



Dental Public Health Activities & Practices

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SECTION I: PRACTICE OVERVIEW

Name of the Practice:

New Mexico School-Based Dental Sealant Program

Public Health Functions:

Policy Development – Use of State Oral Health Plan
 Policy Development – Collaboration of planning and Integration
 Policy Development – Oral Health Program Organizational Structure and Resources
 Assurance – Population-based Program
 Assurance – Access to Care and Health Systems Intervention
 Assurance – Program Evaluation for Outcomes and Quality Management

HP 2010 Objectives:

21-1 Reduce caries experience among children.
 21-8 Increase sealants for 8 year-olds' first molars and 14 year-olds' first and second molars.
 21-12 Increase preventive dental services for low income children and adolescence.

State:

New Mexico

Region:

Southwest
Region VI

Key Words:

School based program, dental sealants, fluoride varnish, prevention, mobile dental services, children services

Abstract:

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. The State of New Mexico allocates an estimated \$400,000 general fund for the state dental sealant program. For the 2007-2008 school year: (a) the state staff screened 4,329 students, and provided 14,435 dental sealants to 118 schools, and (b) the contracted private dental providers screened 1,457 students and provided 4,259 sealants in underserved areas. The National Health and Nutrition Examination Surveys (NHANES) 2007-2008 shows that New Mexico is close to achieving the Healthy People 2010 oral health objective of increasing the proportion of children (the target is to have 50% of 8 years-olds and 14 year-olds who have received at least one dental sealant on their molar teeth).

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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

In 1978, the New Mexico Department of Health (DOH), Office of Oral Health (OOH) began delivering dental sealant services to the state's elementary schools. The school-based dental sealant program provides direct services with OOH staff applying dental sealants to school children. The success of the program is greatly contributed to the partnerships established with the elementary schools across the state.

In 2006, the program further expanded its services by contracting private dental providers to provide dental sealant services in underserved areas. The dental sealant program has now become a substantive part of the school health services in many elementary schools. The Office of School Health will be extending dental sealant services to children in middle schools.

Justification of the Practice:

The use of fluorides and dental sealants prevents dental caries (tooth decay). Optimally fluoridated community water can prevent tooth decay in about 80% of the smooth surfaces of teeth and in 20% of fissured chewing surfaces of the teeth. Dental sealants are more effective in preventing dental caries in fissured surfaces and pits of teeth. If dental sealants are properly applied to newly erupted permanent molars on the chewing surfaces and pits, sealants can be 100% effective in preventing tooth decay in these areas. Benefits of dental sealants begin immediately after application and are effective as long as the sealants are retained. Research has documented the effectiveness of dental sealants in reducing dental decay even when the dental sealants are partially retained. Several studies have shown the combination of fluorides and dental sealants can reduce the incidence of tooth decay up to 85%.

The NM 2006 Oral Health Surveillance Survey reports that 23% of the state's children in 3rd grade have experienced dental caries. NM children from low income families, of a minority racial/ethnic group or an immigrant population, lack dental insurance, or live in dental provider shortage or isolated rural area have higher risk to tooth decay. Many low-income children in NM have limited or no access to preventive dental care. NM is classified as a health care professional shortage state with 0.6 Dentists per 1,000 Population compared to 0.8 nationally in 2008 (stateheal facts.org). Studies have shown that school-based programs are successful in reaching the low-income children and underserved rural areas.

The Task Force on Community Preventive Services recommends school-based and school-linked sealant programs for prevention of dental caries based on a systematic review of scientific evidence (MMWR November 30, 2001). NM's school-based dental sealant program is an evidence-based strategy. Furthermore, the dental sealant program addresses the 2010 Healthy People Oral Health Objectives and supports a national effort to reduce children's caries experience and increase the placement of dental sealants on permanent molars.

Inputs, Activities, Outputs and Outcomes of the Practice:

Program Goal

The goal of the dental sealant program is to prevent dental caries in children's permanent molars.

Program Administration

The dental sealant program is administered through the OOH headquarters and through regional offices located in two of the state's public health districts. The OOH oversees the state staff and contracted private dental providers and coordinates statewide program activities with the providers. Each regional office is responsible for the scheduling and coordination of dental sealant services within their geographic area.

Program Population and Eligibility

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. In rural areas, all elementary school children in grades 1-6 are eligible to participate in the dental sealant program. In urban areas, only children in grades 1-3 are eligible for the program. The dental sealant program offers services at no cost to the parents/guardians and participating schools.

