

Practice Number: 25007
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SECTION I: PRACTICE OVERVIEW		
<p>Name of the Dental Public Health Activity: SEAL! Michigan School-Based Dental Sealant Program</p>		
<p>Public Health Functions: Assurance – Population-based Interventions Assurance – Building Linkages and Partnerships for Interventions Assurance – Building State and Community Capacity for Interventions</p>		
<p>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-7 Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year OH-8 Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year OH-9 Increase the proportion of school-based health centers with an oral health component OH-12 Increase the proportion of children and adolescents who have received dental sealants on their molar teeth</p>		
<p>State: Michigan</p>	<p>Federal Region: Midwest Region V</p>	<p>Key Words for Searches: Dental sealants, SEAL! Michigan, school-based dental sealant program, school-linked dental sealant program, children’s oral health, prevention, population-based intervention, access to oral health care</p>
<p>Abstract:</p> <p>It has been shown that dental sealants reduce tooth decay; reducing dental decay improves the oral health and general well-being of children. 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 2012-2013 school year, the program served 138 schools, screened 4,724 students, and provided 16,731 sealants. There were also 4,227 fluoride applications provided to students seen in the dental sealant program. 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%.</p>		
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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

Sealants are protective coatings placed on the grooved surfaces of teeth to prevent dental disease. The SEAL! Michigan dental sealant program is a school-based program designed to provide students with free dental sealants on their first and second permanent molars. The program originally was known as the Smile! Michigan program and began in 2007 after a year long pilot program in Detroit, Michigan.

Two main factors, dental hygienists practicing under the Public Acts of 2006 (Act No. 161) and a Cooperative Agreement from the CDC Division of Oral Health, came together to make school-based dental sealant programs a reality in Michigan:

- (1) The PA 161 Hygienists: In 2005, the Public Acts of 2005 (Act No. 161) was approved by the 93rd Legislature providing rules in which a dental hygienist may provide preventive dental hygiene services to underserved patients. The law regulates the supervision requirements for a hygienist practicing under PA 161 and states that "dental hygienist may perform dental hygiene services under the *supervision* of a dentist as part of a program for dentally underserved populations in this state conducted by a local, state, or federal grantee health agency for patients who are not "*assigned by a dentist.*" In other words, the patient provided services by a PA 161 hygienist can not be a "*patient of record*" of a dentist. Therefore, for a sealant program, a general dentist no longer needs to be on site for a PA 161 hygienist to place dental sealants.
- (2) CDC Cooperative Agreement: The Center for Disease Control and Prevention (CDC) Cooperative Agreement awarded to Michigan, which greatly assisted with the inception of the statewide sealant dental sealant program. The Cooperative Agreement provided grant funding to build infrastructure that will support preventive programs. Support for the sealant program initially through the Title V Maternal & Child Health funding and currently is through both Title V and the Health Resources and Services Administration (HRSA) grant funding. Michigan has remained competitive among the states in competing for the five year CDC Cooperative Agreement and is currently in their third grant cycle. This has provided time for the SEAL! MI program to grow and strengthen within Michigan.

With the pilot project having demonstrated success, the program was expanded. A Request for Funds Proposal (RFP) was released as a competitive grant process for others within the state to begin local dental sealant programs. The program initially funded grantees one year at a time but changed to three-year award to assist in program sustainability.

Justification of the Practice:

The school-based dental sealant program is important for Michigan given these findings of the Count Your Smiles Survey in 2006 and 2010:

