Dental Public Health Activity

Descriptive Report Submission Form

The Best Practices Committee requests that you complete the Descriptive Report Submission Form as follow-up to acceptance of your State Activity Submission as an example of a best practice.

Please provide a more detailed description of your **successful dental public health activity** by fully completing this form. Expand the submission form as needed but within any limitations noted.

ASTDD Best Practices: Strength of Evidence Supporting Best Practice Approaches
Systematic vs. Narrative Reviews: http://libguides.mssm.edu/c.php?g=168543&p=1107631

NOTE: Please use Verdana 9 font.

CONTACT PERSON PREPARING THE SUBMISSION AND TO ANSWER QUESTIONS

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SECTION I: ACTIVITY OVERVIEW

Title of the dental public health activity:

Oregon Statewide School Dental Sealant Program

Public Health Functions*: Check one or more categories related to the activity.

"X"	Assessment
	1. Assess oral health status and implement an oral health surveillance system.
	2. Analyze determinants of oral health and respond to health hazards in the community
X	3. Assess public perceptions about oral health issues and educate/empower them to achieve and maintain optimal oral health
	Policy Development
X	4. Mobilize community partners to leverage resources and advocate for/act on oral health issues
X	5. Develop and implement policies and systematic plans that support state and community oral health efforts
	Assurance
X	6. Review, educate about and enforce laws and regulations that promote oral health and ensure safe oral health practices
X	7. Reduce barriers to care and assure utilization of personal and population-based oral health services
X	8. Assure an adequate and competent public and private oral health workforce
X	9. Evaluate effectiveness, accessibility and quality of personal and population-based oral health promotion activities and oral health services
X	10. Conduct and review research for new insights and innovative solutions to oral health problems

***ASTDD Guidelines for State and Territorial Oral Health Programs that includes 10 Essential Public Health Services to Promote Oral Health**

Healthy People 2020 Objectives: Check one or more key objectives related to the activity. If appropriate, add other national or state HP 2020 Objectives, such as tobacco use or injury.

"X"	Healthy People 2020 Oral Health Objectives	
X	OH-1	Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth
X	OH-2	Reduce the proportion of children and adolescents with untreated dental decay
	OH-3	Reduce the proportion of adults with untreated dental decay
	OH-4	Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease
	OH-5	Reduce the proportion of adults aged 45 to 74 years with moderate or severe periodontitis
	OH-6	Increase the proportion of oral and pharyngeal cancers detected at the earliest stage
X	OH-7	Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year
X	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-10	Increase the proportion of local health departments and Federally Qualified Health Centers (FQHCs) that have an oral health component
X	OH-11	Increase the proportion of patients who receive oral health services at Federally Qualified Health Centers each year

X	OH-12	Increase the proportion of children and adolescents who have received dental sealants on their molar teeth
	OH-13	Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water
	OH-14	Increase the proportion of adults who receive preventive interventions in dental offices
	OH-15	Increase the number of States and the District of Columbia that have a system for recording and referring infants and children with cleft lips and cleft palates to craniofacial anomaly rehabilitative teams
	OH-16	Increase the number of States and the District of Columbia that have an oral and craniofacial health surveillance system
	OH-17	Increase health agencies that have a dental public health program directed by a dental professional with public health training

"X"	**Other national or state Healthy People 2020 Objectives: (list objective number and topic)**	

Provide 3-5 Key Words (e.g. fluoride, sealants, access to care, coalitions, policy, Medicaid, etc.) These will assist those looking for information on this topic:
Sealants, access to care, policy

Executive Summary: Complete after Section II: Detailed Activity Description. Please limit to 300 words in one or two paragraphs.

Provide a brief description of the dental public health activity. Include information on: (1) what is being done; (2) who is doing it and why; (3) associated costs; (4) outcomes achieved (5) lessons learned, both positive and negative.

The **Oregon Health Authority's (OHA's) Dental Sealant Program (DSP)** developed its model to follow the Association of State and Territorial Dental Directors (ASTDD) Best Practice recommendations. The DSP targets elementary and middle schools where at least 40% of the students are eligible for the Federal Free-and-Reduced Lunch Program. The OHA contracts with dental hygienists and assistants to provide screenings and sealants. The program targets 1st, 2nd, 6th, 7th graders that have parental permission (1st-8th graders in very small schools). The team (hygienist/assistant) transports and sets up the portable equipment, provides screenings and sealants, and manages the paperwork. Data is entered onsite into an iPad software program and is synced electronically and securely to an offsite server that forwards it to the home database. Students with immediate dental needs are referred for care through coordination with the school nurse. The DSP receives $368,000 in state general funds per biennium. A federal match brings the total available funding to $773,000 per biennium.