Program Staff and Contractors

The dental sealant program's state staff consists of: 2.5 Full Time Equivalent (FTE) dental hygienists, 3 FTE dental assistants, 2 FTE dental case managers, and 2 FTE dentists. The state staff members form three dental sealant teams. Each team consists of a dentist, a dental hygienist, and a dental assistant and travels to schedule schools to provide screenings and sealants. OOH staff provides dental sealant services through a mobile program with portable equipment. The OOH Program Director provides oversight for the dental sealant program and the collection of client/service data statewide.

Due to limited state staff, OOH has contracted two private dental providers to provide sealant services to schools not reached by the state staff. The contracted private providers conduct dental screenings, apply sealants, and notify parents when a child needs further dental care. The contracted private dental providers deliver sealants at the schools and at a fixed dental facility.

One contracted private provider is able to provide restorative treatment for untreated dental caries using portable dental equipment at the school site. Furthermore, OOH funds three other private dental providers to provide basic dental preventive and restorative care services for children participating in the dental sealant program.

Program Services

For the state staff, program services begin with distributing an educational sealant video to the schools and conducting bilingual oral health education. Bilingual consent forms authorizing treatment, informational pamphlets about the benefits of sealants, and general oral health information are given to the schools for the parents/guardians. Class lists of students are returned to the OOH. OOH retains the students' charts and consent forms from the previous school year, which enables the dental sealant program staff to check and reapply any lost sealants. The program aims to retain all dental sealants placed the previous year.

Consent forms are collected and organized by class list. Dental screenings are then scheduled. The screenings are completed by a licensed dentist who travels to the schools with program staff. The dentist screens the children who have a signed consent form. During the screenings, each child is evaluated to determine their need for sealants. On the same scheduled days, the students previously treated are screened to check for sealant retention. A follow-up letter (along with a toothbrush) is sent home explaining services needed or providing the reason why a child's teeth were not suitable for dental sealants.

After the screenings, a dental sealant team (consists of a dental hygienist and dental assistant) place the sealants. In NM, registered dental hygienists require a dentist's general supervision when applying dental sealants. Certified dental assistants can also place dental sealants under the direct supervision of a registered dental hygienist or licensed dentist. Currently, the dental sealant program has dental assistants that are certified in placing dental sealants. The dental hygienists and dental assistants travel throughout the state providing dental sealant services to participating elementary school children.

After completing the placement of dental sealants, another follow-up letter to the parent/guardian goes home with each child. The letter includes the following information:

- How many sealants were provided,
- The reason why sealants were not provided, if this situation arose,
- Recommendations for further dental treatment, and
- The method to contact the program.

Dental Case Access Program

The State of NM has five public health regions. In two of the regions (Santa Fe and Albuquerque), OOH has established a dental case access program. Each access program has a dental case

manager who works with the dental sealant teams to identify children in the region requiring case management. The dental case access program alerts parents of their children's need to obtain restorative care, assists the child/family to secure a dental home, and helps the children complete their treatment plans.

Program Operation

The current dental sealant program staff has many years of experiences in implementing a school-based dental sealant program and using mobile equipment. Program staff invests efforts to assure efficient operation by addressing the following:

- Make sure that all staff members are familiar with how the portable equipment should be transported, set-up and taken-down prior to bringing services to schools. This helps to work out equipment problems and maintain a long service life for equipment.
- Make sure the school provides adequate space to set up equipment including: (1) the setup area has the proper type and number of outlets for electrical hook-ups, (2) access to running water that is close to the setup area, and (3) easy entry to transport equipment and supplies to the setup area.
- Make sure portable dental equipment and supplies can be transported easily in available vehicles. OOH has three 12-passenger vans to transport equipment, supplies and staff to the schools. Equipment and supplies can be transported and set up easily by two people.

Program Evaluation

The evaluation of the dental sealant program is designed using a goal attainment model. The program consent form requires a signature from a parent/guardian to allow treatment and follow-up for evaluation of care. The program staff checks the retention of the dental sealants placed in the previous school year and evaluates if recommended dental treatment has been completed.

Follow-up has demonstrated that the program has a retention rate of 90% or better. The program monitors retention rates since a retained dental sealant fully protects at-risk tooth surface from tooth decay, averting dental disease, and saving treatment dollars. High sealant retention rate is required for an effective preventive program.

