2022

Best Practice Approaches for State, Community and Territorial Oral Health Programs

A Best Practice Approach Report describes a public health strategy, assesses the strength of evidence on the effectiveness of the strategy, and uses practice examples to illustrate successful/innovative implementation.

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Best Practice Approach: School-Based Dental Sealant Programs

Table of Contents

Executive Summary

Dental sealants are widely recognized as an evidence-based intervention that prevents or reduces the incidence of tooth decay on the chewing surfaces of the back teeth (molars). School dental sealant programs are school-based, school-linked, or hybrid programs where dental sealants are applied to the molars of children by a qualified oral health professional. The programs provide an efficient and cost-effective approach for delivering this intervention to children, in particular to those who are from families with low incomes and who are members of racial and ethnic minority groups that would not otherwise have access to oral health care. This report focuses primarily on school-based dental sealant programs.

The Community Preventive Services Task Force (CPSTF) recommends school-based dental sealant programs based on strong evidence showing that these programs increase the number of children who have dental sealants placed at school and that sealants result in a large reduction in the incidence of tooth decay among children ages 5–16.[1] State oral health programs play a significant role in establishing and funding dental sealant programs in schools, with approximately 65% of states reporting they have school-based or school-linked dental sealant programs.[2] Despite the high number of states reporting school dental sealant programs, they are in a small percentage of schools with high need nationwide.

This report highlights

- Background and rationale for school dental sealant programs, including school-based, school-linked, and hybrid programs.
- Guidelines, recommendations, and evidence reviews developed by nationally recognized experts and organizations to support the establishment of school-based dental sealant programs.
- Considerations that need to be taken into account when implementing school-based dental sealant programs.
- State practice examples illustrating strategies and interventions for school-based dental sealant programs.

Background and Rationale

A. Introduction

Dental sealants are clear or opaque protective coatings applied to the chewing surfaces of back teeth (molars) to prevent tooth decay. Sealants prevent initiation and arrest the progression of tooth decay by providing a physical barrier against microorganisms and food particles that collect in a tooth's pits and fissures.[3] About 90% of decay occurs in the pits and fissures of permanent teeth;[4] the molars are the teeth at highest risk for tooth decay.[5]

National data show that 7% of non-Hispanic Black children, 9% of Mexican-American children, and 7% of children from families with low incomes have a significantly higher proportion of untreated tooth decay compared to non-Hispanic White children (4%) and those from families with high incomes 4%.[6] American Indian and Alaska Native children are nearly three times as likely to have untreated tooth decay as children in the general U.S. population.[7] The report *Oral Health in America: Advances and Challenges* notes that placement of dental sealants is an efficient use of resources in populations with higher-than-average rates of tooth decay and when sealants are placed on teeth at highest risk for tooth decay.[8] However, during 2011–2016, only 39% of children ages 6–11 from families with low incomes had sealants, compared to 45% of children from families with high incomes.[6]

In addition, the coronavirus disease (COVID-19) pandemic reduced access to dental sealants among children from families with low incomes and from racial and ethnic minority groups because many dental practices and school-based and school-linked dental sealant programs closed temporarily due to concerns related to the virus. Projections of the incidence of tooth decay in the first molars of 7-year-old children between March 2020 and February 2024 indicate an overall increase of 2.3%. The projected increase was highest for Hispanic children (2.6%),[9] followed by non-Hispanic Black children (2.4%], and non-Hispanic White children (1.9%]. Similarly, children were 18% less likely to have had one preventive dental visit in the past 2 months and 40% less likely to have and 2 or more preventive dental visits in 2020 compared to 2019.[10]

Under the Patient Protection and Affordable Care Act (ACA) of 2010, the provision of dental sealants is considered an essential benefit that individual and small group health plans are required to cover as part of children's oral health care. The law addresses prevention and treatment through various grant programs, including the award of grants for school-based dental sealant programs to states, territories, and Indian tribes.[11]

B. School Dental Sealant Programs

School dental sealant programs offer an evidence-based approach for bringing dental sealants to children. Designed to reach children from families with low incomes because they are less likely to receive regular oral health care and are at higher risk for tooth decay than their more affluent counterparts, many school dental sealant programs use income as a basis for targeting schools. Two federal programs that are commonly used as proxies for income, barriers to accessing oral health care and increased risk for tooth decay, are the National School Lunch Program, and Title I, Part A, of the Elementary and Secondary Education Act.[12]

School dental sealant programs increase the number of children receiving dental sealants, prevent tooth decay, and reduce disparities among children from families with low incomes. For

each sealed tooth, there is an estimated savings of $11.70 over a 4-year period.[13] In addition, school dental sealant programs reduce barriers to oral health care and reduce school absenteeism by an average of 34 million school hours annually that would otherwise be lost owing to oral pain and the need for unplanned (emergency) oral health care.[14,15]