From 2007 to 2013, the DSP expanded from serving eleven schools in three counties to serving 158 schools in 25 counties, providing 16,581 sealants. The DSP trained eight local groups in the DSP model and, via a HRSA oral health workforce grant, piloted a voluntary certification program for sealant programs. In 2015, Coordinated Care Organizations (CCOs) responsible for serving Oregon's Medicaid population were incentivized to provide sealants for 6 -14 year olds. In 2015, the state legislature passed Senate Bill 660 requiring the OHA to ensure all schools had access to sealants and mandating that all school-based sealant programs be certified. By 2012, Oregon had met the Healthy People 2020 sealant objective. Statewide, school sealant programs increased from serving 26% of the eligible elementary schools in 2007 to serving 88% of eligible elementary and 69% of eligible middle schools in 2017.

SECTION II: DETAILED ACTIVITY DESCRIPTION

Provide detailed narrative about the dental public health activity using the headings provided and answering the questions. Include specifics to help readers understand what you are doing and how it's being done. References and links to information may be included.

Complete using **Verdana 9 font.

Rationale and History of the Activity:

1. What were the key issues that led to the initiation of this activity?

The Oregon Health Authority (OHA) – previously Department of Human Services – began with an appeal to state government to address the declining oral health status among Oregon children. The 2007 Oregon Smile Survey of 1st -3rd graders found a 7% increase in cavities and a 49% increase in untreated decay from 2002 to 2007. Numerous attempts to implement policy mandating water fluoridation had failed. Only 22% of Oregonians had access to optimally fluoridated water. Only three of the 36 counties in Oregon had dental sealant programs. The Oral Health Program promoted the Smile Survey data, advocated for state general funds for a school dental sealant program, leveraged those funds with matching Medicaid funds, and included a higher percentage match for service providers. In 2007, the state legislature approved a biennial budget of $368,000 which was used to purchase 10 portable dental equipment units, hire a School Oral Health Programs Coordinator, and support contracting with regional registered dental hygienist providers. During that same legislative session, dental hygienists were allowed to determine the need for and place sealants without a dentist's supervision.

During the first school year of the program (2006-07), the statewide DSP served eleven schools in three counties and provided 451 screenings and 1,180 sealants. By the 2012-13 school year, the DSP had expanded to 158 schools in 25 counties and provided 8,349 screenings and 16,581 sealants. The DSP also encouraged and trained local programs to provide school-based services. Counties with sealant program participation increased from three counties in 2006 to 31 counties in 2013.

In 2009, when budgetary constraints prohibited expanding the number of schools served, the DSP focused on improving quality and increasing the number of children served within each school. This focus included an emphasis on increasing the percentage of parent permission forms returned, streamlining administrative processes, and providing more training for the contracted dental hygienists.

Initially, in larger schools, the DSP used two units with one contracted lead hygienist and one volunteer hygienist. This situation, however, proved difficult for the lead hygienist due to equipment set-up and caused some issues with quality control and the tracking of retention rates. By 2011, the DSP program used only contracted hygienists.

The DSP also used volunteer dental assistants in the first two years. It soon became evident that volunteer assistant help was difficult to find in rural areas. The program now uses contracted dental assistants in rural and frontier areas, and volunteer assistants in urban settings.

In 2011-12, the return rate for parent permission forms averaged 50% and the average program retention rate for sealants placed was 92%. By 2014, metrics included tracking caries experience in primary and permanent teeth. The objectives of the program were to increase the number of children receiving screenings and sealants, reduce the number of children referred for early and urgent needs, and reduce caries experience.

2. What rationale/evidence (may be anecdotal) did you use to support the implementation of this activity?

As mentioned previously, the 2007 Oregon Smile Survey of 1st -3rd graders found a 7% increase in cavities and a 49% increase in untreated decay from 2002 to 2007. Numerous attempts to implement policy mandating water fluoridation had failed. Even today, only 22% of Oregonians have access to optimally fluoridated water. Although school dental sealant programs were strongly supported in the literature, only three of Oregon's 36 counties had these programs. Many of Oregon's counties are rural or frontier and children have limited access to dental care. The 2007 Smile Survey

indicated that only 30% of Oregon children had dental sealants, far below the Healthy People 2010 goal of 50%.