- In 2006, nearly one in ten 3rd grade children in Michigan, 9.6%, have immediate dental care needs with signs or symptoms of pain, infection, or swelling which decreased slightly in 2010 to one in fourteen, 7%. Children lacking dental insurance, children of lower socioeconomic status, and children who had not visited a dentist in the past year were most likely to have immediate dental needs.
- Only 23.3% of 3rd grade children in Michigan had sealants present on first molar teeth in 2006. A comparison of the Count Your Smiles Survey in 2006 to 2010 showed an increase in percentage of 3rd grade children with dental sealants, from 23.3% to 26.4%, still slightly below the Healthy People 2020 goal of 28.1%.
- In 2006, over one in eight parents of 3rd grade children in Michigan, 13.0%, reported their child had a toothache when biting or chewing in the past six months which decreased slightly in 2010 to one in nine parents, 11.3%. Toothaches were more common among children attending schools in the city of Detroit and among children who had difficulty obtaining dental care in the past year.
- In 2006, one in four Michigan 3rd grade children, 25.0%, had untreated dental disease, however in 2010, this increased to 27.1%. Hispanic and African American schoolchildren had

higher rates of untreated dental disease. Lower socioeconomic status and lack of dental insurance were also associated with untreated dental disease.

- In 2006, nearly one in six 3rd grade children, 15.1%, lacked dental insurance – twice the number of Michigan children who lacked medical insurance. In 2010, this number decreased to one in nine, 11.2%. Uninsured children had significantly more dental disease and substantially less access to dental services.
- In 2006, roughly one in nine Michigan 3rd grade children, 11.2%, encountered problems that prevented them from obtaining dental care in the past year this decreased slightly in 2010, to one in eleven, 9.1%. Increased difficulty in obtaining dental care was common among all racial and ethnic minorities as well as children not covered by private dental insurance. Cost and a lack of dental insurance were the two most frequently cited reasons for failure to obtain dental care.
- In 2006, a substantial number of children visited the dentist every year with 84.4% of parents reporting that their child had visited the dentist in the past year. However, in 2010 it decreased to 80.1%. A lack of dental insurance was strongly associated with failing to visit the dentist, particularly among Hispanics.

Inputs, Activities, Outputs and Outcomes of the Practice

The SEAL! Michigan Program is administered and operated under the following parameters:

Funding of Grantees

The Michigan Department of Community Health (MDCH) funds qualifying applicants through a competitive grant process. To assist with sustainability, grantees are funded for a cycle of three years.

Who are Served

The grantees are required to serve schools which have 50% or greater of their student population participating in the Free and Reduced Lunch Program. They are required to serve all first, second, sixth, and seventh grade students who return a positive parental permission slip; schools within Wayne County and the Upper Peninsula are urged to see all grades due to transient populations and extensive travel. Grantees that are located within counties without the Healthy Kids Dental program receive priority (provides a wide range of health care coverage and support services for qualifying pregnant women, babies and children under age 19).

Payment for Sealants

The SEAL! Michigan grantees offer dental sealants to any student who returns a positive parental permission slip, free of charge to the family. The grantees are required to bill any applicable insurance for the dental sealants, but must provide dental sealants to students regardless of the ability to pay or insurance coverage. The additional income from insurance billing assists with sustainability of their program.

Incentives

All grantees are encouraged to provide a small incentive to the students to return a positive permission slip. All grantees are encouraged to provide a teacher incentive to encourage students to return permission slips. Incentives for both teachers and students have drastically improved the student participation in the dental sealant program. It is to the discretion of each grantee to determine the incentives. Student's incentives may be items such as a pencil, tooth shaped silly bands or a child's spin brush; teacher's incentives may be a \$10 gift card, \$25 gift card to host a classroom pizza party or an adult spin brush.

Referrals and Emergent Care

All grantees are required to provide each student in the program with a resource to establish a dental home. The dental home must be within 20 miles of the school attended by the child. If a child presents with urgent dental needs, the grantees must follow-up with the parents, school, teacher, school nurse, and/or student until restorative care is received.

Retention Checks

Grantees are required to perform retention checks on 20% of the students sealed within each program, ideally between six and twelve month time frame. In the event that sealants are found to be fully or partially lost, the sealant will be replaced or repaired. For those grantees who utilize dental hygiene students, each hygiene student checks retention on every student receiving a sealant.