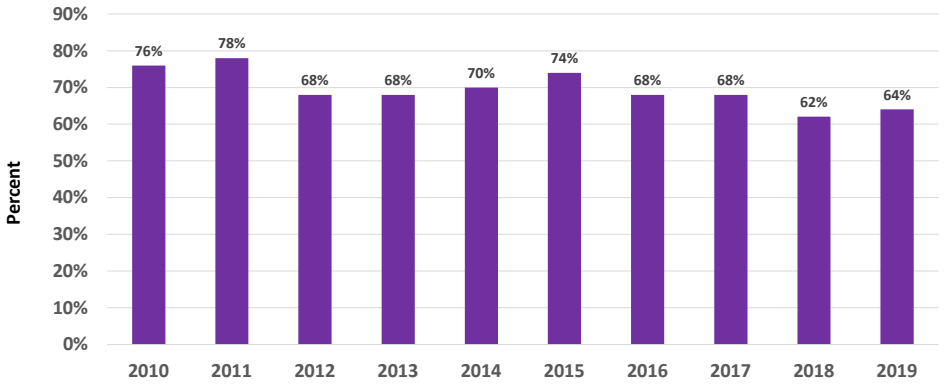
There are variations in how school dental sealant programs are designed. This report focuses primarily on school-based dental sealant programs.

- **School-based dental sealant programs** are conducted within the school with oral health professionals (e.g., dental hygienists) using portable equipment in a temporary location; in a fixed clinical facility, such as a school-based health center; or in a mobile dental van parked on school property.
- **School-linked dental sealant programs** are connected with schools at a site, such as a community clinic or private dental office. School-linked programs may present information, distribute consent forms, and conduct oral health screening at schools.
- **Hybrid dental sealant programs** incorporate components of school-based and school-linked programs.

School-based and school-linked dental sealant programs have the potential to connect children to oral health care in a dental home providing comprehensive, continuously accessible, coordinated, and family-centered care in the community.[16] School dental sealant programs are not meant to be a replacement for a dental home.

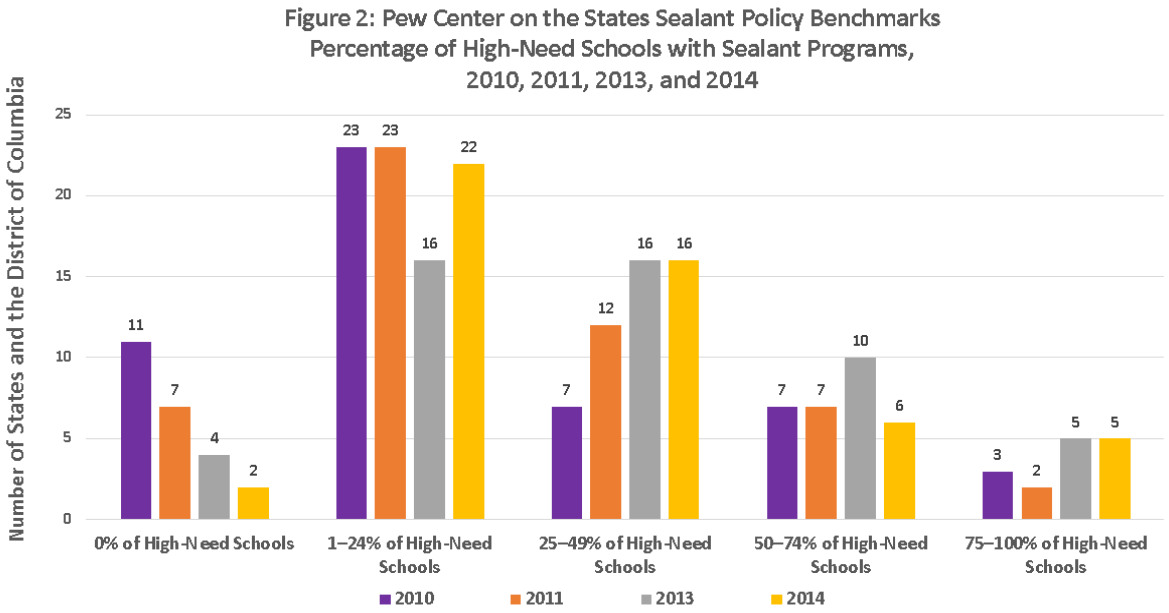
The number of states with school dental sealant programs remained relatively steady between 2016 and 2019, with approximately 65% of states and the District of Columbia reporting having a program. Despite the high percentage, there has been a decrease in school dental sealant programs over the past decade (see Figure 1).[2]

Figure 1. Percentage of States Reporting Having School Dental Sealant Programs, 2010–2019



While these data indicate that a high percentage of states have school dental sealant programs, the data do not give a full picture of the children served by the programs. Between 2010 and 2014, the Pew Trust Dental Campaign evaluated all 50 states and the District of Columbia on their performance related to placing dental sealants on the teeth of children from families with low incomes. In addition to identifying states with school dental sealant programs, the evaluators looked at the percentage of schools with high need (i.e., schools in which 50% or more of students participated in the U.S. Department of Agriculture's National School Lunch Program) in each state. The data show that in 2013 and 2014 only five states reported that they reached 75–100% of schools with high need. On the other hand, most states reported that they served less than 25% of schools with high need, demonstrating that school dental sealant programs are underused in all but a few states (see Figure 2).[17–20]

Confoundingly, data on the number of school dental sealant programs, the number of schools served by school dental sealant programs, and the number of children served by the school dental sealant programs may be under-represented because most states do not require school dental sealant programs to report data to their respective departments of education or health or to their state dental board. In addition, most state oral health programs are unable to obtain data from school dental sealant programs unless they have a formal relationship with the program.



