



Dental Public Health Activity Descriptive Report

Practice Number: 38002
Submitted By: Ohio Oral Health Section, Bureau of Community Health Services and Patient-Centered Primary Care
Submission Date: January 2002
Last Updated: January 2014

SECTION I: PRACTICE OVERVIEW		
Name of the Dental Public Health Activity: The Ohio Department of Health School-based Dental Sealant Program		
Public Health Functions: Assurance – Population-based Interventions Assurance – Building State and Community Capacity for Interventions Assurance – Program Evaluation for Outcomes and Quality Management		
Healthy People 2020 Objectives: OH-1 Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth OH-2 Reduce the proportion of children and adolescents with untreated dental decay OH-8 Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year OH-12 Increase the proportion of children and adolescents who have received dental sealants on their molar teeth		
State: Ohio	Federal Region: East Region V	Key Words for Searches: School-based program, dental sealants, prevention, children services
Abstract: <p>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.</p>		

Contact Persons for Inquiries:

Shannon L. Cole, RDH, BS, School-based Oral Health Program Coordinator, Oral Health Section Bureau of Community Health Services and Patient-Centered Primary Care, Ohio Department of Health, 246 N. High Street, Columbus, OH 43215
Phone: 614-466-4180, Fax: 614-564-2421, Email: Shannon.Cole@odh.ohio.gov

Carrie Farquhar, BSDH, Administrator, Oral Health Section, Bureau of Community Health Services and Patient-Centered Primary Care, Ohio Department of Health, 246 N. High Street Columbus, OH 43215
Phone: 614-466-4180, Fax: 614-564-2421, Email: Carrie.Farquhar@odh.ohio.gov

SECTION II: PRACTICE DESCRIPTION**History of the Practice:**

School-based dental sealant programs began in Ohio during the mid-1980's expanding from a single demonstration program in Cincinnati in 1984 to 21 programs in 2012. The ODH began expanding beyond the demonstration grant in 1987; and, funded 18 of the state's 21 sealant programs in 2012. Several of these programs serve multiple, primarily Appalachian, counties.

Justification of the Practice:

Dental caries (tooth decay) remains one of the most common chronic diseases of childhood. When properly placed, dental sealants are almost 100% effective in preventing caries on the chewing surfaces of first and second permanent molar teeth. However, sealants remain underused, particularly among children from low-income families and from racial/ethnic minority groups. While all groups achieved the HP2010 objective, some gaps still remain by income and race/ethnicity. Despite 25 years of providing dental sealants through SBSPs, the 2009-10 survey revealed that nearly 50% of third graders still do not have one or more dental sealants.

Inputs, Activities, Outputs and Outcomes of the Practice:

In 2012, the ODH Sealant Grant Program funded 18 SBSPs. The 18 ODH funded combined with three locally funded programs serve over half of all eligible schools in Ohio. The ODH School-based Oral Health Program provides grants on a competitive basis every three years with annual non-competitive continuation applications for the second and third years of each grant cycle. Funding levels are determined using standards that are based on experience (see Budget Estimates and Formulas below). Grantee agencies include: local health departments, school systems, private not-for-profit agencies, and hospitals. The grants support SBSPs targeting schools with large proportions of higher-risk students (those from low-income families). A typical funded sealant program is a school-based program, operates September-June (during the school year), uses portable dental equipment, targets 2nd and 6th grades, requires parental consent and utilizes dental hygienists working with dental assistants to place sealants. Dental sealant program staff must receive training at least once a year on infection control principles and practices specific to their portable dental environment. Additionally, all program personnel are required to complete the [School-Based Dental Sealant Programs](#) distance learning curriculum available at www.ohiodentalclinics.com to ensure that staff have a thorough understanding of the history, operations and underlying principles of this program. The curriculum provides guidelines for infection control in school-based programs, details appropriate tooth assessment and selection for dental sealants, reviews the dental sealant application process and provides specific operational requirements for ODH-funded sealant programs.

The ODH conducted an analysis of the common practice of targeting higher-risk schools (based on percentage eligible for the school meal program) in order to reach higher-risk children and determined

that targeting higher-risk schools was an effective and efficient method for targeting higher-risk children.¹ In another analysis of program and oral health survey data, the ODH established a benchmark of 40% eligible for the Free/Reduced Price Meal Program (FRPMP) to identify *higher-risk schools*, a change from the previous 50% benchmark. The analysis provided two reasons to make this change.² First, children at schools with more than 40% eligible for the Free/Reduced Meals program (<185% of federal poverty level) had significantly more dental disease than schools with less than 40% eligible for the meal program. Second, the number of higher-risk children per school is significantly greater than the schools with less than 40% eligible for the meal program. ODH data also indicated that sealant prevalence among higher-risk children at Ohio schools with SBSPs is one and a half times that of their counterparts at schools with no SBSP (61% vs. 46%, respectively).³ The programs follow up on children roughly a year later by screening sealant program participants in the 3rd and 7th grades. Sealants are placed on newly erupted teeth, or are replaced if not retained from the previous year.

