

Best Practice Approaches for State and Community 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

- I. Description (page 1)
- II. Guidelines and Recommendations (page 8)
- III. Research Evidence (page 9)
- IV. Best Practice Criteria (page 9)
- V. State Practice Examples (page 10)
- VI. Acknowledgements (page 13)
- VII. Attachments (page 15)
- VIII. Resources (page 16)
- IX. References (page 16)

Summary of Evidence Supporting School-based Dental Sealant Programs

Research	+++
Expert Opinion	+++
Field Lessons	++
Theoretical Rationale	+++

See **Attachment A** for details.

I. Description

A. Dental Sealants

Dental sealants are clear or opaque plastic materials applied to the occlusal pit-and-fissure (biting) surfaces of teeth to prevent tooth decay (dental caries). Sealants prevent initiation and arrest progression of tooth decay by providing a physical barrier against microorganisms and food particles that collect in pits and fissures.¹ About 90 percent of decay occurs in the pits and fissures of permanent posterior teeth² with the molars being at highest risk.³ National data show that children from low-income families have a significantly higher proportion of untreated caries compared to children from high-income families. Only 25% of 6–9 year olds from low-income families had sealants compared to 34% of children from high-income families (25.5%).⁴

The Surgeon General's Report *Oral Health in America: A Report of the Surgeon General* noted that sealants are an efficient use of resources when used in populations with higher-than-average disease incidence rates and when sealants are placed on teeth at highest risk for caries.⁵

Based on recommendations and reviews by a panel of experts supporting the Task Force on Community Preventive Services, the *Guide to Community Preventive Services* (The Community Guide) strongly recommends school-based and school-linked dental sealant delivery programs for preventing or reducing occlusal caries on posterior teeth of children.⁶

B. Dental Sealant Programs

Dental sealant programs generally are targeted to vulnerable populations less likely to receive dental care that could benefit from sealants, such as children eligible for free or reduced-cost meal programs.⁵ Schools are an ideal place to reach children.⁶ School-based sealant programs have been associated with reducing the incidence of tooth decay by 40 to 60 percent.⁷

There are variations in how dental sealant programs are designed:

- **School-based programs** are conducted completely within the school setting, with teams of dental health professionals such as dentists or dental hygienists utilizing portable equipment or in a fixed clinical facility within the school setting or in a mobile dental van parked on school property.
- **School-linked programs** are connected with schools, but deliver the sealants at a site other than the school (e.g., a clinic or private dental office). School-linked programs may present information, distribute consent forms and conduct dental screening at schools.
- **Hybrid programs** incorporate school-based and school-linked services.

School-based and school-linked dental sealant programs have the potential to link students with treatment and ongoing care in a dental home in the community where dental care should be comprehensive, continuously accessible, coordinated, and family-centered.⁸ Community-based sealant programs are not meant to be a replacement for a dental home.

Over the past four years the Synopses of State Dental Public Health programs has shown that more than 50% of the states/DC have programs for dental sealants (in one or more of the program design variations described previously). In FY 2011-2012, 68.6% of states/DC reported having a dental sealant program.⁹

In 2010 and 2011, the Pew Children’s Dental Campaign assessed and graded 50 states/DC on eight policy benchmarks that ensure dental health and access to care for disadvantaged children.^{10,11} Two of these eight policy benchmarks focused on dental sealants (Table 1). The first benchmark was selected because children from low-income families are at higher risk for tooth decay and less likely to have received dental sealants compared to their higher-income counterparts.⁴ Thus it is important to know the distribution of sealant programs in high-need schools that serve at risk children. The second benchmark addresses State Dental Practice Acts as research shows that sealant programs in states with less restrictive practice acts are more cost effective.¹²

Table 1: Pew Center on the States Sealant Policy Benchmarks 2010, 2011^{10,11}		
Policy Benchmark 1: Percentage of High-Need Schools with Sealant Programs		
Percentage of high-need schools with sealant programs	Number of States	
	2010	2011
• 75-100%	3	2
• 50-74%	7	7
• 25-49%	7	12
• 1-24%	23	23
• None	11	7
Policy Benchmark 2: Rules Restricting Hygienists		
State allows hygienists to provide sealants without a prior dentist's exam*	Number of States	
	2010	2011
• Yes	30	*
• No	21	*
• Yes (Exam never required)	*	16
• Yes (Exam sometimes required – some classifications of hygienists can place sealants without a prior exam)	*	13
• No (Exam always required)	*	12
• No (Exam and dentist's direct or indirect supervision required)	*	10
*response categories changed in 2010		