Outputs

For the school year 2007-2008:

- OOH staff screened 4,329, and provided 14,435 dental sealants in 118 schools.
- The contracted private dental providers screened 1,457 and provided 4,259 dental sealants in underserved areas.

Outcomes

The impact of the program is demonstrated by the following:

- Increased dental sealant prevalence has been observed in the four public health districts of the state. The latest NM's Oral Health Survey in 2000 showed that in three of the districts, where the dental sealant program's presence is strong, 47-52% of the 3rd grade students have at least one dental sealant. In comparison, only 19% of 3rd grade students have at least one dental sealant in one district that had minimal presence of the dental sealant program. With recent expansion of the program, the OOH is able to provide more dental sealants services in underserved areas of the state.
- The NHANES report has indicated that NM, in 2007, is close to achieving the Healthy People 2010 oral health objective for increasing the number of children receiving dental sealants by 50%.

Budget Estimates and Formulas of the Practice:

The overall OOH budget is in excess of \$2 million. In SFY 2007, the Legislature and Governor approved an augmentation of \$450,000 to increase the preventive and restorative care services to indigent New Mexicans.

OOH allocates an estimated \$400,000 general fund for the school-based dental sealant program. The funds cover staff salaries (include program dentists, dental hygienists and dental assistants, and temporary staff), supplies, maintenance/repair of portable equipment, travel/gas/vehicles, staff training, and additional contracted dental providers.

Lessons Learned and/or Plans for Improvement:

Lessons learned

- It is critical to have good communication with schools to ensure that there is adequate space for the equipment, students are present for the services, and consent forms have been collected by the schools.
- Clearly communicate the program's expectations to each school; be sure the school nurse understands the program's requirement for space (many schools have limited space) and the length of time needed to complete the sealant services.
- Always have back-up equipment. Since the program requires traveling to schools that are located one to two hours from the home office, time is wasted if there is a need to return to the office for replacement equipment.
- Remain flexible with scheduling screening and treatment days and how to set up in each school.

Plans for improvement

- OOH is planning to develop a new database to better track the dental sealant program services, retention rates, and identify the prevalence of dental caries.
- Increase the number of schools participating in the dental sealant program.

Available Information Resources:

- Wisconsin Dental Sealant Manual – has procedure and protocols for starting and maintaining a school-based dental sealant program.
- "Seal in a Smile" video – distributed by the Columbus Health Department in Ohio educates children about what dental sealants are, how they work, and the process of having dental sealants placed.

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)?

The Task Force on Community Preventive Services recommended school-based and school-linked sealant programs for prevention of dental caries based on a systematic review of scientific evidence. The New Mexico's school-based dental sealant program provided more than 18,000 dental sealants during the 2007-2008 school year. Further, a comparison of three public health districts where the program provides most of its services demonstrated a sealant prevalence of 47-52% among 3rd graders compared to a district minimally served by the program having only 19% of the 3rd graders with sealants.

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.

Studies have shown that school-based programs are successful in reaching low-income children and increasing access to care. Utilization of auxiliary dental staff (i.e. certified and non-certified dental assistants) has made the practice of placing dental sealants very efficient in NM. The dental sealant program is able to deliver more sealants utilizing certified dental assistants without the higher cost of hiring or contracting additional dental hygienists.

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?

The OOH began providing dental sealant services in 1978 to NM elementary school children. The dental sealant program has been in operation for more than 20 years. Program infrastructure includes state funding, employed full-time dental staff, and partnerships with schools across the state. The program has increased its capacity over time, with the latest expansion of services in underserved areas during 2007 (a result of the NM Legislature providing additional funds for preventive and restorative dental services).

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 dental sealant program is a substantive part of the school health services in NM elementary schools. The school officials and personnel (superintendents, principals, school nurses and teachers) are strong partners of the dental sealant program.

Objectives/Rationale

How has the practice addressed HP 2010 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 dental sealant program addresses the 2010 objectives by supporting efforts to reduce children's caries experience and increase the placement of dental sealants on permanent molars.

Extent of Use Among States

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

School-based/school-linked dental sealant programs exist in many states. The 2009 Synopses of State Dental Public Health Programs showed that more than three-fourths (76%) of the states reported having a dental sealant program.

The New Mexico school-based dental sealant program is 100% supported by state funding. The extent of other state dental sealant programs that are entirely supported by state funding is not known.