Before 2014, Oregon's Medicaid population was served by managed care through Dental Care Organizations (DCOs). This system continued as Oregon moved through health system transformation. By July 2014, all of the DCOs had contracts with the state's new Coordinated Care Organizations (CCOs, modeled on the Accountable Care Organization structure) to provide dental services. But the DCOs were not providing dental sealants. In 2011, DCOs provided sealants for only 14.6% of the eligible children ages 6 to 9. The statewide DSP was able to reach more children through the school system for this preventive service. Finally in 2015, CCOs (and therefore DCOs) were incentivized to increase their sealant rates for 6 to 14 year olds.

The 2012 Smile Survey indicated the influence of the statewide DSP. The 2007 survey demonstrated that in all areas Oregon children fared worse than in 2002; by 2012 all areas showed improvement, surpassing even the 2002 data.

For children in 1st – 3rd grades:

- Children that had a cavity:
  - In 2002 = 57%
  - In 2007 = 64%
  - In 2012 = 52%
- Children with untreated decay:
  - In 2002 = 24%
  - In 2007 = 36%
  - In 2012 = 20%
- Children with rampant decay (decay in seven or more teeth):
  - In 2002 = 16%
  - In 2007 = 20%
  - In 2012 = 14%
- Children with at least one sealant:
  - In 2002 = 32%
  - In 2007 = 30%
  - In 2012 = 38%, with 52% of 3rd graders having sealants

Community dental sealant programs also utilized the DSP as a key resource while creating their own programs. The DSP provided technical assistance and annual training for eight of these local programs. In 2007, local programs served 81 schools, 64 of which were in one county. By 2014, local programs were serving 205 eligible schools with programs based on the statewide DSP model. Combining the number of eligible schools served by both the DSP and local programs, the state was able to meet the Pew Center on the States benchmark of 75% of eligible schools served in 2014.

3. What month and year did the activity begin and what milestones have occurred along the way? (May include a timeline.)

July 2006: General funds established an OHA School Oral Health Programs Coordinator position and funded 10 portable dental equipment units.

2006-07: The OHA statewide DSP served eleven schools in three counties; local programs served 81 schools in three counties.

2007-08: The OHA statewide DSP served 43 schools in nine counties; local programs served 96 schools.

2008-09: The OHA statewide DSP staff trained a local program to provide school sealant services and transitioned 11 schools to that program (transitioning schools allowed the DSP to expand to unserved schools); DSP served 62 schools in 13 counties; local programs served 112 schools.

2009-10: The OHA statewide DSP staff trained another local program and transitioned six OHA-served schools to that program. The DSP served 142 schools.

2010-11: The OHA statewide DSP served 142 schools, transitioned nine OHA-served schools to local programs; local programs served 128 schools.

2011-12: OHA served 141 schools, trained five local programs, and transitioned two OHA-served schools; local programs served 190 schools.

2012-13: OHA served 158 schools (155 eligible schools) and transitioned seven schools; local programs served 190 schools.

2013-14: OHA served 153 eligible schools and transitioned two schools; local programs served 210 schools.

2014-15: OHA served 143 eligible schools, trained one local program, and transitioned seven schools; local programs served 358 schools.

In 2014, dental care was incorporated into Oregon's Coordinated Care Organization (CCO) system. The CCO's adopted one incentivized dental metric: Sealants for children ages 6 to 9 and 10 to 14.

In 2014, the Oregon statewide DSP was named one of 11 Best Practices by the Association of State and Territorial Dental Directors.

In 2015, Oregon was acknowledged by the Pew Charitable Trusts as one of three states receiving all possible points for school dental sealant programs.

From 2012-2015, a HRSA oral health workforce grant enabled the DSP to develop a voluntary certification program for local school sealant programs. Eight programs became voluntarily certified by complying with national quality standards and submitting data to the OHA.

In 2015, Senate Bill 660 was passed by the Oregon Legislature. This bill required the OHA to ensure the availability of sealant programs for eligible students, and to certify all local programs providing sealant services in the school setting.

2015-16: OHA changed school eligibility from schools where at least 50% of the students were eligible for the national Free and Reduced Lunch Program to schools with 40% FRL status, and added eligible middle schools. The number of eligible schools increased from 458 eligible elementary schools to 524 eligible elementary "grades" and 281 eligible middle "grades" (some schools house both elementary and middle grades).

OHA served 80 elementary and eight middle schools and transitioned 72 OHA-served schools to local programs that could bill Medicaid. OHA contracted to provide administrative assistance to a new non-profit (Dental3) created to serve schools in a large metropolitan area. The non-profit consisted of two Coordinated Care Organizations (CCOs) and seven Dental Care Organizations (DCOs) that collaborated to present a unified face to the schools. The result was that there was one organization, one parent permission packet, one combined set of data, and one software program that all local programs within Dental3 utilized. While the CCO and DCO collaboration was challenging, the schools perceived the process as seamless.