In 2013, Pew Children’s Dental Campaign graded 50 States/DC on four benchmarks focusing on prevention and improving access to sealants among children.⁷

Table 2: Pew Center on the States Sealant Policy Benchmarks 2013⁷

Benchmark 1: Percentage of High-Need Schools with Sealant Programs	
Categories	# of States
<ul style="list-style-type: none"> • Programs reaching 75% or more of high-need schools • Programs reaching 50-74% of high-need schools • Programs reaching 25-49% of high-need schools • Programs reaching less than 25% of high-need schools • No programs 	<p>5 10 16 15 + DC 4</p>
Benchmark 2: Rules Restricting Hygienists	
Categories	# of States
<ul style="list-style-type: none"> • A dentist’s exam is not required prior to a hygienist placing a sealant in a school • A dentist’s exam is sometimes required in a school (e.g., certain classifications of dental hygienist, such as public health hygienists, can place sealants without a dentist’s prior exam) • A dentist’s exam is always required in a school • A dentist’s exam and indirect or direct supervision are required in a school 	<p>15 16 11 8 + DC</p>
Benchmark 3: Collecting and Submitting Data to the National Oral Health Surveillance System	
Categories	# of States
<ul style="list-style-type: none"> • Submitted data within the past five years • Participated, but no recent data • Never participated 	<p>31 12 7 + DC</p>
Benchmark 4: Meeting Healthy People 2010 Sealant Goal	
Categories	# of States
<ul style="list-style-type: none"> • Met the Sealant goal • Did not meet the Sealant goal 	<p>10 40 + DC</p>
Overall State Grades	
Categories	# of States
<ul style="list-style-type: none"> • A (10-11 points) • B (8-9 points) • C (6-7 points) • D (3-5 points) • F (0-2 points) 	<p>5 8 17 15 5 + DC</p>

C. School-Based Dental Sealant Programs

Health care professionals often provide prevention services in schools to protect and promote the health of students. A school oral health promotion/disease prevention program may incorporate several elements, such as oral health education, dental screenings, topical fluoride and/or sealant applications, and referral for dental treatment. Primary dental care programs in school settings may also include sealants as part of basic restorative and preventive dental treatment. This Best Practice Report will, however, focus only on school-based sealant programs.

School-based dental sealant programs seek to ensure that children receive a highly effective dental prevention service through a proven community-based approach. Tooth decay disproportionately affects low-income children and children from racial and ethnic minority groups.⁴ School-based sealant programs generally are designed to maximize effectiveness by targeting schools with high-risk children (those vulnerable populations less likely to receive dental care) such as children eligible for free and reduced-cost meal programs.

Children and their parents/guardians are made aware of the value and the availability of dental sealants through the school program. Once signed consent forms have been returned, children are evaluated for their sealant needs and dental professionals place the sealants. School-based sealant programs address the unmet needs of the children by placing sealants, facilitating referral and ensuring quality and continuity of care through retention checks, replacement of lost sealant material, and follow-up on any untreated dental disease.¹³

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

- (a) providing direct service delivery,
- (b) funding grants or contracts for sealant programs,
- (c) managing a state-level program that provides vouchers for services in the community instead of direct services at the school,
- (d) assisting with establishment of a "dental home,"
- (e) setting standards for local direct service sealant programs, and/or
- (f) facilitating and promoting private-public sealant program partnerships (e.g., schools and dental societies).

The following description of a school-based dental sealant program shows the attributes of a direct service delivery program, whether operated by a state or local agency or an organization:

1. Deliver sealants to large numbers of high-risk children with susceptible permanent molar teeth.

- The program should serve a geographic area that has a critical mass of children who meet its eligibility criteria. Such areas could include urban neighborhoods or rural counties.
- The goal of the program is to reach children who would be considered high-risk based on their socioeconomic status. Generally, eligibility for the free or reduced cost school meal program from the U.S. Department of Agriculture's [National School Lunch Program](#) has been used as a proxy for income and increased risk of untreated decay. Children from low-income families have been shown to be less likely to receive dental care than are children whose families do not meet the meal program criteria. Local standards will determine the acceptability of targeting children rather than schools.
- In many locales, offering a sealant program only to children on the meal program may be viewed as stigmatizing and, therefore, unacceptable. Targeting schools based on the proportion of free or reduced cost meal program-eligible children, however, is generally acceptable. A minimum of 50 percent of the student enrollment eligible for the free and reduced meals is a common benchmark for school eligibility.
- Generally, sealant programs target children in the second grade (for sealing the first permanent molars that typically erupt at ages 6 to 7) and sixth grade (for sealing the second permanent molars that typically erupt between 11 and 13 years of age). Targeting these grades maximizes the availability of susceptible molar teeth. Although some sixth graders may not have erupted second molars, this grade was chosen because program participation typically drops off for higher grades.
- Obtaining signed parental consent forms is a critical component of successful school-based sealant programs. In general, signed consent form return rates are between 40 to 60%. Some of the reasons why parents may not sign consent forms are: a) failure of the child to bring the consent form home or give it to the parents, b) parent's lack of knowledge about the benefits of dental sealants, c) other health, social, cultural or family factors. To develop an effective program, the program administrators should try to reduce barriers and develop strategies to gain parental consent for students to receive dental sealants.