Data

Grantees are required to complete MDCH required data form documents. Documents include a slightly modified SEALS (CDC's Sealant Efficiency Assessment for Locals and States software) Child-Level and Event-Level data collection forms as well as quarterly data forms which report quarterly data for tracking within MDCH. Each grantee also provides their original data sheets to MDCH at the end of the grant year so that data can be entered and analyzed internally at MDCH. Once analyzed, program specific data reports are provided to each grantee annually, as well as the report that encompasses all grantee data per each fiscal year. Additional data tracking by grantees is encouraged, for example, in a dental practice management software program.

Oral health education

All grantees must provide oral health education to parents and students. For education of the children, some of the grantees do classroom or auditorium presentations (this is generally determined by the principal within each school) and others will provide education one on one when a child is screened. Many of the programs give the students a pre-test, provide age specific dental education with a video, laptop computer and headphones, and then administer a post-test after the video. This type of evaluation assures that children are provided with effective oral health education as required by the grant.

Evaluations

All grantees are required to evaluate their programs on a regular basis. Evaluation shall involve the school administration, teachers, parents, and students.

MDCH Dental Sealant Coordinator

The MDCH dental sealant coordinator assists the grantees with their programs throughout the year. This includes technological support, aid in creating forms or documents, brainstorming for solutions to barriers, provision of supplemental information to strengthen their programs (i.e., free posters, literature, brochures, and additional grant opportunities), providing an annual workshop, and developing newsletters. The coordinator conducts quarterly site visits on each grantee.

Communication

The quarterly site visits with each grantee provides face-to-face communication. The site visits take place at a school while students are receiving dental sealants. Time is always set aside to discuss the program strengths and barriers, check current SEALS data, and review the current work plan and budget. Further communication is provided via e-mail and/or teleconference with all grantees at least bi-weekly.

Training

All grantees take a dental sealant training annually and the dental professionals receive three continuing education credits for completion the training. The training is provided to all grantees annually and is developed in Microsoft PowerPoint. All who work in the school-based sealant programs are required to take the dental sealant program training. The course consists of five chapters and takes approximately three hours to complete. The training covers dental sealants within a school-based health center, the latest OSHA and MI-OSHA safety guidelines, and MDCH requirements of the grantees.

Newsletters

Newsletters are developed by the MDCH Coordinator sent out to the grantees to provide informational reminders on the grant, recent information research studies or products, highlights of specific programs' successes, and recognition of sealant program efforts. Newsletters are sent, developed, and disseminated on an as-needed basis.

Workshops

Workshops are held annually over the summer months to provide face-to-face networking, share successes and lessons learned, teach data entry systems, and update clinical and infection control techniques. Workshops are held approximately two months prior to the end of the grant year and grant requirement reminders and updates are provided at that time.

Outputs of the SEAL! Michigan Program

Since the inception of the dental sealant program in 2007, thousands of children have received dental sealants. The programs have grown and serve increased number schools. Some programs are now incorporated within school-based health centers. School administrators have become strong advocates for the programs after observing the benefits and efficiency of the programs. Grantees improve their program's efficiency in use of funding and time. The following are outputs from the 2010-2013 fiscal years:

	2010	2011	2012	2013
Schools served	85	91	132	138
Students screened	3,029	3,432	3,740	4,724
Total sealants placed	11,426	14,448	15,215	16,731
First molars sealed	9,943	12,009	12,533	13,486
Second molars sealed	1,433	2,389	2,553	2,774
Other surfaces sealed	50	50	129	471
Students receiving fluoride varnish	2,412	3,339	3,299	4,227
Students receiving oral health education	8,924	10,005	11,957	12,267
Amount of total grantees	7	10	9	9
Funding from Title V	\$300,000	\$300,000	\$300,000	\$300,000
Funding from Delta Dental	\$0	\$50,000	\$125,000	\$100,000
Funding from HRSA	\$160,000	\$160,000	\$0	\$0
Total funding for SEAL! MI Program	\$460,000	\$510,000	\$425,000	\$400,000