Local programs served 382 elementary and 124 middle schools.

2016-17: This school year was the first year local programs were required by law to be certified by OHA. OHA conducted four certification trainings (attendance mandatory) and 20 programs became certified - two of them provisionally certified (due to an inability to bill Medicaid). The OHA DSP served 57 schools with elementary grades and 14 schools with middle grades (some schools housed both), and transitioned 22 schools to local programs. Local programs served 390 elementary and 171 middle schools.

Total schools served: 88% of the eligible schools (447 of 506) and 69% of the eligible middle schools (185 of 266).

This school year was the first time local programs were required to submit aggregate-level data to the OHA. This data will enable the OHA to create a statewide report on school dental sealant programs. The first report will be published in the spring of 2018.

In 2017, the OHA's certification program was mentioned by the Children's Dental Health Project as a model to ensure sealant program quality.

2017-18: OHA DSP now serves 20 schools. The OHA staff provides a mandatory one-time certification training to local program administrators (new administrators are required take the training), an annual

clinical training for hygienists, and conducts site visits to ensure compliance to the rules of the certification program. OHA transitioned 44 schools to local programs.

The sections below follow a logic model format. For more information on logic models go to: W.K. Kellogg Foundation: Logic Model Development Guide

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES

1. What resources were needed to carry out the activity? (e.g., staffing, volunteers, funding, partnerships, collaborations with various organizations, etc.)

State general funds and federal matching funds support the position of OHA School Oral Health Programs Coordinator and provide for supplies, contracts with the statewide DSP hygienists and assistants, travel expenses for site visits, and equipment maintenance. The staff of the Oral Health Unit provides administrative and policy support for the statewide DSP and the certification program for local school dental sealant programs. The staff provides ongoing technical assistance to local programs, which include partnerships with school districts, schools, Dental Care Organizations, Coordinated Care Organizations, Federally Qualified Health Centers, Community Health Centers, County Health Departments, and non-profits.

INPUTS	**PROGRAM ACTIVITIES**	OUTPUTS	OUTCOMES

2. Please provide a detailed description the key aspects of the activity, including the following aspects: administration, operations, and services.

The OHA is responsible for all aspects of the OHA statewide DSP and for certifying all school dental sealant programs in the state.

The responsibility for the OHA statewide DSP includes form development (updates, translations, printing), gaining school participation, contracting with hygienists and assistants, assigning schools, distributing forms to the schools (parent permission forms, checklists, videos, teacher information) and gathering relevant information about the schools (e.g. contacts, phone numbers, and emails) so the hygienists may schedule the schools. The Coordinator ensures permission forms reach the schools in time for inclusion in the school registration packets and is on-call throughout the year to provide technical assistance to the hygienists, assistants, and schools. The contracted hygienists provide screenings for all 1st, 2nd, 6th, and 7th graders (1st-8th graders in very small schools) that have parent permission, and then provide sealants when appropriate. All students that are screened receive a results form to take home to the parents. The hygienists sync the iPad data electronically and mail the parent permission forms back to the OHA office. The OHA staff receives the electronic data and parent permission forms and sends back to the school within 30 days feedback forms, certificates, and school results. The OHA staff compiles the data.

INPUTS	PROGRAM ACTIVITIES	**OUTPUTS**	OUTCOMES

3. What outputs or direct products resulted from program activities? (e.g., number of clients served, number of services units delivered, products developed, accomplishments, etc.)

By 2014, the OHA statewide DSP had trained eight local programs in the DSP model.

During the 2014-15 school year, the OHA DSP:

- Transitioned seven OHA-served schools to local programs
- Served 144 eligible schools
- Screened 6,600 students
- Provided sealants for 4,721 students
- Placed 15,108 sealants
- Referred 29% of the students screened for needed restorative care

In 2015, Oregon was acknowledged by the Pew Charitable Trusts as one of three states receiving all possible points for dental sealant programs.