2. Maximize program efficiency.

- The program staff, in conjunction with school staff, establishes an efficient flow of available children into the sealant placement area. School-based programs minimize the amount of time children are away from class and tend to maximize participation by increasing parent willingness to enroll children in the program.
- The program operates in the least expensive and most productive manner possible, while maintaining quality standards. Sealant delivery with a two-person team using a four handed technique is more effective than using a single operator.¹⁴
- On average, efficient school-based programs using four-handed technique can place dental sealants on 15-16 children per team per school day (typical school day is about 6.7 hours.¹⁵ Programs must comply with state laws regarding delegable procedures and whether dentists need to conduct an initial exam to determine which teeth are to be sealed. However, significant cost savings may result from reducing the required level of supervision by a dentist.¹² Efficient use of resources generally directs a program to hire the least expensive qualified personnel permitted to perform the preventive procedures under state law. The program must provide adequate training and quality assurance.
- For any program, choosing the right sealant material is important. Several sealant materials are available and the most commonly used are resin-based sealants and glass ionomer cements. Current evidence comparing the effectiveness of these two materials to control caries is of low quality; therefore, recommendations on superiority of one material over another are not possible at this time.^{16,17} However, although the evidence comparing caries prevention does not support one material over another, there is evidence indicating that resin-based sealants have superior retention compared to glass ionomer sealants. One systematic review found that resin-based sealants were five times as likely to be retained after two to three years of follow up compared to glass ionomer sealants.¹⁸

Clinicians should take into account the likelihood of experiencing lack of retention when choosing the type of sealant material most appropriate for a specific patient and clinical scenario. For example, in situations in which dry isolation is difficult to maintain, such as a tooth that is not fully erupted and has soft tissue impinging on the area to be sealed, then a material that is more hydrophilic (for example, glass ionomer) would be preferable to a hydrophobic resin-based sealant. On the other hand, if the tooth can be isolated to ensure a dry site and long-term retention is desired, then a resin-based sealant may be preferable.¹⁸

When selecting dental sealant materials for use in a school-based dental sealant program, the following factors should be considered:

- Cost
- Simplicity of application technique
- Retention¹⁷
- Program staffing, including use of four-handed technique⁸
- Programmatic policy for sealant placement on partially-erupted teeth or situations in which isolation is difficult

Program staffing considerations also include whether dentist supervision is required by the state practice act. Certain sealant materials are more likely to require occlusal adjustment, and under most state practice acts, only dentists may perform this procedure.^{12 13}The placement of sealant material demands meticulous application technique following the manufacturer's instructions.⁶

3. Maintain a quality assurance system.

- Patient/family procedures. A quality sealant program ensures confidentiality and treats children and families respectfully. A quality program should have direct communication

with the parent/guardian of the child. Sealants will not be placed without written permission and a completed medical form. The program will provide the family with documentation of services provided.

- Clinical procedures. A quality program will follow Centers for Disease Control and Prevention (CDC) infection control guidelines and the Occupational Safety and Health Administration (OSHA) guidelines and standards to promote worker safety and health with written policies and protocols in place. The program will stay abreast of the latest evidence-based studies focused on dental sealants, sealant material, and application techniques.
- Family Educational Right and Privacy Act/Health Insurance Portability and Accountability Act (FERPA/HIPAA). Programs will be in compliance with laws that are in place to protect the privacy of student information. For more information: [National Assn. of School Nurses: HIPAA & FERPA](#).
- Quality Assurance. Technical quality generally refers to a high rate of retention for sealants (one-year retention rates of well-applied sealants usually averages between 80 to 90%). Sealant quality can be assessed by checking short-term retention rates or one year retention rates or both on a sample of students who received dental sealants from the SBSP. Short term retention checks are done within one to two months of sealant placement and are helpful to evaluate staff performance, to identify needed protocol changes, and to determine the adequacy of material and equipment used.¹³ Yearly retention checks are generally done during the next school year. If resources allow then retention checks should be completed on as many students as possible.
- Ensuring Appropriateness of the Program. Appropriateness can be evaluated by analyzing program participation to ensure children and schools in the program meet its eligibility criteria. Additionally, programs should ensure compliance with applicable state laws and professional standards and guidelines, including infection control.

