—Summary of Clinical Recommendations for the Nonrestorative Treatment of Caries on Primary Teeth

This report presents findings from a systematic review and recommendations to address clinical questions related to the effect of dental sealants on preventing and arresting dental caries in children and adolescents. Additional topics include the efficacy of sealants compared with fluoride varnishes and the merits of the different types of sealant material used on pits and fissures of occlusal surfaces.


Infection Prevention & Control Guide for School Sealant Programs During the Coronavirus Disease 2019 (COVID-19)

This guide is designed to supplement guidance provided in the Centers for Disease Control and Prevention document Considerations for School Sealant Programs During the Coronavirus Disease 2019 (COVID-19) Pandemic. The guide provides additional considerations for practical implementation. It discusses school-based dental sealant program scope of services, what to do before going into a school, setting up the dental treatment area in the school, transporting students to the treatment area, patient care, managing patient-care items, environmental-infection prevention and control, and program monitoring and evaluation.

### I-Smile @ School: School-Based Oral Health Programs (rev. ed.)

This manual outlines expectations of agencies receiving grant funds for school-based dental sealant programs (SBSPs) in Iowa to help them achieve their program goals. It provides an introduction to SBSPs and discusses regulatory guidelines; program requirements; forms, reporting, and recording; and budget and funding information. Sample forms and letters are included.


### Oral Health: Preventing Dental Caries, School-Based Dental Sealant Delivery Programs

This report presents recommendations for the use of school-based dental sealant programs (SBSPs). The report explains what sealants are, how they are applied, and what SBSPs do. Also addressed are the basis for the recommendations, applicability and generalizability issues, data-quality issues, other benefits and harms, economic evidence, and evidence gaps. Summary evidence tables on the effectiveness of sealants and the effectiveness of SBSPs are included.


### OSAP/DQP Best Practices for Infection Control in Dental Clinics During the COVID-19 Pandemic (2021)

This report is a compilation of regulations, guidance, and practice tips related to infection control for oral health professionals working in health care settings, including school sealant programs, during the COVID-19 pandemic. The report is divided into two sections: a practical checklist and a resources and tools section. Section 1 selected topics include policies and procedures; oral health team preparation and screening; equipment and supplies; adjusting cleaning areas; and heating, ventilation, and air conditioning. Section 2 selected topics include patient arrival for appointment, personal protective equipment for the clinical team, and patient discharge.


### Report of the Sealant Work Group: Recommendations & Products

This report provides recommendations for states to strengthen the ability of school-based dental sealant programs to reach more children, especially those at high risk for dental caries. Contents include recommendations in the following priority areas: promoting evidence-based and promising practices; communicating with families, the community, and school staff; collecting, analyzing, and reporting data; addressing Medicaid and reporting data; and addressing Medicaid and regulatory hurdles. A summary of the recommendations, an infographic, a questions-and-answers document, and a communications plan worksheet are also available.

**School Dental Programs Face Stiff Challenges—Programs Struggle to Navigate the Pandemic**

This brief presents struggles that school-based dental sealant programs (SBSPs) are facing as a result of the COVID-19 pandemic. The brief also discusses the positive effect of these programs on the oral health, overall health, and readiness to learn on students from families with low incomes. The following topics are also discussed: how the pandemic challenges SBSPs, collecting surveillance data, reassuring parents and administrators, and lessons and next steps.


**School Dental Sealant Programs White Paper**

This paper provides information about tooth decay prevalence and Association of State and Territorial Dental Directors recommendations related to school-based dental sealant programs (SBSPs). The effectiveness of sealants for preventing tooth decay is discussed, along with considerations for SBSPs, including sealant material selection and staffing considerations.


**School-Based Dental Sealant Programs (2nd ed.)**

This curriculum is designed to provide school-based dental sealant program (SBSP) staff with an understanding of the history, operations, and principles of SBSPs funded by the Ohio Department of Health (ODH). Contents include guidelines for infection control and information about tooth selection and assessment for sealants; the sealant-application process; and SBSP operations, with an emphasis on requirements that apply to programs funded by ODH. [Funded by the Maternal and Child Health Bureau]


**School-Based Sealant Programs: An Innovative Approach to Improve Children’s Oral Health**

This brief explores the impact of dental caries on children’s health and academic success and how North Carolina can take steps to improve children’s oral health and academic outcomes through the use of school-based dental sealant programs (SBSPs). Topics include the impact of dental caries on children’s health and well-being, evidence-based solutions, SBSPs, and the impact of SBSPs on children’s oral health outcomes.