Data Sources: Pew Center on the States 2010; Pew Center on the States 2011; Pew Center on the States 2013; Pew Center on the States 2015

Lack of funding is often cited as a key challenge to expanding school dental sealant programs, especially in schools with a high number of children who are not covered by public or private dental insurance. Funding shortfalls are a result of restrictions on Medicaid credentialling requirements and low reimbursement rates.[21] State dental practice acts requiring a dentist's supervision of dental hygienists during screening, sealant placement, or both also add to program labor costs and decreased productivity. The same holds true in states that restrict the type of personnel who can deliver sealants in public health settings.[22,23]

C. School-Based Dental Sealant Programs

School-based dental sealant programs seek to ensure that children receive effective preventive oral health care through a proven community-based approach. School-based dental sealant programs can offer a significant cost savings to families and public payers, such as Medicaid and the Children's Health Insurance Program (CHIP). It is estimated that up to $300 million can be saved by providing sealants to 6.5 million children from families with low incomes who need them and, for every tooth that is sealed among children at high risk for tooth decay, more than

$11 is saved in treatment costs.[24] In addition, projections indicate that for every 1,000 children served by a school-based dental sealant program, 485 restorations are prevented.[25] These programs also become more cost-effective as the tooth decay risk of students served increases.[26–28] For programs in schools with large numbers of children who are at high risk for tooth decay, placing sealants on the teeth of all children confers higher cost-savings than trying to identify and place sealants on only children at high risk.[29] In schools with as few as 20% of students at high risk, placing sealants on the teeth of all children improves oral health outcomes at a small cost (8 cents per cavity-free month per tooth).[30] Making sealants available to all children in a school targeted for intervention also reduces the possibility of stigma compared to when individual children within a school are targeted for intervention.[1]

Source: CDC 2020. www.cdc.gov/oralhealth/infographics/roi-school-sealant.html

School-based dental sealant program staff provide information to children and their parents about the value and availability of dental sealants. Once signed consent forms have been returned, children are evaluated for their sealant needs, and oral health professionals place the sealants. School-based sealant program staff conduct sealant retention checks, replace lost sealant material, facilitate referral for treatment and continuity of care, and follow up on children with untreated tooth decay.[12]

A state oral health program's role in school-based dental sealant programs may take the form of:

- Providing oral health care directly.
- Funding school dental sealant programs.
- Managing a state-level program that provides vouchers for direct care, including the placement of dental sealants in the community instead of at the school.
- Setting standards for local school dental sealant programs.
- Facilitating and promoting private-public school dental sealant program partnerships, for example, by collaborating, with
    - State and local dental societies and local oral health professionals to support school dental sealant programs and to provide needed follow-up care as identified by school dental sealant program oral health staff.
    - State Medicaid programs to assist with measuring the quality of dental sealant placement provided in school dental sealant programs.
    - School dental sealant programs to collect and analyze data to monitor and track needed follow-up care and support case-management efforts.

Characteristics of a well-run school-based dental sealant program, whether operated by a state or local agency or an organization, are outlined below. More detailed information on these key characteristics can be found in *Seal America: The Prevention Invention*.[12]

- Deliver sealants to large numbers of children at high risk for tooth decay.
- Maximize program efficiency.
- Maintain a quality-assurance system.
- Identify children with treatment needs and ensure that they receive appropriate oral health care.
- Re-screen children within 1 year of initial sealant placement.
- Maintain descriptive program data.
- Be sustainable.

Guidelines, Recommendations, Evidence Reviews, and National Objectives

A. Guidelines and Recommendations

1. *Evidence-Based Clinical Practice Guidelines for the Use of Pit and Fissure Sealants*

   The American Academy of Pediatric Dentistry and the American Dental Association (ADA) released practice guidelines to inform oral health professionals during the clinical decision-making process about the prevention of tooth decay in children. The panel concluded that dental sealants are effective in preventing and arresting tooth decay on primary and permanent molars compared to the non-use of sealants or fluoride varnishes. They also concluded that sealants could minimize the progression of non-cavitated tooth decay.[31]

2. *Health Investments That Pay Off: Strategies to Improve Oral Health*

   The National Governors Association, Center for Best Practices, encouraged governors to invest in school dental sealant programs, particularly those administered in schools, as one of three critical health investments to reduce state oral health care expenditures. The brief outlines oral health interventions to improve population health and the quality of health care and to reduce health care costs. It includes an overview of the problem, strategies to implement and finance evidence-based interventions, and strategies to support data collection related to interventions.[32]

3. *Oral Health: Preventing Dental Caries, School-Based Dental Sealant Delivery Programs. The Guide to Community Preventive Service*

   CPSTF recommended school-based dental sealant programs based on strong evidence of their effectiveness in preventing tooth decay among children. The task force found evidence that these programs increase the number of children who have dental sealants placed at school and that sealants result in a large reduction in tooth decay among children ages 5–16. In addition, it found that the benefits of such programs outweigh their costs when implemented in schools that have a large number of enrolled children at high risk for tooth

decay.[1]