4. Identify children with treatment needs and ensure that they receive appropriate dental care.

- When assessing the need for sealants, programs typically also identify children with treatment needs such as untreated decay and notify parents/guardians and school nurses. Ensuring that children receive appropriate dental care often is the most difficult aspect of a school-based sealant program. Ideally treatment needs will be met through linking a child to a dental home, which could include a broad base of locations, such as private dental providers, local health departments, non-profit public clinics, and community health centers.
- School-based dental professionals and community health workers can play an important role in helping to coordinate needed dental care and address potential barriers that interfere with parents pursuing care, finding dentists who will provide care to their children and assuring that children receive the recommended care.

5. Re-screen children within one year of initial sealant placement.

- Sealant retention and integrity can be checked and newly erupted teeth can be sealed during the following school year if the child has not moved and if consent is received. Typically, children who received sealants in second grade are re-screened in third grade. Best practices guidelines recommend sealant retention checks to be performed within one year of sealant placement.
- The timing of sealant retention evaluation can depend on several factors such as local program objectives; changes in dental materials, techniques or personnel; and student movement in and out of the school and school district.⁸

- Evaluating sealants after placement is very important but may not be feasible for all programs. However, even if the follow-up cannot be ensured, high-risk children should still receive sealants.⁶

6. Maintain descriptive program data.

Program data should reflect the program's ability to reach its goals and objectives. Baseline data should be established to track progress towards program goals.

Descriptive program data may include:

- An estimate of the percentage of eligible schools (e.g., schools with 50 percent or more of the students eligible for the free and reduced lunch program) in the state served by sealant programs (generally each state's Department of Education website has the list of public schools with percentage of children on free and reduced lunch program). National statistics on distribution of public schools by free and reduced lunch program can be found on the [National Center for Education Statistics website](#).
- An estimate of the number and percentage of all high-risk children in the state who receive sealants through the program.
- Number of consent forms returned.
- Rates of participation. Number of children screened and number of children who received sealants.
- Calculating and comparing caries incidence (new areas of tooth decay) in children who participated in the sealant program and received sealants. For example, comparing cohort data from 2012 to 2013.
- An estimate of the cost per child screened (including costs of referrals for care) and cost per child who receives sealants. These will provide suitable benchmarks for program efficiency.^{19,20} Methods used by states to estimate cost per child or per sealant are not standardized (e.g., cost of equipment, sealant supplies and materials, travel and/or administrative time may or may not be included in estimating cost). Note that depending on the tooth selection criteria, assessment of the number of teeth sealed or the cost per tooth sealed should identify if low-risk teeth, such as premolars, routinely were also sealed.

One option for maintaining sealant program data is [SEALS](#) (Sealant Efficiency Assessment for Locals and States), a software program developed by the Centers for Disease Control and Prevention (CDC) that aids in the evaluation of sealant program effectiveness and efficiency. This Excel-based software automates the capture, storage, and analysis of oral health status of participants, the type and number of delivered services, and event costs and logistics. SEALS generate summaries and performance measures such as cost per child receiving sealants, sealant retention, averted caries, and children sealed per chair-hour. Companion software, *SEALS_Admin*, uses data from individual local sealant programs to calculate statewide values of the summary and performance measures and ranks individual programs on 15 performance measures. SEALS data can be used to estimate the cost and impact of a sealant program. Data also can be used to compare school sealant events by need, cost and efficiency, enabling programs to allocate resources more efficiently. The software can help programs identify areas where they are less efficient and then set goals for improvement.

7. Sustainability.

The program's sustainability can be demonstrated by having an ongoing plan for covering program expenses. This may include a recurring line item in the state or municipal budget, a mechanism for collecting Medicaid reimbursements, or recurring grant funding. Some state agencies may enter into creative partnerships with community groups or funders to sustain the program. For more information on sustainable and substantial school sealant programs

refer to the Children’s Dental Health Project (CDHP) “[Dental Sealants: Proven to Prevent Tooth Decay](#)” pages 14-16.

II. Objectives, Guidelines & Recommendations from Authoritative Sources

Objectives.