**Seal America: The Prevention Invention (3rd ed.)**

This manual provides a step-wise approach for health professionals to plan, implement, and sustain school-based dental sealant programs (SBSPs). It also provides information to help improve specific aspects of SBSPs and to refer students with unmet oral health needs to a dental clinic or office. [Funded by the Maternal and Child Health Bureau]

**SEALS: Sealant Efficiency Assessment for Locals and States**

This software and accompanying user manuals and technical notes provide instruction for using an evaluation and benchmarking tool for community dental sealant programs. One set of software, manuals, and notes is intended for use by individual program administrators, and the other is for state administrators to combine data from all local programs.


**State Dental Screening Laws for Children: Examining the Trend and Impact—An Update to the 2008 Report**

This report focuses on whether state laws on oral health screening of school-age children have expanded and whether they have resulted in improved access to care and reduced oral disease. The report presents background information and methods. It also presents results in the following areas: state laws, major findings from key informants, key findings from program data, and impact of state oral health screening laws.


**Public Education**

**Dental Sealants Save Teeth!**

This flyer for parents provides information about how dental sealants can protect teeth from decay. Topics include what sealants are, which teeth should be sealed, how sealants are applied, whether decay can occur underneath sealants, how long sealants last, how sealants feel, and how Connecticut residents can get sealants. Other tips for preventing tooth decay are included. The document is available in Chinese, Creole, English, French, Italian, Korean, Polish, Portuguese, Russian, Spanish, and Vietnamese.


**Sealants**

This fact sheet for consumers provides information on dental sealants. Topics include what sealants are and how they protect teeth from decay, what plaque is and why it causes tooth decay, the sealant-application process, and who should get sealants.

State and Local Programs

The 2018–2019 Update on the Iowa Department of Public Health’s School-Based Sealant Program

This fact sheet provides information about I-Smile at School, the Iowa Department of Public Health’s School-Based Dental Sealant Program. Topics include how services are provided, growth of the program since its inception in 1995, possible explanations for reduced student participation in the program since 2016–2017, trends in school participation, barriers to accessing oral health care among children from families with low incomes in Iowa, and program impact.


Future Smiles: Participation Forms

These forms are intended for use in implementing a school-based oral hygiene program to provide preventive oral health services (screenings, cleanings, fluoride varnish applications, dental sealant applications, and education) for children from families with low incomes in Nevada. Contents include a consent form for services, including sealant application; a data-collection form; a parent letter detailing a child’s health concerns, treatment performed (including sealant application), and recommendations; and a privacy notice. The parents letter is written in English on one side and in Spanish on the other.


This manual provides information about the Maryland Mighty Tooth School Dental Sealant Program. It presents general program information and administrative protocols and discusses the following topics: operating effective community programs; tooth-surface selection, materials, and sealant application techniques; assessment and data collection; health-education curricula; and training. Sample letters and forms are included.


School-Based Dental Sealant Program Manual

This manual provides professional recommendations and states’ expectations for school-based dental sealant programs (SBSPs) under the Ohio Department of Health (ODH). Contents include local program operations, regulatory compliance, compliance with ODH policies, SBSP eligibility, sample program forms, clinical materials and methods, retention checks, Medicaid billing and collection, reimbursement guidelines, health professional enrollment, filing claims, performance benchmarks and performance standards, reporting, ODH program reviews, and compliance with other ODH requirements. The appendices contain sample forms, records, letters, and other practice-related materials.

Seal Your Smile: A Step Toward Combatting Oral Health Disparities in Utah

This report presents information about the school-based dental sealant program (SBSP) Seal Your Smile, which provides elementary school students with preventive oral health care in a school setting and, if needed, links them to dental homes in the community. Topics include background on SBSPs in Utah, the purpose of the program, program implementation, data-analysis methods, general outcomes, and a summary of findings. Also discussed are participating students’ oral health status, oral pain and unmet oral health care needs, most recent dental visit, dental insurance status, and reassessment data.


