



Dental Public Health Activities & Practices

Practice Number: 04006
Submitted By: Office of Oral Health, Arizona Department of Health Services
Submission Date: May 2002
Last Updated: September 2009

SECTION I: PRACTICE OVERVIEW		
Name of the Practice:		
Arizona 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:		
21-1 Reduce dental caries experience in children. 21-8 Increase sealants for 8 year-olds' first molars and 14 year-olds' first and second molars.		
State:	Region:	Key Words:
Arizona	Southwest Region IX	Dental sealant, prevention, children services, school based school linked program, school services
Abstract:		
<p>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.</p>		
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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

The Arizona Dental Sealant Program (AZDSP) began in 1987. Originally in one county, Maricopa County, the program now serves six of fifteen counties in the state.

Justification of the Practice:

Dental caries (tooth decay) remains one of the most common chronic diseases of childhood. In Arizona, a 1999-2003 survey of children's oral health status showed that 61 percent of Arizona's children ages 6-8 years have tooth decay experience and 38 percent have untreated tooth decay, and 25% percent lack dental insurance. Uninsured children, as well as those covered by Medicaid, have greater levels of untreated dental disease and less access to dental care. (A new oral health survey of Arizona 3rd graders was initiated in January 2009 and updated findings on tooth decay experience and untreated tooth decay will be available in 2010.)

When properly placed and retained, dental sealants are highly effective in preventing tooth decay 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 1999-2003 oral health survey of Arizona school children revealed that 31 percent of 8 year-olds had at least one dental sealant. While this is below the HP2010 target of 50 percent, it represents a significant increase over the 1987-1990 survey which showed only 8 percent of 8 year-olds with dental sealant.

School-based dental sealant programs have been shown to be effective in reducing disparities in prevalence of dental sealants for socially disadvantaged children (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).

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

A Program Manager at the Arizona Department of Health Services, Office of Oral Health (OOH) administers the Arizona Dental Sealant Program (AZDSP). OOH contracts county health departments and individual providers to implement the program. Funding is available through federal grants, private donation funds and reimbursement from the state's Medicaid program.

All public and charter schools are eligible for the program if a high proportion of the students attending the school are enrolled in the National School Lunch Program (the free/reduced lunch program). Each school year, eligible schools are selected based on availability of funding and providers; schools are prioritized from highest to lowest percentage of school lunch enrollment.

The AZDSP schedules schools for dental screenings and dental sealant applications from August through May of each school year. Portable dental equipment is used to deliver care at the schools. Only 2nd and 6th grade students are eligible for the sealant program services and parental consent is required. Program dentists assess and determine the need for dental sealants for each participating child evaluating the individual surfaces of permanent molar teeth only.

A dentist screens approximately 100-120 children in an average school day and prescribes the necessary dental sealants. At the end of the screening day, the school receives a list of children with urgent dental needs. On a subsequently scheduled date, the program dental hygienists, working with dental assistants, place sealants as prescribed at the screening. A dental hygienist can apply sealants to approximately 15-20 students per day.

The OOH requires all providers to be trained and standardized in collecting program data, providing a dental screening, applying sealants and making dental referrals based on local resources. All aspects of the program utilize specific protocols and techniques. While the OOH provides portable dental equipment for most sites to deliver program services, the purchase of all dental supplies and coordination and scheduling of schools is made at the local or county level.

The AZDSP also collects oral health status information utilizing the Basic Screening Survey (BSS) protocol recording data on standard paper forms. This information is processed as follows:

- A findings form is sent home with the child on the day of the screening.
- On the day of the screening, the school receives a list of children with urgent needs.
- All collected data is entered and tabulated at the OOH central office.
- Findings letters notifying parents of their child's need for dental treatment are sent to schools.
- Each school receives a report that includes the number of children served and the oral health treatment needs of individual student. This school report provides a tool for the school nurse/personnel to triage and follow up on needed dental care.
- Data analysis and reporting of program services are generated for the state, county and school levels.

The AZDSP has a quality improvement program focusing on sealant retention, provider satisfaction, school personnel satisfaction, participation and efficiency. The evaluation of sealant retention was integrated into the program since FY 2000-01. Approximately 25 percent of students in 3rd and 7th grades who received sealants when they were 2nd and 6th graders are randomly selected and reassessed for retention of sealants. Analysis of three surface areas on maxillary and two surface areas on mandibular teeth resulted in a 70 percent annual retention rate for fully retained sealants. Since retention of a dental sealant is required to prevent tooth decay, retention rates directly impact the overall effectiveness of the Sealant Program.