Table 3: Healthy People 2020 Oral Health Objective		
OH-12: Increase the proportion of children and adolescents who have received dental sealants on their molar teeth.²¹		
Objective	Baseline*	Target
12.1: Increase the proportion of children aged 3-5 years who have received dental sealants on one or more of their primary molar teeth	1.4 % of children aged 3-5 years received dental sealants on one or more of their primary molars in 1999–2004	1.5%
12.2: Increase the proportion of children aged 6-9 years who have received dental sealants on one or more of their permanent first molar teeth	25.5 % of children aged 6-9 years received dental sealants on one or more of their first permanent molars in 1999–2004	28.1%
12.3: Increase the proportion of adolescents aged 13-15 years who have received dental sealants on one or more of their permanent molar teeth	19.9 % of adolescents aged 13-15 years received dental sealants on one or more of their first permanent molars and one or more second permanent molars in 1999–2004	21.9 %
*Data Source: National Health and Nutrition Examination Survey (NHANES) , CDC , NCHS ⁴		

Sealant programs focus on permanent molars because caries risk on other teeth with pits and fissures is considerably lower.³ Although sealants can be placed on the pits and fissures of children’s premolars, maxillary incisors and primary molars, the situations in which such use would be appropriate may be limited.

Guidelines and Recommendations: In 2009, CDC and a workgroup of recognized experts in sealant research, practice, and policy, and experts in caries assessment, prevention, and treatment published guidelines for sealant use in school-based programs.⁸ These guidelines are based on current scientific evidence and provide guidance in planning, implementing and evaluating school-based sealant programs (Table 4).

Table 4: Recommendations for School-based Sealant Programs	
Topic	Recommendation
Indications for sealant placement	Seal sound and non-cavitated pit and fissure surfaces of posterior teeth, with first and second permanent molars receiving highest priority.
Tooth surface assessment	Differentiate cavitated and non-cavitated lesions. <ul style="list-style-type: none"> ○ Unaided visual assessment is appropriate and adequate. ○ Dry teeth prior to assessment with cotton rolls, gauze, or, when available, compressed air. ○ An explorer may be used to “gently” confirm cavitation (i.e., breaks in the continuity of the surface); do not use a sharp explorer under force. ○ Radiographs are unnecessary solely for sealant placement. ○ Other diagnostic technologies are not required.
Sealant placement and evaluation	Clean the tooth surface. <ul style="list-style-type: none"> ○ Toothbrush prophylaxis can be used. ○ Additional surface preparation methods, such as air abrasion or enameloplasty, are not recommended. ○ Use a four-handed technique, when resources allow. ○ Seal teeth of children even if follow-up cannot be ensured.

- Evaluate sealant retention within one year.

In 2014, the Children’s Dental Health Project released “Dental Sealants: Proven to Prevent Tooth Decay.”²² In this report they recommend:

- The convening of a School Sealant Program (SSP) Sustainability Work Group to collaboratively review available information and recommend or develop new strategies for inclusion in the ASTDD Best Practice Approaches and new resources, as appropriate, in existing authoritative Program Guidance (e.g., through the American Association of Community Dental Programs’ [AACDP] *Seal America* manual).
- The convening of an expert SSP Design and Operations Work Group, primarily to update program planning guidelines from the 1994 Workshop on Guidelines for Sealant Use that were not addressed in the CDC’s 2009 “Updated Recommendations and Reviews of Evidence” and have not been revisited since.
- The convening of an expert SSP Facilitators and Barriers Work Group to review and analyze federal and state policies that may facilitate or act as barriers to SSPs, with input from oral health, public health and public finance policy experts.

III. Research Evidence

The Community Preventive Services Task Force recommends school-based dental sealant programs based on strong evidence of effectiveness in preventing caries in children.⁶ A 2013 Cochrane Collaboration review of sealant studies found that sealant placement on the occlusal surfaces of the permanent molars in children and adolescents reduces caries by 81% when compared to no sealant when followed up to two years.^{6,17}

The Community Guide (2013) found that the adjusted median decrease in caries on the occlusal surfaces of posterior teeth in children due to sealant placement was 40%. School-based sealant programs become more cost-effective as the caries risk of the targeted students increases.^{23,24,25} For programs targeting high-risk schools, sealing all children offers higher cost-savings than trying to identify and seal only high-risk children.²⁶ In schools where as few as 20% of students are high-risk, delivering sealants to all children improves oral health outcomes at a small cost (8 cents per cavity-free month per tooth).²⁷ School-based sealant programs can also reduce racial, ethnic and economic disparities in the prevalence of dental sealants.^{8,28}

IV. Best Practice Criteria

For the best practice approach of **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 program delivers services to large numbers of high-risk children with susceptible permanent molar teeth.
- The program maintains a quality assurance system that includes technical quality (the sealants placed have a high rate of retention) and appropriateness (the children receiving sealants are at high caries risk).

