Dental Public Health Activities & Practices

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SECTON I: PRACTICE OVERVIEW

Name of the Practice:
The Ohio Department of Health School-Based Dental Sealant Program

Public Health Functions:
Assurance – Population-based Interventions
Assurance – Building Linkages and Partnerships for Intervention
Assurance – Building Community Capacity for Intervention
Assurance – Program Evaluation for Outcomes and Quality Management

HP 2010 Objectives:
21-8 Increase sealants for 8 year-olds' first molars and 14 year-olds' first and second molars.
21-1 Reduce dental caries experience in children.

State:	Region:	Key Words:
Ohio	East Region V	Dental sealants, school based program, prevention

Abstract:
The Ohio Department of Health's (ODH) Dental Sealant Program provides grants to support school-based sealant programs targeting high-risk schools, those with large proportions of students from families with low-incomes. In 2002, 19 of the state's 21 sealant programs have been funded by ODH and will provide sealants to approximately over 28,000 schoolchildren. The ODH grant funds originate from the Federal Maternal and Child Health (MCH) Block Grant. In 2000-2002, funding also has been received from tobacco settlement dollars. Grantee agencies include: local health departments, school systems, private not-for-profit agencies, and hospitals. Findings from the ODH's 1998-99 oral health survey of schoolchildren indicate that the school-based sealant programs, targeted to groups at high 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 five times greater than for students in schools without sealant programs. Among third graders, all racial and income groups at schools with sealant programs achieved the Healthy People 2010 sealant objective.

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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 2002. The Ohio Department of Health began expanding beyond the demonstration grant in 1987, funding 19 of the state's 21 sealant programs in 2002. Several of these programs serve multiple, primarily Appalachian, counties. The two largest programs in the state, Columbus and Cincinnati, are fully funded with local resources.

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. A 1998-99 oral health survey of Ohio school children revealed that only 30% of eight-year-olds had one or more sealants.

Administration, Operations, Services, Personnel, Expertise and Resources of the Practice:

In 2002, the ODH Sealant Grant Program funded 19 local sealant programs in the state serving 44 of the 88 counties and reaching two-thirds of potentially eligible elementary schools in the state (approximately over 28,000 children will receive sealants). The Ohio Department of Health (ODH) Sealant 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 school-based sealant programs targeting schools with large proportions of high-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 for the dentists to examine and prescribe sealants for individual children's teeth, and utilizes dental hygienists working with dental assistants to place sealants. Urban schools are eligible for the program if 50% or more of the students are participating in the Free/Reduced Meals program (<185% of federal poverty level). Rural school districts with median family income at or below 150% of the federal poverty level are eligible for the program. Although, ODH encourages grantees to prescribe sealants on an individual risk-basis, there is no indication that programs do so to any significant extent.

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, for 3rd and 7th grade students.

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 1998-99 school year. The results of the survey (see MMWR, August 31, 2001) indicated that Ohio's targeted, school-based dental sealant programs substantially increase the prevalence of dental sealants and reduce disparity. Among students who attended schools with sealant programs and had sealants on their teeth, 70% received them at school. After controlling for race and income, third grade students in schools with sealant programs are 4.8 times more likely to have sealants than students in schools without programs. All racial and income groups of Ohio third graders at schools with sealant programs exceed the Healthy People 2010 objective of 50% prevalence of sealants while no single group at schools without sealant programs meet the objective.

Budget Estimates and Formulas of the Practice:

Average cost/child receiving sealants: $35-$40
Approximately 30 children can be screened per hour
Each team can place sealants for 15-18 children per day.

In 2002, $800,000 in Maternal and Child Health Block Grant funds and $210,000 in tobacco settlement monies were used to support school-based dental sealant programs. Annual grant awards are based on the number of students the program anticipates receiving sealants through the program, consistent with separate urban and rural benchmarks established over the 18-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. Of the MCH funds, $61,000 funded two demonstration programs for assuring restorative dental care for children found to be in need through sealant programs.

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 2001:

63% of parents provided written consent;
99% of children with consent were screened, of whom
88% were treatment planned for sealants, of whom
96% received sealants (most of those who did not receive sealants were absent)

About 30% of the children seen in school-based dental sealant programs are identified as needing dental care. Letters are sent to parents, notifying them of their child's need for dental treatment. When students are screened the following year to check sealant retention, about 25% of them still need dental care. Two programs in Ohio are currently piloting different models designed to help students to receive needed care. One model relies on case managers to make appropriate referrals to dental providers and provide case management services to assure care is received; the other model uses portable dental equipment to provide basic restorative services in the schools. The programs haven't been in place long enough at this time to evaluate their effectiveness.

Available Resources - Models, Tools and Guidelines Relevant to the Practice:

- Seal America: The Prevention Invention, school-based dental sealant program manual, 1995, National Maternal & Child Oral Health Resource Center
- Seal in a Smile, videotape, brochure, bookmarks and posters designed for use by school-based dental sealant programs, Columbus City Health Department, Columbus, Ohio.
- Impact of Targeted, School-Based Dental Sealant Programs in Reducing Racial and Economic Disparities in Sealant Prevalence Among Schoolchildren – Ohio, 1998-1999. MMWR August 31, 2001/ 50(34);736-8.

SECTION III: PRACTICE EVALUATION INFORMATION

Impact/Effectiveness

Does the practice demonstrate impact, applicability, and benefits to the oral health care and well-being of certain populations or communities (i.e., reference scientific evidence and outcomes of the practice)?

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 recently 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. Although the overall prevalence still falls short of the 2010 objective, among targeted schools, all racial and income groups of third graders (and 8-year olds) have achieved or exceeded the objective.

Efficiency

Does the practice demonstrate cost and resource efficiency where expenses are appropriate to benefits? Are staffing and time requirements realistic and reasonable?

The Ohio program is a relatively efficient approach for delivering sealants to high-risk children. Each sealant team provides sealants for 15-18 students per day. The average sealant program cost per child receiving sealants is $35-$40 (typically 4 sealants placed), as compared to Ohio Medicaid ($88) reimbursement rates and private practice fees (approximately $120) for the same service. Students served by sealant programs receive an average of four sealants each. Most programs serve 1,000 to 2,000 students, many cover several counties, which keep administrative costs to a minimum.

Demonstrated Sustainability

Does the practice show sustainable benefits and/or is the practice sustainable within populations/communities and between states/territories?

Ohio sealant programs require subsidy, usually from ODH and sometimes from either local government, United Ways or charitable foundations. Sealant programs target schools with a large proportion of high-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. Medicaid reimbursement is collected for only about 15 percent of the students. 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

Does the practice build effective partnerships/coalitions among various organizations and integrate oral health with other health projects and issues?

The program creates inherent partnerships with school personnel and offers potential for other community partnerships. Often, the local dental community is asked to support the program by providing dental screenings and written treatment plans for the sealant teams to follow. Partnerships may develop in an effort to obtain needed dental care for the children identified as needing care.

Objectives / Rationale

Does the practice address HP 2010 objectives, the Surgeon General's Report on Oral Health, and/or build basic infrastructure and capacity?

The school-based sealant program supports 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 and aged 14 years on their first and second permanent molar teeth. Furthermore, the Ohio model addresses disparity elimination, a major focus of Healthy People 2010.

Extent of Use Among States

Is the practice or aspects of the practice used or observed in other states?

ASTDD State Synopsis showed that in 2000, 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, OK, TX, UT, VT, VA, WA, WV, SI, and WY. The territories include N. Mariana Islands, Puerto Rico and Republic of Palau.