In the 2007-2008 school year:

- 10,481 second and sixth grade students in participating schools received a dental screening.
- 7,860 of the children screened received dental sealants.
- Approximately 44 percent of the children screened reported that they did not have dental insurance.
- Approximately 47 percent of the children seen in the school-based dental sealant program were identified as having untreated decay.

A partnership with the Arizona Dental Association was established in 2001 to help recruit dental provider for the AZDSP, especially in areas where OOH has difficulty contracting providers.

Budget Estimates and Formulas of the Practice:

The Maternal and Child Health Block Grant, Arizona's Medicaid program (Arizona Health Care Cost Containment System) reimbursements, and private foundation donations fund the operation of the Arizona Dental Sealant Program. The overall annual budget is approximately \$500,000. The funds are used to pay for staff, travel, supplies, training, equipment, etc. All equipment is owned by the Arizona Department of Health Services but is loaned on a semi-permanent basis to contracted community sites.

Lessons Learned and/or Plans for Improvement:

- School-based programs are an effective approach for identifying and accessing students who are most likely to benefit from sealant placement and least likely to receive them through the private dental care delivery system.
- Standardized data collection is important across counties to monitor oral health status and services delivered.
- Local dental providers are better able to leverage local resources than state staff.
- State legislation enacted in 2002 allows the AZDSP to receive reimbursement for Medicaid enrolled children. This helps sustain and expand the program and reaches Medicaid enrolled children who

are not otherwise likely to obtain this service (approximately 37 percent of the children served by the sealant program are Medicaid/SCHIP insured children).

- Private donation dollars have allowed additional expansion of the program in specific areas of the state.

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

The Arizona Dental Sealant Program Manual provides specific protocols and techniques and includes various program data collection forms.

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)?

Most public agencies do not have the capacity to evaluate program impact in terms of caries reduction. The Task Force on Community Preventive Services recently recommended school-based and school-linked sealant programs for prevention of dental caries (MMWR November 2001).

Arizona evaluates the impact in terms of increasing sealant prevalence. Data from the 1999-2003 statewide children's dental survey showed that 31 percent of 8-year old children had dental sealants. Since the 1987-1990 oral health survey of Arizona school children showed that 8 percent of 6-8 year olds had sealants, it appears that although sealant prevalence falls short of the HP2010 objective, progress in dental sealant prevalence has been demonstrated.

Efficiency

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

- The majority of the program expenditures are spent on clinical staff providing direct patient services versus administrative costs.
- Dentists provide dental assessments at a rate of approximately one per 2 minutes.
- Dental hygienists apply dental sealants under general supervision of a dentist and assisted by a dental assistant (four-handed) at approximately one patient per 15-20 minutes. This increases time efficiency and reduces program cost for staffing.

Demonstrated Sustainability

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

The program was initiated in 1987 and has been sustained for 22 years. In addition, Medicaid reimbursement, which began in fall of 2002, further supports the ongoing sustainability of the program. This change took two years to establish through legislative action, but will ensure the financial stability of the program since approximately 36 percent of the children are Medicaid/SCHIP insured children. This percentage has remained fairly constant over the last 6 years. Private donation funding from local foundations has also helped to ensure additional financial stability.

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 partnerships between the state, counties and local organizations. The local dental sealant program coordinators work very closely with school administrators and school nurses to schedule schools to implement the sealant program. School nurses and county health departments also work collaboratively with local organizations to provide follow-up restorative dental care to participating students. At the community level, partnerships with local dental societies, community clinics and private dentists have been established. At the state level, the program established partnerships between the state Medicaid, Medicaid-managed care companies, Federally Qualified Health Centers (FQHCs), Primary Care Association (PCA), local charitable foundations, and the Arizona Dental Association. Some of these partnerships are responsible for obtaining legislative change to allow reimbursement from the Medicaid managed care organizations to the state health department in order to sustain and expand the program.

Objectives/Rationale

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

The sealant program, a population-based intervention, addresses HP2010 objectives 21-8 and 21-1 to increase the percent of children with sealants and decrease the percent with tooth decay experience. It also addresses reducing health disparities highlighted in the Surgeon General's Report on Oral Health.

Extent of Use Among States

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

The majority of states and territories have school-based and/or school-linked dental sealant programs. The 2008 Synopses of State and Territorial Dental Public Health Programs showed that 39 states reported having dental sealant programs.