Wisconsin Seal-A-Smile Administration Manual

This manual provides policies and procedures for Wisconsin Seal-A-Smile (SAS) grantees, with the goal of helping them administer programs and ensure consistency across programs. The purpose of SAS is to improve the oral health of Wisconsin children through school-based dental sealant programs. Topics include administrative and regulatory guidelines; program requirements; forms, reporting, and recording; and budget and funding information.

Organizations
Organizations

American Academy of Pediatric Dentistry

211 East Chicago Avenue, Suite 1600
Chicago, IL 60611-2637
Phone: (312) 337-2169
Website: www.aapd.org

The American Academy of Pediatric Dentistry (AAPD) works to achieve optimal oral health for all children and adolescents, including those with special health care needs. AAPD serves primary care and specialty pediatric dentists, as well as general dentists who treat children and adolescents in their practices.

American Dental Association

211 East Chicago Avenue
Chicago, IL 60611-2678
Phone: (312) 440-2500
E-mail: info@ada.org
Website: www.ada.org; www.mouthhealthy.org

The American Dental Association (ADA) provides oral health information to dentists and consumers and works to advance the dental profession at the national, state, and local levels. ADA initiatives include those related to advocacy, education, research, and the development of standards.

American Dental Hygienists’ Association

444 North Michigan Avenue, Suite 3400
Chicago, IL 60611
Phone: (312) 440-8900
Website: www.adha.org

The American Dental Hygienists’ Association (ADHA) works to ensure access to high-quality oral health care; promote dental hygiene education, licensure, practice, and research; and represent the legislative interests of dental hygienists at the local, state, and federal levels. ADHA serves dental hygienists with the goal of helping them achieve their full potential as they seek to improve the public’s oral health.

Association of State and Territorial Dental Directors

3858 Cashill Boulevard
Reno, NV 89509
Phone: (775) 626-5008
Website: www.astdd.org

The Association of State and Territorial Dental Directors promotes the establishment of national dental public health policy, assists state oral health programs in the development and implementation of programs and policies for preventing oral disease, builds awareness and strengthens public health professionals’ knowledge and skills by developing position papers and policy statements, provides information on oral health to health officials and policymakers, and conducts conferences for the dental public health community.

Centers for Disease Control and Prevention, Division of Oral Health

1600 Clifton Road
Atlanta, GA 30329-4027
Phone: (800) 232-4636
E-mail: cdcinfo@cdc.gov
Website: www.cdc.gov/oralhealth/index.html

The Centers for Disease Control and Prevention (CDC) works to combat disease and supports communities and citizens to do the same. CDC’s Division of Oral Health strives to improve oral health and reduce oral health disparities by helping states improve their oral health programs, extending the use of proven strategies to prevent oral disease, enhancing efforts to monitor oral disease, contributing to the scientific knowledge base related to oral health and oral disease, and guiding infection control in dentistry.
The National Network for Oral Health Access (NNOHA) works to improve the oral health of underserved populations and contributes to overall health through leadership, advocacy, and support to oral health professionals in safety-net systems. NNOHA’s priorities include ensuring that oral health care is integrated into primary care; promoting evidence-based oral-disease-management models; advocating for every health center to have an oral health program; and ensuring that oral health professionals have the information, resources, and support to deliver high-quality services.

The Indian Health Service (IHS) is responsible for providing federal health services, including oral health services, to American Indians and Alaska Natives. The IHS dental portal serves as a centralized location where staff who work in Indian health care can locate resources to support the operation of effective clinical and community oral health programs.

The Maternal and Child Health Bureau provides leadership, in partnership with stakeholders, to improve the physical, mental, and oral health; safety; and well-being of the maternal and child health population, which includes all women, infants, children, and adolescents and their families.

The National Maternal and Child Oral Health Resource Center responds to the needs of professionals working in states and communities with the goal of improving oral health services for pregnant women, infants, children, and adolescents, including those with special health care needs, and their families (MCH population). The resource center collaborates with government agencies, professional associations, foundations, policy and research centers, and voluntary organizations to gather, develop, and share information and materials to promote sustainable oral health services for the MCH population.