The ODH's statewide oral health survey of Ohio schoolchildren provided an opportunity to assess the impact of the sealant programs. The survey determined the prevalence of dental sealant use among third grade students from schools with and without sealant programs during the 2009-10 school years. The results of the survey indicated that Ohio's targeted, school-based dental sealant programs substantially increase the prevalence of dental sealants and reduce disparity. 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.

Budget Estimates and Formulas of the Practice:

In 2012, over \$300,000 in HRSA Workforce Grant monies and \$600,000 in Maternal and Child Health Block Grant funds were used to support SBSPs. Annual grant awards are based on the number of students the program anticipates receiving sealants through the program, consistent with benchmarks established over the 25-year history of the program. This funding approach is in contrast to retrospective reimbursement using vouchers for children who actually receive sealants. Funds pay for personnel, travel, supplies, equipment, etc.

Applicant agencies submit detailed budgets which include itemized estimates of costs and revenues. ODH then identifies funding gaps and awards grant funds based on costs, revenues and funding gaps for each grantee.

Local agencies that operate SBSPs with ODH funding, bill Medicaid for children who have coverage and use ODH grant funds for other children. In CY 2012, program-wide, almost two-thirds of SBSP costs were covered by the ODH grant (\$44/child) and just over one-third by local project income derived from Medicaid reimbursement (\$26/child). Based on a well-known national fee survey, 50th percentile charges in the private sector for four dental sealants would be \$187/child⁴.

Lessons Learned and/or Plans for Improvement:

School-based programs are a very effective approach for identifying and accessing students who are most likely to benefit from sealants. ODH has supported other models, such as transporting the students to a dental school to receive sealants (school-linked) and found the participation rates much lower. The school-based approach is least disruptive to the schools and makes it easy for the parents. In 2012:

41% of parents provided written consent;

¹ Siegal MD, Detty AMR. 2010. Do school-based dental sealant programs reach higher risk children? J Public Health Dent <http://onlinelibrary.wiley.com/doi/10.1111/j.1752-7325.2009.00162.x/abstract>

² Siegal MD, Detty AMR. 2010. Targeting school-based sealant programs: who is at "higher risk?" J Public Health Dent

³ The *Make Your Smile Count* Oral Health Survey was an open-mouth survey of 14,959 children at 377 randomly selected schools, conducted by the Ohio Department of Health.

⁴ American Dental Association, Survey Center, *2012 Survey of Dental Fees*.

86.8% of children with consent were screened, of whom
87.4% received sealants (most of those who did not receive sealants were absent); and,
69% were screened for follow up.

SBSPs are required to report to ODH the number of students identified as needing follow-up dental treatment. A letter is sent home notifying parents of their child's need for dental treatment and offer assistance finding a dentist if the family does not have a dental home. It is left up to the parent to initiate the follow-up for their child to get dental treatment. In CY 2011, 5,322 (24%) children in Ohio SBSPs target grades (grades 2 and 6) were identified as needing follow-up dental treatment. Our data indicate that upon being screened for follow-up in CY 2012, 19% of children screened needed dental treatment⁵. While these are not necessarily all the same children, typically, SBSPs see about 77% of the children screened in grades 2 and 6 the following year in grades 3 and 7. This indicates that many children in SBSPs are not getting follow-up dental treatment completed.

Over the past 10 years SBSP participation has declined from 60% to 41%. This was partly the result of "competing" oral health programs serving the same schools. Additional oral health programs, some public health and some entrepreneurial, have approached schools that were traditionally served by ODH-funded sealant programs and offered their services. In some cases the school administration chose to participate in both programs, but participation had been low in these schools because parents did not provide consent for their children to participate in both programs. In other cases school administrators elected to go with another oral health program, leaving the ODH-funded programs to find replacement schools that qualified to participate based on our school selection criterion.

In an effort to increase participation and understanding for schools and parents, two ODH sealant programs coordinate activities with two school-based safety net dental care programs: Ronald McDonald Care Van at University Hospitals in Cleveland and Humility of Mary Health Partners Foundation- Smile Station in Youngstown. The safety net dental care programs and school-based sealant programs are working collaboratively to present their programs to schools as one, single program with a combined consent form and shared records. The mobile dental care programs will provide follow-up dental care for children served by the school-based dental sealant programs in selected schools. The ODH hopes to collaborate in a similar fashion with public health mobile dental care programs and SBSPs in other areas of the state in the future. The ODH is also implementing biennial "check-in" calls to funded SBSPs. These calls will occur mid-year and year-end as part of the ODH Quality Assurance Plan for SBSPs. These calls will provide an opportunity for open dialogue between the funded SBSPs and ODH, with a focus on progress toward meeting the program's goals.