4. *Preventing Dental Caries Through School-Based Sealant Programs: Updated Recommendations and Review of Evidence*

   The Centers for Disease Control and Prevention convened a workgroup that developed recommendations consistent with current science about appropriate sealant placement in school-based dental sealant programs.[16]

5. *Seal America: The Prevention Invention*

   Seal America: The Prevention Invention provides a step-wise approach for health professionals to plan, implement, and sustain school-based dental sealant programs. The manual provides information to help improve specific aspects of programs and to refer children with unmet oral health needs to a dental office or clinic.[12]

B. Evidence Reviews

1. *Pit and Fissure Sealants for Preventing Dental Decay in Permanent Teeth*

   The Cochrane Collaboration conducted a review of dental sealant studies and found that resin-based sealants applied on the chewing surfaces of permanent molars are effective for preventing tooth decay in children. The review reported a reduction of tooth decay by between 11% and 51% for permanent molars with sealants compared to those without sealants, when measured at 24 months after sealant placement. Similar benefit was seen at time points up to 48 months after placement.[33]

2. *Sealants for Preventing Dental Decay in the Permanent Teeth*

   The Cochrane Collaboration conducted a review of dental sealant studies and found that, at 2 years after placement, sealant placement on the chewing surfaces of the permanent molars in children reduces tooth decay by 81% when compared to no sealant placement.[34]

3. *Sealants for Preventing and Arresting Pit-and-Fissure Occlusal Caries in Primary and Permanent Molars: A Systematic Review of Randomized Controlled Trials—A Report of the American Dental Association and the American Academy of Pediatric Dentistry*

   ADA and the American Academy of Pediatric Dentistry formed a panel that conducted a systematic review and found that dental sealants are effective in preventing and arresting tooth decay in children compared with no sealants or fluoride varnishes. The panel further concluded that dental sealants can minimize the progression of tooth decay that has not yet progressed into the second layer of a tooth (dentin) on which a sealant has been placed.[35]

C. Healthy People 2030 National Objectives

Placement of dental sealants on children's teeth has been a longstanding part of the Healthy People national objectives.[36] Upon the release of the 2030 national objectives in 2020, the baseline for children ages 3–19 who had dental sealants placed on one or more primary or permanent molar was 37%. The target for 2030 is 42.5%.[i]

Considerations for Implementing School-Based Dental Sealant Programs

A number of considerations need to be taken into account in implementing school-based dental sealant programs. These include: (1) ensuring program effectiveness, (2) expanding programs to reach more children, (3) bundling preventive services, (4) using electronic-specified clinical quality measures, and (5) promoting health equity and public health.

- **Ensuring Program Effectiveness.** This takes into account the preventive and financial benefits derived from a well-run school-based dental sealant program, as well as the significant increase in access to dental sealants for children enrolled in schools with such programs. School-based dental sealant programs have demonstrated that they prevent tooth decay, are cost-effective, and increase the number of children receiving dental sealants who are from families with low incomes and children from racial and ethnic minority groups.[1,3,13,25,35]

  The National Network for Oral Health Access (NNOHA) provides resources and learning opportunities that outline best practice approaches for running an efficient and effective practice. As part of its technical assistance activities designed to increase the use of dental sealants, NNOHA conducted multiple quality-improvement (QI) collaboratives with community health center oral health programs over five years. The result of these QI collaboratives was a change package of recommendations that dental offices or clinics can implement using QI methods to place more sealants.

  NNOHA's top five recommendations designed to help community health center oral health programs increase the number of dental sealants placed include the following:[37]

  1. Place dental sealants on the same day that a child is assessed for sealant placement.
  2. Prioritize sealant placement over routine restorative care.
  3. Develop patient protocols and flow charts to devote as much time as possible placing dental sealants while in a school.
  4. Use dental hygienists and dental assistants working at the top of their license to place sealants.
  5. Use equipment and materials that make sealant placement more efficient.

- **Expanding Programs to Reach More Children.** Since the establishment of the Healthy People 2010 national objectives, increasing the prevalence of dental sealants among children has been a national objective.[38] It has been projected that states and communities can prevent tooth decay in millions more children by launching dental sealant programs in more schools and expanding existing programs.[39]

  A variety of strategies for increasing the number of children served by school-based dental sealant programs have been proposed. These include:

  - Establishing dental sealant programs in schools with a high proportion of children at high risk for tooth decay.[24]

- Simplifying Medicaid application and credentialing processes to enable enrollment and reimbursement for all licensed oral health professionals and facilitate the expansion of school-based dental sealant programs.[40]
- Improving school-based dental sealant programs' data collection and analysis to provide powerful stories that communicate program impact.[40]
- Evaluating and changing state dental practice acts or other existing rules that restrict the use of appropriately trained and licensed oral health professionals to apply sealants that would allow the receipt of oral health services in the most cost-effective manner without compromising quality or safety.[40]

- **Bundling Preventive Care.** Bundling placement of dental sealants with the application of fluoride varnish (effective at preventing tooth decay on the smooth surfaces of teeth) in school-based dental sealant programs increases children's access to multiple preventive oral health care therapies. The combination of these preventive therapies reduces children's risk of developing tooth decay on all tooth surfaces. Adding silver diamine fluoride (SDF) to the oral health care provided by school-based dental sealant programs when appropriate can arrest or slow the progression of existing tooth decay on teeth that cannot be sealed.[41]