During the 2015-16 school year, the OHA DSP:

- Transitioned 66 OHA-served schools to local programs
- Served 83 eligible schools
- Screened 3,484 students
- Provided sealants for 2,507 students
- Placed 8,267 sealants
- Referred 32% of the students screened for needed restorative care

During the 2016-17 school year, the OHA DSP:

- Transitioned 22 OHA-served schools to local programs
- Served 57 eligible elementary grades and 14 middle grades (some schools house both elementary and middle grades)
- Screened 2,719 students
- Provided sealants for 2,116 students
- Placed 7,316 sealants
- Referred 32% of the students screened for needed restorative care

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	**OUTCOMES**

4. What outcomes did the program achieve? (e.g., health statuses, knowledge, behavior, care delivery system, impact on target population, etc.) Please include the following aspects:
    a. How outcomes are measured
    b. How often they are/were measured
    c. Data sources used
    d. Whether intended to be short-term (attainable within 1-3 years), intermediate (achievable within 4-6 years), or long-term (impact achieved in 7-10 years)

The OHA statewide DSP measures process outcomes, not actual health outcomes. (The program is based on research since individual child-level longitudinal data is not tracked.) The OHA does conduct a Smile Survey every 5 years, but this data is reliant on many variables.

The following DSP data is tracked and compiled every year:

- Number/percentage of schools/grades served
- Number/percentage of students receiving screening and sealants
- Number of sealants provided
- Number/percentage of students referred for further treatment (early and urgent)
- Number/percentage of students, per grade level, with:
    - caries experience
    - untreated caries
    - sealants
    - restorations
- Number/percentage of parent permission forms returned (yes and no)
- Number/percentage of parent permission forms returned by month
- Annual retention per hygienist
- Annual retention per program
- Ethnicity data
- School satisfaction ratings

Budgetary Information:
NOTE: Charts and tables may be used to provide clarity.

1. What is the annual budget for this activity? The budget for the biennium is $773,000. The annual budget is $386,500.

2. What are the costs associated with the activity? (Including staffing, materials, equipment, etc.)

   Costs include OHA staffing, direct and indirect costs, contracts for the dental hygienists and assistants, equipment maintenance, supplies, forms (translations and printing), and travel associated with site visits.

3. How is the activity funded?

   State general funds and matching federal funds.

4. What is the plan for sustainability?

   The OHA statewide DSP program is gradually transitioning OHA-served schools to certified local programs that can bill Medicaid. The OHA realizes that Medicaid funding, especially for those covered by Oregon's Medicaid expansion, may be at risk in the near future. Since the future is unclear, the OHA DSP plans to remain viable until sealant services provided by local programs are embedded permanently in the school system.

Lessons Learned and/or Plans for Addressing Challenges:

1. What important lessons were learned that would be useful for others looking to implement a similar activity? Was there anything you would do differently?

   The OHA based all statewide DSP protocols on established research and on the recommendations from national organizations - the ASTDD, Centers for Disease Control and Prevention, American Dental Association, and the Pew Charitable Trusts. One important policy was that the DSP cause as little disruption to the school environment as possible. Consequently, the DSP maintained a 98% approval rating from the schools.

   The OHA found it was useful to start a sealant program in one school in a county, gain that school's support and trust, and then use feedback from that school (quotes and contact names/emails) to encourage other schools to participate. The program began by using volunteer hygienists and assistants, but soon switched to contracting with providers. Retention improved with consistency and experience. The program retention ranged between 88 to 92% over ten years.

2. What challenges did the activity encounter and how were those addressed?

   While most schools were eager to participate, some entire counties were reluctant. OHA staff always offered the program the ensuing year, providing positive comments from participating schools. Our patience paid off. The final two of Oregon's 36 counties did not accept a school sealant program until the past year (2017). Now all 36 counties have programs.

   We had a few hygienists with unacceptable retention, so we changed our protocol to train new hygienists as follows: For the first entire day, a hygienist experienced in the program provides sealants with the new hygienist, acting first as the hygienist, then as the assistant. This routine ensures there is an understanding as to the appropriateness of sealant placement (on sound teeth and non-cavitated lesions) and that the manufacturer's guidelines are followed (adequate drying and isolation). The second day, the experienced hygienist is in the room while the new hygienist provides sealants (with an assistant – always 4-handed) and the experienced hygienist checks every sealant. Usually the process only takes two days.

Available Information Resources:

Share any models, tools, and/or guidelines developed by the program specifically for this activity that may be useful to others seeking additional information. Hyperlink resources if possible.

OHA DSP – basic information
Parent Permission Forms
Parent Fact sheets
Teacher Information Sheet
Further information about certification

TO BE COMPLETED BY ASTDD	
Descriptive Report Number:	40007
Associated BPAR:	School-based Dental Sealant Programs
Submitted by:	Oregon Health Authority/Public Health Division
Submission filename:	DES40007ORsealantprogram-2017
Submission date:	March 2011
Last reviewed:	December 2017
Last updated:	December 2017