2. Efficiency:

- The program uses the least expensive personnel permitted by state laws to screen children and deliver dental sealants with adequate training and quality assurance.
- The program collects data and analyses the data to demonstrate program efficiencies and program cost-effectiveness.

3. Demonstrated Sustainability:

- The program demonstrates sustainability by establishing a track record or a reasonable plan for covering program expenses.

4. Collaboration/Integration:

- Collaborative partnerships are established to administer and sustain the program.

5. Objectives/Rationale:

- The program’s goals and objectives are linked to the state and/or national oral health goals and objectives.

V. State Practice Examples

During the first phase of the ASTDD Best Practices Project, states submitted descriptions of their successful practices to share their experiences and implementation strategies. The following practice examples illustrate various elements or dimensions of the best practice approach for **School-based Dental Sealant Programs**. These reported success stories 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 the links of the practice names) and adapt ideas for a better fit to their states and programs.

A. Summary Listing of Practice Examples

In FY 2013-2014, five states updated practice descriptions of their **school-based dental sealant programs** to the ASTDD Best Practices Committee and six states provided new submissions. These programs illustrate substantial elements of the model school-based sealant program described in Section I-C. See **Figure 1**. Each practice name is linked to a detailed description report.

Figure 1.

State Practice Examples of School-based Dental Sealant Programs			
Item	Practice Name	State	Practice #
1	Arizona Dental Sealant Program	AZ	04006
2	Cost Study of Colorado School-based Dental Sealant Programs	CO	07005
3	Georgia’s State School-based Dental Sealant Program	GA	12006
4	Illinois Dental Sealant Grant Program	IL	16004

5	Kansas School Oral Health Programs	KS	19014
6	SEAL! Michigan School-based Dental Sealant Program	MI	25007
7	Southern Nevada Dental Initiative-Future Smiles School-based Prevention Program	NV	31008
8	New Mexico School-linked Dental Sealant Program	NM	34001
9	The Ohio Department of Health Dental School-based Sealant Program	OH	38002
10	Oregon School-based Dental Sealant Program	OR	40007
11	Wisconsin Seal-A-Smile	WI	56004

B. Highlights of Practice Examples

AZ [Arizona Dental Sealant Program](#) (Practice #04006)

The Arizona Department of Health, Bureau of Women's and Children's Health, Office of Oral Health has administered the Arizona Dental Sealant Program since 1987. This school-based dental sealant program targets children in 2nd and 6th grades attending eligible schools in Arizona. Eligible schools are public and charter schools with a high proportion of students participating in the National School Lunch Program (free and reduced lunch program). All children in 2nd and 6th grade attending eligible schools are entitled to receive a dental screening; those who are uninsured, Medicaid and SCHIP beneficiaries, covered by Indian Health Services or by a state-funded primary care health care program and do not have private dental insurance also qualify for dental sealants. Counties and individual providers are contracted by the state Office of Oral Health to implement the program.

CO [Cost Study of Colorado School-based Dental Sealant Programs](#) (Practice #07005)

The Cost Study of Colorado School-based Sealant Programs (SBSP) was designed to analyze existing SBSP utilization data, recorded in the using the Sealant Efficiency Assessment for Locals and States (SEALS) software, collect and analyze SBSP cost information, and use the SEALS and cost data to develop an economic model to estimate potential cost savings associated with SBSP implementation during the 2010-2011 academic year. Researchers from the Colorado School of Public Health at the University of Colorado Denver conducted the work. The project totaled \$97,855 and the work was conducted over a 20.5 month period (4/15/2010 - 12/31/2011). The funding included indirect costs billed as part of the university contract.

GA [Georgia's State School-based Dental Sealant Program](#) (Practice #12006)

The Georgia dental sealant program is a school-based program designed to provide eligible students with dental sealants on their first and second permanent molars to prevent tooth decay. The Georgia Third Grade Oral Health BSS, in 2011, found 52% of 3rd grade children in Georgia have a history of tooth decay; 19% have untreated tooth decay; only 37% of 3rd grade children in GA have protective sealants on their 1st permanent molars.

The Georgia Oral Health Prevention Program (GOHPP) provides funds to support the School-Based Sealant Program (S-BSP) targeting high-risk schools, those with large proportions of students from families with low-income. In 2009, 45 of the state's sealant programs were funded by the GOHPP and approximately 3000 sealants were placed on schoolchildren. The

GOHPP funds originated from the Maternal and Child Health Block (MCHB) grant as well as state general funds.