  Fluoride varnish and SDF are low-cost prevention and treatment therapies that can be used in various public health settings, including schools. Fluoride varnish is a highly concentrated form of fluoride that is applied to the tooth surface to prevent, slow, or stop the process of tooth decay.[42,43] Like fluoride varnish, SDF is a highly concentrated form of fluoride that is brushed onto tooth surfaces to prevent tooth decay. However, it contains small amounts of silver that can arrest or stop existing tooth decay from progressing further. It is often used when treating children who are fearful, uncooperative, or pre-cooperative.[44]

  To enhance the delivery of and promote the bundling of preventive oral health care in school dental sealant programs, states should consider activating the SDF code as a preventive measure to arrest or prevent tooth decay. In addition, states should consider establishing financial incentives to encourage provision of bundled preventive services that include screenings, SDF treatment, fluoride varnish, oral hygiene instruction, and provision of toothbrushes and fluoride toothpaste in school dental sealant programs.[45] Where needed, changes to state dental practice acts should be encouraged to allow dental hygienists to apply SDF as a preventive and treatment agent in school dental sealant programs.

- **Using Electronic-Specified Clinical Quality Measures.** Using data-driven quality-improvement methods and optimizing use of electronic health records aligns policies, procedures, and protocols among multiple school-based dental sealant programs; decreases reporting burdens; and improves data standardization. Efforts to standardize and reduce the administrative burden associated with collecting and analyzing such data are essential for assessing whether children at high risk for tooth decay are receiving sealants in a timely manner. Such efforts will allow programs to target performance improvement initiatives accordingly.

In 2015, the Health Resources and Services Administration (HRSA) adopted the Uniform Data System (UDS) Sealant Measure as its first oral health clinical quality metric. This patient-level measure encourages sealant placement on the first permanent molar of children ages 6–9 who are at high risk for tooth decay. All community health centers receiving funding from HRSA operate school-based dental programs must report annually on this measure.

ADA's Dental Quality Alliance established dental sealant quality-performance measures that were adopted by the Centers for Medicare & Medicaid Services as part of its core child set of quality measures.[46,47]

- **Promoting Health Equity Through a Public Health Intervention.** Despite improvements to children's access to preventive oral health care, access to oral health care remains an issue for children from families with low incomes[6] and those living in rural areas.[48] This is particularly true for those from racial and ethnic minority groups.

  Understanding what causes health inequities is essential to creating effective programs and policies to address oral health issues faced by underserved groups. The causes range from individual factors such as families with low incomes, families' irregular use of oral health care, and families' lack of knowledge about dental sealants,[49,50] as well as families' low utilization of oral health care to systemic factors such as restrictive state dental practice acts or regulations, no or inadequate dental insurance coverage, few oral health professionals that accept Medicaid, geographic maldistribution of dental practices, lack of public transportation, and other social determinants of health.[8,51]

  School-based dental sealant programs are an important public health intervention that can improve oral health equity among children, particularly those at high risk for tooth decay.[1,52,53] Despite strong evidence for the effectiveness of school-based dental sealant programs, most states are not taking full advantage of such programs.[54]

  Changes are needed in resource allocation, in social and public health policy, in community organization, in the provision of effective oral health care, and in professional and individual behavior.[55] Removing barriers as to who can place dental sealants on children's teeth can enhance access to care. Some states have amended their practice acts to allow dental hygienists to provide sealants under the general supervision of a dentist, while other states are considering similar actions to allow hygienists to screen for and place sealants through public health programs. Additional actions that could accelerate the adoption of these policies include funding the expansion of school-based dental sealant programs to schools with enrolled children at high risk for dental caries, eliminating legal barriers that use age and tooth restrictions to bar reimbursement, and increasing Medicaid reimbursement policies (e.g., covering glass ionomer sealants) and rates.[8]

Best Practice Criteria

The Association of State and Territorial Dental Directors (ASTDD) Best Practice Project promotes best practices for state, territorial, and community oral health programs. For school-based dental sealant programs, the ASTDD Best Practices Committee has proposed the following initial review standards for five best practice criteria:

1. Impact/Effectiveness

- The school-based dental sealant program delivers care to large numbers of children with susceptible permanent molars who are at high risk for tooth decay.
- The program maintains a quality-assurance system that includes technical quality (e.g., high dental sealant retention rates) and appropriateness (the children receiving sealants are at high risk for tooth decay).
- The program has policies, procedures, and protocols in place that
    - Align with program goals and objectives
    - Meet current infection-control and clinical standards
    - Facilitate referrals and follow-up for restorative care
    - Train and calibrate the skills of clinical staff
    - Collect, analyze, and report data.

2. Efficiency

- The school-based dental sealant program maximizes the use of oral health professionals working at the top of their license to screen for and place dental sealants to minimize program costs.
- Program staff are adequately trained, and their sealant assessment, placement, and retention-detection skills are calibrated to ensure sealant quality and retention.
- The program collects data and analyzes it to demonstrate program efficiencies and program cost-effectiveness.
- The program establishes policies and protocols for tracking children who have been referred for restorative and/or ongoing oral health care and for following up with their parents.