Available Information Resources:

1. Seal America: The Prevention Invention, school-based dental sealant program manual, 2012, National Maternal & Child Oral Health Resource Center.
2. Seal in a Smile, videotape, brochure, bookmarks and posters designed for use by school-based dental sealant programs. National Maternal and Child Oral Health Resource Center Website: <http://www.mchoralhealth.org>
3. The [School-based Dental Sealant Program \(S-BDSP\) Manual](#) provides information and clearly states expectations of, and standards for; ODH-funded S-BSPs. ODH-funded S-BSPs must comply with the requirements in this manual.
4. School-Based Dental Sealant Program distance learning curriculum National Maternal and Child Oral Health Resource Center, Georgetown University and the Ohio Department of Health. <http://www.ohiodentalclinics.com/distancelearning.html>

⁵ Not all children screened in target grades are screened for follow-up the next year. Thus, children screened for follow-up in CY2012 does not represent the entire population of children screened in target grades in CY2011

SECTION III: PRACTICE EVALUATION INFORMATION

Impact/Effectiveness

How has the practice demonstrated impact, applicability, and benefits to the oral health care and well-being of certain populations or communities (i.e., reference scientific evidence, outcomes of the practice and/or evaluation results)?

Under the conditions of school-based sealant programs, most public agencies do not have the capacity to evaluate program impact in terms of caries reduction. Following extensive review of published evidence, the Task Force on Community Preventive Services recommended school-based and school-linked sealant programs for prevention of dental caries (MMWR November 30, 2001). Ohio evaluates impact in terms of increasing sealant prevalence. Periodic surveys in Ohio have documented steady increases in the overall prevalence of dental sealants among children aged 8 years, from 11% during 1987-1988 to 26% during 1992-1993 to 30% during 1998-1999 to 43% during 2004-05 to 50% during 2009-10. 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.

Efficiency

How has the practice demonstrated cost and resource efficiency where expenses are appropriate to benefits? How has the practice demonstrated realistic and reasonable staffing and time requirements? Provide unit cost analysis or cost-benefit analysis if appropriate.

The Ohio program is a relatively efficient approach for delivering sealants to higher-risk children. Each sealant team provides sealants for 15-19 students per day. The average sealant program cost per child receiving sealants is \$70 (typically 4 sealants placed), as compared to Ohio Medicaid (\$88) reimbursement rates and private practice fees (approximately \$187) for the same service. Students served by sealant programs receive an average of four sealants each. Most programs serve 500 to 2,000 students; many cover several counties, which keep administrative costs to a minimum.

Demonstrated Sustainability

How has the practice showed sustainable benefits and/or how has the practice been sustainable within populations/communities and between states/territories? What mechanisms have been built into the practice to assure sustainability?

Ohio sealant programs require subsidy, usually from ODH and sometimes from local government, United Ways or charitable foundations. Sealant programs target schools with a large proportion of higher-risk students. Individual students are not singled out for the program. Students from families with dental insurance or families with no insurance (and not eligible for Medicaid) are not asked to pay for the service. Therefore, this model relies upon ongoing subsidy, largely sustained, year-to-year, by the State Health Department's political will to prioritize funding for this purpose.

Collaboration/Integration

How has the practice built effective partnerships/collaborations among various organizations and integrated oral health with other health projects and issues? What are the traditional, non-traditional, public and private partnerships/collaborations established by the practice for integration, effectiveness, efficiency and sustainability?

The program creates inherent partnerships with school personnel and offers potential for other community partnerships. In 2013, new partnerships have developed with two Northeast Ohio safety net dental care programs: Ronald McDonald Care Van at University Hospitals in Cleveland and Humility of Mary Health Partners Foundation- Smile Station in Youngstown. The safety net dental care programs will provide follow-up dental care for children served by the school-based dental sealant programs in selected schools.

Objectives/Rationale

How has the practice addressed HP 2020 objectives, met the National Call to Action to Promote Oral Health, and/or built basic infrastructure and capacity for state/territorial/community oral health programs?

The Ohio school-based sealant program has met the HP 2010 objective of increasing to 50% the proportion of children aged 8 years that have received dental sealants on their first permanent molar teeth. Furthermore, the Ohio model addresses disparity elimination, a major focus of Healthy People 2010.

The ODH's goal for the statewide dental sealant program is to efficiently apply high quality dental sealant to as many students from high risk schools as possible. Each grantee is required to identify their program goals in the form of Specific, Measurable, Attainable, Realistic & Time-Phased (SMART) Objectives using numbers specific to their program.

Program data are reported quarterly and at the end of the program year. ODH uses an Excel data base and generates Crystal reports that compare grantee performance with program benchmarks. The School-Based Oral Health Services Program team reviews the quarterly and year-end summary reports to monitor program progress and identify needs for corrective action.

Extent of Use Among States

Describe the extent of the practice or aspects of the practice used in other states?

ASTDD State Synopsis showed that in 2012, 29 states and 3 territories have community dental sealant programs. The states include: AL, AZ, CO, GA, IL, IN, IA, KS, KT, ME, MA, MO, NB, NH, NJ, NM, NY, NC, ND, OH, OK, TX, UT, VT, VA, WA, WV, SI, and WY. The territories include N. Mariana Islands, Puerto Rico and Republic of Palau.