Outcomes of the SEAL! Michigan Program

Program outcomes included:

- The proportion of children with dental sealants increased. A comparison of the Count Your Smiles Survey in 2006 to 2010 showed an increased in percentage of 3rd grade children with dental sealants, from 23.3% to 26.4%.
- The program demonstrated cost effectiveness. Students can receive a screening, sealants, fluoride varnish, and oral health education for less than equivalent services in a private dental office. In addition, the school-based programs also eliminate the costs of transportation and time off work for parents.
- Each continuing grantee expanded into new schools each year. In the first year of the program (2007), approximately 20 schools were serviced by the SEAL! Michigan dental sealant program. Four years later (2010), 85 schools were served. The SEAL! Michigan program is still growing and served 138 schools in the 2012-2013 school year.
- Preventive care expanded. Although not a grant requirement, grantees expanded their preventive services to include fluoride varnish applications. Grantees also applied fluoride varnish to students that did not require sealants; more children received fluoride varnish than dental sealants.
- Number of applications for the competitive grant process increased. There were 13 grant proposals submitted in 2012 for consideration in comparison to 10 grant proposals submitted in 2010 compared to six proposals in 2007.
- To date (2014), three past programs are now self-sustaining and participate in the SEAL! Of Approval Program (SOAP) which is a program that was developed to continue to offer technical assistance to sealant programs which are not directly funded via a SEAL! MI grant.

Budget Estimates and Formulas of the Practice:

The SEAL! Michigan dental sealant program has received funding support from the Maternal and Child Health Block grant (MCH), the Centers for Disease Control (CDC) Oral Health Cooperative Agreement, Health Resources and Services Administration (HRSA), and Delta Dental Foundation of Michigan. Approximately \$300,000 of Title V funding supports the statewide sealant program annually.

Lessons Learned and/or Plans for Improvement:

Lessons Learned

The MDCH learned the following lessons to reduce barriers/challenges:

- Expect a slow first year for new programs, as year two is generally when programs will become cost effective.
- Give new programs time to address challenges (can take several years) and become successful (e.g., being cost-effective);
- Obtain a reliable process for data collection and processing to ensure data is not lost;
- Offer teacher incentives to improve support for the program;
- Provide a time for all grantees to network and share their experiences and lessons;
- Market the sealant programs among schools to build trust and recognition;
- Schedule schools one year in advance;
- Assure the grantees provide the highest customer service to the schools (e.g., make it easy for teachers and principals);
- Evaluate programs to better meet the needs of the schools, teachers, parents and students;
- Attend back-to-school nights with a sealant program booth, hand out permission slips directly to parents, and collect the signed permission that night; and

- Utilize PA 161 hygienists and parent volunteers.

Plans for Improvement

The MDCH plans to make the following improvements:

- Explore additional data reporting system that is both reliable and time efficient;
- Continue to seek funding to expand statewide program;
- To incorporate mini grants as an option (e.g., serve one or two schools) with use of donated or borrowed portable dental units possibly with dental hygiene students; and
- Further expand the incorporation of dental hygiene students within school-based sealant programs to increase cost effectiveness and to provide the students with learning opportunities for dental public health.
- Maintain collaboration with the MDCH funded school-based health centers on how to incorporate oral health and sealant programs into their existing health centers;
- Increase collaboration with Department of Human Services;
- Continue development of SEAL! Of Approval Program;
- Develop tracking mechanism to evaluate cost effectiveness.