3. Demonstrated Sustainability

- The program has a business plan in place that defines program goals and objectives, identifies available capital and revenue streams, estimates spending, and has a budget in place that aligns financial goals and expenses.
- The program demonstrates sustainability by establishing a track record or a reasonable plan for covering program expenses.
- The program diversifies revenue streams that may include private and public insurance (e.g., Medicaid, CHIP), sponsorships, partnerships, grants, and donations.
- The program uses data and success stories to demonstrate and celebrate accomplishments with key stakeholders (e.g., school administration and personnel, community, funders, partners).

4. Collaboration/Integration

- Collaborative partnerships are established to administer and sustain the program, including partnerships with school administrators and personnel, parent teacher organizations, community sponsors, local dental societies, and other key stakeholders.
- The program establishes partnerships with dental offices and/or clinics in the community to serve as referral points for children who need restorative or ongoing oral health care.
- The program works with parents to understand and address their child's oral health needs, identify insurance and other payment sources (e.g., Medicaid, CHIP), establish dental homes, and seek emergency care as needed.

5. Objectives/Rationale

- The program's goals and objectives are linked to state and national oral health goals and objectives.
- The program collects and analyzes data to evaluate whether it achieves its mission to prevent tooth decay among children who are underserved and at high-risk for tooth decay.
- The program has a communication plan in place to disseminate its successes and achievements.

Evidence Supporting Best Practice Approaches

The ASTDD Best Practices Committee takes a broad view of evidence to support best practice approaches for building effective state and community oral health programs. Practices that are linked by strong causal reasoning to the desired outcome of improving oral health and total well-being of priority populations will be highlighted. Strength of evidence from research, expert opinion and field lessons fall within a spectrum: on one end of the spectrum are promising best practice approaches, which may be supported by little research, a beginning of agreement in expert opinion, and very few field lessons evaluating effectiveness; on the other end of the spectrum are proven best practice approaches, ones that are supported by strong research, extensive expert opinion from multiple authoritative sources, and solid field lessons evaluating effectiveness.

Research may range from a majority of studies in dental public health or other disciplines reporting effectiveness to the majority of systematic review of scientific literature supporting effectiveness. Expert opinion may range from one expert group or general professional opinion supporting the practice to multiple authoritative sources (including national organizations, agencies or initiatives) supporting the practice. Field lessons may range from success in state practices reported without evaluation documenting effectiveness to cluster evaluation of several states (group evaluation) documenting effectiveness. To access information related to a systematic review vs. a narrative review, see Systematic vs. Narrative Reviews.

Practice Examples by State

The following practice examples illustrate various elements or dimensions of best practice approaches for school-based dental sealant programs. These examples should be viewed in the

context of the individual state and program environment, infrastructure, and resources. End-users are encouraged to review the practice descriptions (click on a practice name to view the description) and adapt ideas to fit their state and program. Table 1 provides a list of programs and activities submitted. Each practice name is linked to a detailed description.

Table 1. Practice Examples Illustrating Strategies and Interventions for School-Based Dental Sealant Programs by State

Practice Examples Illustrating Strategies and Interventions for School-Based Dental Sealant Programs by State		
Practice Name	**State**	**Practice #**
Georgia School-Based/Linked Dental Sealant Program	GA	12009
Kansas School Oral Health Programs	KS	19014
Children's Dental Services School-Based Sealant Program	MN	26014
Developing Data Queries in Open-Source Dental Practice Management Software to Support SEALS Reporting	MN	26015
Future Smiles Mobile School Sealant Program	NV	31012
Caried*Away:* Delivering Essential Dental Care in Schools	NH	32007
New Mexico School-Based Prevention Program	NM	34001
Albuquerque Public Schools' Dental Program	NM	34007
Participa! Inc. Mobile Dental Services	NM	34008
Ohio Department of Health School-Based Dental Sealant Program (SBSP)	OH	38002
Oregon Certification Program for Local School Dental Sealant Programs	OR	40009
Project Saving Smiles	TX	49006
St. David's Foundation Dental Program	TX	49007
Wisconsin Seal-A-Smile	WI	56004

Highlights of Practice Examples

GA Georgia School-Based/Linked Dental Sealant Program (Practice #12009)

The Georgia Oral Health Program (GOHP) provides funds to support the school-based/linked sealant program. In 2020, 34 of the state's sealant programs were funded by GOHP, and approximately 2,500 sealants were placed on first and second permanent molars. These funds came from the Maternal and Child Health Block Grant (MCHBG), the Centers for Disease Control and Prevention (CDC) cooperative agreement, and state general funds. Georgia currently has school-based/linked programs operating in nine

districts. Some programs receive 100% of their funding from GOHP and use portable equipment owned by the state; others are funded by individual counties. All programs are required to track their data using CDC's Sealant Efficiency Assessment for Locals and States (SEALS) software and to provide the data to GOHP.