- IL [Illinois Dental Sealant Grant Program](#) (Practice #16004)
The **Dental Sealant Grant Program** (DSGP) assists Illinois schoolchildren who are most at risk for dental caries by providing granting funds, technical assistance and training to public health departments and to other service providers to develop and to implement community-based oral health programs. This school-based/linked program includes: preventive oral health care, oral health education and case management to dental homes. It has been the catalyst for expanding community-based oral health programs throughout the state. It is an essential component to a continuum of oral health care focusing on children and their families who are at the most risk for dental disease. In FY 13, the DSGP currently exists in 72 of the 102 counties in the state and serves approximately 180,000 children placing over 400,000 sealants annually. Since the program's inception in 1986, there more than 1 million children have been seen and more than 2 million sealants placed.
- KS [Kansas School Oral Health Programs](#) (Kansas School Screening Program and Kansas School Sealant Program) (Practice #19014)
Kansas has two school oral health programs, the Kansas School Screening Program and the Kansas School Sealant Program, that are administered by the Bureau of Oral Health (BOH). The state has a law that requires each child to have an annual "dental inspection." In 2007 the Bureau of Oral Health received a state foundation grant to create a standardized screening protocol and an online data collection system. The protocol mimics the Basic Screening Survey and uses volunteer dental professional screeners to collect and input the screening data. The Screening Program provides the Bureau with school, county and statewide data on children K-12. In the 2011-2012 school year the Screening Program was in 46% of all Kansas public schools. A searchable database of the oral health data is publically available at the Bureau's website.
- MI [SEAL! Michigan School-Based Dental Sealant Program](#) (Practice #25007)
The Michigan Department of Community Health's SEAL! Michigan dental sealant program works to prevent dental disease through prevention. SEAL! Michigan provides dental sealants, fluoride varnish, and oral health education to students in Michigan in their school settings. By utilizing Registered Dental Hygienists who travel to schools to provide prevention services onsite, cost saving is realized. The SEAL! Michigan program delivers dental sealants, fluoride varnish, and oral health education to children for less than \$100 per student. Since the inception of the dental sealant program in 2007, thousands of children have received dental sealants. For the 2009-2010 school year, the program served 85 schools, screened 3,029 students and 214 students with special needs, and provided 11,426 sealants to 1,853 students. Surveys in 2006 and 2010 showed an increased in percentage of 3rd grade children with dental sealants, from 23.3% to 26.4%, closer to reaching the Healthy People 2020 target of 28.1%.
- NV [Southern Nevada Dental Initiative – Future Smiles School-based Prevention Program](#) (Practice #31008)
Future Smiles is a Nevada non-profit, 501(c) (3) IRS status, school-based prevention program that provides services to children who attend higher-risk schools with greater than 50% free and reduced meal program enrollment (FRL). Children served by the program are from families living well below the federal poverty guidelines (FPL), Medicaid/CHIP enrollees as well as children who are uninsured/underinsured living in Southern Nevada. All at-risk children enrolled at the schools are eligible for services.
- NM [School Based Dental Sealant Program](#) (Practice #34001)
The New Mexico Department of Health (DOH), Office of Oral Health (OOH) administers a school-based dental sealant program that provides oral health education, dental screenings, and dental sealant applications on first and second molars. The dental sealant program was developed to provide preventive services for school children to reduce tooth decay, since many low-income children have limited or no access to preventive dental care. In rural areas, all elementary school children are eligible to participate in the dental sealant program. In urban areas, the services are limited to the first, second and third grade students. The program is supported by state staff and by contracted private dental providers. Program services are offered at no cost

to the parents or guardians and to participating schools. Elementary schools qualify for the program if they have at least 50% or more of its student population on the free and reduced school lunch program. FY 12 the State of New Mexico allocated an estimated \$681,499.00 general fund for the state dental sealant program. For the 2012 school year: 6,254 students participated in the program with a total of 19,075 molars being sealed.