Available Information Resources:

1. SEAL! Michigan Dental Sealant Brochure in English, Spanish, and Arabic:
http://www.michigan.gov/documents/mdch/6237_v1_Dental_Sealant_Program-English_465247_7.pdf
2. Dental Sealant Fact Sheet (for consumers/parents):
http://www.michigan.gov/documents/mdch/Dental_Sealant_Fact_Sheet-JMoore_391177_7.pdf
3. Request for Proposal for SEAL! Michigan School-based/School-linked Dental Sealant Program (a request for funds proposal): Contact MDCH for most current proposal.
4. SEAL! Of Approval Program:
http://www.michigan.gov/documents/mdch/SOAP_Interest_Document_Final_440055_7.pdf
5. Selecting a School Based Oral Health Care Program:
http://www.michigan.gov/documents/mdch/Q_and_A_brochure_for_School_Staff_for_email_388180_7.pdf
6. Additional Dental Sealant Program Forms:
Forms are available and can be requested to be sent by email. Contact Jill Moore, RDH, BSDH, MHA, Dental Sealant Coordinator, Michigan Department of Community Health at MooreJ14@michigan.gov.

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 SEAL! Michigan Dental Sealant Program increased the proportion of children with dental sealants increased (from 2006 to 2010 an increased from 23.3% to 26.4% in percentage of 3rd grade children with dental sealants) and provide cost effectiveness to the delivery of dental sealants (less cost than receiving equivalent services in a private dental office and eliminating the cost related to transportation and time off work for parents).

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 program demonstrates cost efficiency. The cost of one child receiving a screening, sealants (up to eight sealants per child, fluoride varnish, and oral health education) is \$93.50 compared to the same services being provided in a private practice dental office for \$201 (receiving four sealants).

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 SEAL! Michigan program is funded under MCH Block grant funds, a five-year CDC Cooperative Agreement, Delta Dental Foundation of Michigan, and also supported by a three-year HRSA grant. The MDCH Oral Health Program is always seeking new grant opportunities to ensure sealant program growth across the state.

The SEAL! Michigan program went from a one-year funding period to a three-year funding period to increase the chances of sustainability. By eliminating the risk of no funds, the SEAL! Michigan grantees are able to schedule schools one-year in advance. Also, by providing a three-year grant period it increases the sustainability of workforce within each sealant program because program employees can plan on a sustainable job for three-years. This decreases program workforce turnover.

Feedback from the grantees on financial stability shows that programs grow and become more sustainable each year. Equipment is purchased under SEAL! Michigan grant funding and grantees establish a steady stream of funding from Medicaid and revenue from other insurance plans. This contributes to program sustainability.

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 MDCH dental sealant coordinator has worked to establish effective collaborations and partnerships. Within the state, collaboration exists with the School and Adolescent Health program. This relationship builds linkages between dental sealant programs and the MDCH funded school-health centers. In addition, oral health educational seminars have been provided to school-nurses (Registered Nurses and Nurse Practitioners) on the importance of having oral health within the schools. The dental sealant coordinator collaborates with other sealant programs which are not funded through MDCH to share resources and networking possibilities.

The MDCH dental sealant coordinator serves on a national ASTDD School and Adolescent Oral Health (SAOH) Committee, communicate with dental sealant coordinators from other states funded by the CDC, and participates in a sealant committee organized by Rory Reese in Florida to discuss lessons learned. Many of the information obtained through the partnerships, networks, and shared lessons have been incorporated into the SEAL! Michigan program for improvements. These collaborative relationships have been vital to the success of the 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 SEAL! Michigan dental sealant program addresses several goals of the State of Michigan Oral Health Plan (2010):

- Implement evidence-based preventative practices that maintain optimal oral health for Michigan Communities.
- Increase knowledge of the relationship between oral health and systemic health.
- Increase access to oral health services in underserved populations and communities.
- Increase oral health access for persons with special needs

The SEAL! Michigan dental sealant program meets the objectives of the Healthy People 2010 and Healthy People 2020 related to improving children's oral health through reducing dental caries experience in primary or permanent teeth, reducing untreated dental decay, increasing the use of the oral health care system in the past year, increasing preventive dental services during the past

year, increasing dental sealants on molar teeth, and Increasing school-based health centers with an oral health component that includes dental sealants.

Extent of Use Among States

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

The 2010 State Synopses showed that in FY 2008-2009, 39 states and District of Columbia reported having dental sealant programs.