KS Kansas School Oral Health Programs (Practice #19014)

Kansas has two school-based oral health programs: the Kansas School Sealant Program (KSSP) and the Kansas School Screening Program, which are administered by the Bureau of Oral Health (BOH). KSSP contracts with local safety net clinics, private dentists, community-based dental hygienists, and community health centers to provide dental sealants and other preventive oral health services such as dental cleanings and fluoride varnish applications. Since 1915, Kansas has had a state mandate that requires each school-age child to have an annual "dental inspection." In 2008, through funding from a state foundation grant, a standardized screening protocol and online-data-collection application were created. The protocol is based on the ASTDD Basic Screening Survey and uses volunteer oral health professionals. Annual screening provides BOH with school, county, and statewide data on children in pre-K through 12th grades.

MN Children's Dental Services School-Based Sealant Program (Practice #26014)

Children's Dental Services uses a multi-lingual team of collaborative practice dental hygienists and dental assistants to provide dental sealants, diagnostic and preventive care, and culturally targeted oral health education. Advanced dental therapists provide restorative treatment. Team members speak Somali, Hmong, and Spanish. Culturally tailored care involves traditional dentifrices such as miswak, a medicinal chewing bark common in East Africa, which stimulates salivation. Culturally focused and translated oral health instructions incorporate diet and cultural norms.

MN Developing Data Queries in Open-Source Dental Practice Management Software to Support SEALS Reporting (Practice #26015)

A key informant interview with school-based dental sealant program coordinators and feedback from data stewards indicated that programs experienced significant barriers when reporting data to SEALS. The Minnesota Department of Health (MDH) collaborated with one of the dental clinics to closely examine its dental-practice-management software. There was a need to download the data from different areas of the clinic's database, adjust the format to be compatible with SEALS, and then upload the data. Six of eleven SEAL Minnesota partners were using Open Dental as their dental-practice-management software. MDH and Open Dental worked with partners to develop and implement custom queries to generate data reports directly from Open Dental into CDC's format of reporting SEALS child-level data. This automation significantly reduced administrative costs, including staff time associated with data entry and reporting. It also minimized discrepancies between requested and reported measures.

NV Future Smiles Mobile School Sealant Program (Practice #31012)

Future Smiles was established in 2009 to provide oral health education and preventive services to children at school-based locations and is Nevada's largest school-based oral health care provider. It operates two types of school-based delivery modes: the Women's Philanthropy Dental Wellness Center, the first and only school-based dental restorative center in Nevada; and the Mobile School Sealant Program, which provides services to approximately 50 schools per year. Future Smiles staff includes dentists, dental hygienists, dental assistants, and case managers.

NH Caried*Away*: Delivering Essential Dental Care in Schools (Practice #32007)

Caried*Away* uses an all-in care bundle that incorporates multiple effective interventions twice per year, for all teeth, in all children, in all grades, delivered by dental hygienists. Initially the interventions were glass ionomers for both dental sealants and interim therapeutic restorations, fluoride varnish, and fluoride toothpaste. Caried*Away*'s work compares the efficacy of the original more complex all-in bundle with a simpler all-in bundle that substitutes silver diamine fluoride for glass ionomer. The results of both bundles appear to have similar clinical outcomes (~50% caries arrest, ~80% caries prevention), and both improve oral-health-related quality of life.

NM New Mexico School-Based Prevention Program (Practice #34001)

The New Mexico Department of Health, Office of Oral Health administers a school-based dental sealant program for elementary school children that provides oral health education, screenings, sealants on first and second molars, and case management. In rural areas, all children in first to fifth grades are eligible. In urban areas, services are limited to children in first through third grades. Program services are offered at no cost to parents. In FY 2019–2020, New Mexico allocated approximately $900,000 in general funds for the state dental sealant program, allowing 2,572 children to participate in the program, with a total of 4,281 molars being sealed.

NM Albuquerque Public Schools' Dental Program (Practice #34007)

Albuquerque public schools' (APS) school-based dental sealant program was established to provide convenient access to care. Mira Consulting, Inc., provides services each school year in 36 elementary, 16 middle, and 5 high schools. It takes radiographs and provides oral exams and cleanings, fluoride varnish, oral hygiene instruction, and dental sealants. Children in need of restorative care are treated at the Mira Clinic, which provides care once a week and offers a dental home for children without one. The services are provided by a dentist, a dental hygienist, and dental assistants. Most children who receive care have Medicaid or private insurance. For those without coverage, the New Mexico Department of Health provides Mira Consulting with an annual budget to cover services. Once those funds are expended, all children with parental consent are eligible to receive radiographs

and exams in-kind per the contract with APS. Due to changes related to COVID-19, scheduling is now done via SchoolDude™ rather than with individual school nurses.

NM Participa! Inc. Mobile Dental Services (Practice #34008)

Participa! Inc. Dental Services has been providing school-based oral health services in New Mexico since 1999. It provides oral exams, cleanings, dental sealants, fluoride varnish, and silver diamine fluoride to any child with a signed parental consent form. Teledentistry is being used to communicate findings to dentists. Participa! focuses on providing services in rural areas in the northwest portion of the state. It shares data collected with the New Mexico Department of Health (DOH), Office of Oral Health, as well as with the school districts it serves. The districts share the data with the New Mexico Public Education Department for their end-of-year reports. In 2019, expenses for providing care to approximately 1,500 students came to $155,855. Most of the costs were covered by Medicaid, with a small portion covered by private insurance and a small grant from DOH.