- OH [The Ohio Department of Health Dental School-Based Sealant Program](#) (Practice #38002)
The Ohio Department of Health's (ODH) School-based Oral Health Program provides grants to support school-based sealant programs (SBSPs) targeting higher-risk schools, those with large proportions of students from families with low-incomes. In 2012, 18 of the state's 21 SBSPs were funded by ODH and provided sealants to 25,321 schoolchildren. The ODH grant funds originate from Ohio's Federal Maternal and Child Health (MCH) Block Grant. In 2010, a HRSA Oral Health Workforce grant supported the expansion of SBSPs. Grantee agencies include: local health departments, school systems, private not-for-profit agencies, and hospitals. Findings from the ODH's 2009-10 oral health survey of schoolchildren indicate that SBSPs, targeted to groups at higher-risk for dental caries and least likely to receive regular dental care have substantially increased sealant prevalence and reduced disparity in schools reached by the program. The prevalence of sealants among third grade students in schools with dental sealant programs is approximately 1.5 times greater than for students in schools without sealant programs. Just over 50 percent of all Ohio third graders have at least one or more sealants on their permanent molar teeth, meeting the HP2010 objective regardless of racial group or income. In 2013, the ODH began implementing a pilot collaboration between two safety net dental care programs and SBSPs in Northeast Ohio to provide follow-up care to students identified as needing dental treatment. As part of the ODH Quality Assurance Plan, the ODH initiated formalized biennial "check-in" calls to discuss with SBSPs their progress toward meeting ODH benchmarks and their sealant targets for the year.
- OR [Oregon School-based Dental Sealant Program](#) (Practice #40007)
The **Oregon Health Authority's (OHA's) Dental Sealant Program (DSP)** targets schools where at least 50% of the students are eligible for the Federal Free-and-Reduced Lunch Program. In the participating schools, all 1st and 2nd graders with parental permission receive a screening, and sealants are placed when appropriate (1st-5th graders in very small schools). Children with immediate dental needs are referred for care through coordination with the school nurse. Local resources such as Coordinated Care Organizations (Oregon's Medicaid program), Dental Care Organizations, and community health clinics that offer dental services are utilized.
- WI [Wisconsin Seal-A-Smile](#) (Practice #56004)
The Wisconsin Seal-A-Smile (SAS) school-based dental sealant program began providing dental sealants to low-income children across the state of Wisconsin in 1999. The Wisconsin Department of Health Services (DHS) has provided ongoing funding for the SAS program since its inception. DHS, in collaboration with Children's Health Alliance of Wisconsin (Alliance), provides program support and monitors all aspects of the school-based dental sealant program. Local programs apply annually for mini-grants to support their dental sealant programs. Local public health departments, community health centers, hospitals, school districts, dental and dental hygiene schools, independent dental hygienists and dental clinics are the recipients of these grants ranging in size from \$1,000 to \$75,000.

VI. Acknowledgements

This updated report is the result of efforts by the ASTDD Best Practices Committee and the ASTDD School and Adolescent Oral Health Committee to identify and provide information on developing successful practices that address the oral health care needs of school-aged children and adolescents.

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VII. Attachment

Strength of 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. The Committee evaluated evidence in four categories: research, expert opinion, field lessons and theoretical rationale. Although all best practice approaches reported have a strong theoretical rationale, the 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.

<u>Promising</u>				<u>Proven</u>	
<u>Best Practice Approaches</u>				<u>Best Practice Approaches</u>	
Research	+			Research	+++
Expert Opinion	+			Expert Opinion	+++
Field Lessons	+			Field Lessons	+++
Theoretical Rationale	+++	⇒	⇒	Theoretical Rationale	+++

Research

- + A few studies in dental public health or other disciplines reporting effectiveness.
- ++ Descriptive review of scientific literature supporting effectiveness.
- +++ Systematic review of scientific literature supporting effectiveness.

Expert Opinion

- + An expert group or general professional opinion supporting the practice.
- ++ One authoritative source (such as a national organization or agency) supporting the practice.
- +++ Multiple authoritative sources (including national organizations, agencies or initiatives) supporting the practice.

Field Lessons

- + Successes in state practices reported without evaluation documenting effectiveness.
- ++ Evaluation by a few states separately documenting effectiveness.
- +++ Cluster evaluation of several states (group evaluation) documenting effectiveness.

Theoretical Rationale

- +++ Only practices which are linked by strong causal reasoning to the desired outcome of improving oral health and total well-being of priority populations will be reported on this website.

VIII. Resources

- 1) [Seal America](#)
- 2) [CDC School-Based Dental Sealant Programs](#)
- 3) [NIDCR - Sealants](#)
- 4) [Arkansas PANDA Program](#)
- 5) [Maryland - Guidelines & Operations Manual](#)
- 6) [Ohio – School-Based Dental Sealant Program Manual](#)
- 7) [OSAP – Portable and Mobile Oral Health Settings References and Resources](#)
- 8) [Confidentiality in School-Based Health Services: Understanding HIPAA & FERPA](#)
- 9) [ADA – Pit-and-Fissure Sealants](#)
- 10) [CDHP – Dental Sealants: Proven to Prevent Tooth Decay](#)
- 11) [CDHP – School-Based Dental Sealant Programs: Recommendations](#)

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