OH Ohio Department of Health School-Based Dental Sealant Program (SBSP) (Practice #38002)

The Ohio Department of Health (ODH), Oral Health Program (OHP) has operated a school-based dental sealant program for more than 40 years. Initially, ODH provided small grants through its MCHBG to local agencies to operate school-based programs. The number of grants has varied over the years, depending on funding. At one time, 22 programs supported by state and local funding operated in 42 counties, and approximately 29,000 children received dental sealants each year. Over time, programs have consolidated to serve multiple counties. In 2022, OHP funded 12 grants totaling approximately $724,000. These programs serve 407 schools in 34 of Ohio's 88 counties. Most programs serve students in second and sixth grades. In 2019, long-term retention checks indicated an average of 91% of resin-based sealants were retained.

OR Oregon Certification Program for Local School Dental Sealant Programs (Practice #40009)

In 2007, after a disturbing decrease in all state oral health metrics for students ages 6–9, Oregon created a statewide school-based dental sealant program. Initially, 3 of Oregon's 36 counties had such a program. From 2007 through 2020, the Oregon Health Authority (OHA) and local dental sealant programs expanded to provide dental sealants in schools in all of Oregon's 36 counties. As local programs sought to provide sealants in their communities, a need arose for coordinating school sealant efforts statewide. In 2015, legislation passed that moved OHA into an oversight role certifying all school-based programs. In 2022, the budget for the mandatory certification program is $250,000 annually.

TX Project Saving Smiles (Practice #49006)

In 2008, the Houston Health Department initiated Project Saving Smiles (PSS) following a 2001 needs assessment in Harris County showing that 45.9% of children in second grade had untreated tooth decay. PSS is a school-linked program that provides screenings, dental sealants, fluoride varnish, and oral health education free of charge. Throughout the years, PSS has collaborated with the Texas Department of State Health Services, academic institutions, school districts, private industries, and various non-profit organizations. These partners share in the planning, resources, and implementation of PSS. From school year 2008–2009 through March 2020 (due to COVID-19), 74,758 total health screenings were provided, 235,474 dental sealants were placed, and fluoride varnish was applied 73,819 times. The average cost for these services per child was $137.55. The estimated value of services provided is $9,776,545.97.

TX St. David's Foundation Dental Program (Practice #49007)

St. David's Foundation Dental Program provides free dental cleanings, dental sealants, fluoride varnish, fillings, and extractions to children in Title 1 schools in three counties in Central Texas. There is no cost to parents for any oral health care provided. The program is exploring adding silver diamine fluoride, stainless steel crowns, and pulpotomies. It currently has nine mobile dental vans. Clinical staff includes10 dentists, 4 dental hygienists, 19 dental assistants, and 15 operations staff. Children who cannot be treated on the mobile vans may receive care through the Complex Care Program (CCP). CCP consists of general dentists and specialists in the community who have agreed to provide oral health care to children referred to them at 50% of the regular cost. St. David's Foundation reimburses the dentist for the remainder of the cost.

WI Wisconsin Seal-A-Smile (Practice #56004)

The Wisconsin Seal-A-Smile program provides school-based preventive oral health care in approximately 1,100 schools annually and reaches nearly 80,000 children. The program is a collaborative effort between Children's Health Alliance of Wisconsin, Delta Dental of Wisconsin, and the Wisconsin Department of Health Services Oral Health Program. Funding is provided through the state budget and matching funding from Delta Dental of Wisconsin, totaling nearly $1.1 million. The program's coordinated approach led to its successful expansion over the past 20 years and allows the individual school-based dental sealant programs to collaborate and learn from one another rather than compete against each other. The development of online data-collection and consent tools have allowed the program to track children over time and engage more families to receive care.

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Resources

Many of the resources highlighted in this report are described in *Seal America: The Prevention Invention*. Also see the list below for additional resources identified in this report.

- **Interdisciplinary Collaboration:**

  The *Smiles for Life: National Oral Health Curriculum* and Qualis Health provide information on the integration of oral health care and primary care. The *Whole School, Whole Community, Whole Child Oral Health Integration and Recommendations* offers a conceptual model for addressing oral health in schools.

- **Preventive Services:** *Fluoride Varnish: An Evidence-Based Approach Research Brief*, *Silver Diamine Fluoride Fact Sheet*, and the webinar, *Silver Diamine Fluoride: A Game Changer in Managing Caries in High-Risk Populations?* provide resources and information about other preventive services for children.

- **Risk Assessment:** Caries Management by Risk Assessment (CAMRA) helps oral health professionals develop a personalized treatment plan to prevent and manage tooth decay.

- **Teledentistry:** The *Teledentistry* topics page and *Teledentistry: Opportunities for Expanding the Capacity and Reach of the Oral Healthcare Systems* report offers information about teledentistry, virtual dental homes, and strategies to improve access to oral health services for children.

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[i] It should be noted that this objective differs from the related Healthy People 2020 objectives in that the oral health (OH) objectives OH-12.1, OH-12.2, and OH-12.3 tracked children ages 3–5, 6–9, and 13–15, respectively, who had sealants placed, while the 2030 objective tracked children ages 3–19 who had sealants placed.[56]