

Dental Public Health Activity Descriptive Summary

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Tacoma-Pierce County Health Department School-Based Oral Health Program

Description of Activity / Overview:

Tacoma- Pierce County Health Department's School-Based Oral Health Program (SBOHP) serves as an integral part of a robust, public health strategy in Pierce County, Washington. The SBOHP demonstrates effective, collaborative partnership of the local health department, schools, and oral health clinicians to reach children, increase access to dental services, and improve oral health.

The Health Department oversees and coordinates the SBOHP countywide. Private dentists, dental assistants, and dental hygienists provide direct preventative oral health services to children and adolescents in a school setting, using Best Practices. Preventative services provided through the SBOHP include screenings, sealants, fluoride varnish applications, oral health education, and referral to a dental home. The SBOHP also provides referral to emergency dental treatment as appropriate.

The overall goal of the SBOHP is to increase the number of Pierce County children and adolescents in Kindergarten through 12th grade who receive comprehensive preventative dental care.

Details of Program Participants:

SBOHP participants include:

- private dentists, dental assistants, and dental hygienists;
- schools throughout Pierce County, Washington;
- students in grades K-12; and
- Tacoma-Pierce County Health Department.

Private dentists, dental assistants, and dental hygienists:

- Providers are recruited and selected via a Request-for-Qualifications (RFQ) process initiated by Tacoma-Pierce County Health Department.
- The number of providers selected for the SBOHP, and the number of schools assigned to each provider is based on the capacity of providers to effectively serve a given number of students through continued service review throughout the school year. As new schools are recruited, existing providers are given the option to serve these schools as their capacity permits. New providers are recruited as necessary.
- Current providers for the 2017 – 2018 school year include: one Federally-Qualified Health Center, one non-profit clinic, and two independent dental hygienists.
- SBOHP providers offer preventative services on-site at schools, following Best Practice service schedules. Providers commit to visiting each school twice during a school year to offer fluoride varnish applications four months apart to any age and grade of student. The first application

may be done during the initial visit and screening. (Sealant applications, by comparison, follow a different service schedule based on grade and age of student, to accommodate eruption of first and second molars).

- SBOHP providers commit to serve all participating students, regardless of insurance or ability to pay.

Why involved: Tacoma-Pierce County health Department partners with private dental providers as a means to optimize dental service delivery and increase service access for children through a school setting, rather than reliance on limited Health Department staffing and financial resources to meet community need for oral health services.

Schools:

- The SBOHP serves all 15 public school districts and Native American tribal schools in Pierce County. All schools are welcome. We actively recruit new schools, with prioritized efforts in low-income elementary and middle schools.
- Of 176 elementary and middle schools, 146 schools currently participate in the SBOHP.
- SBOHP 2017-2018 priorities target elementary and middle schools with a 50% or greater student population eligible for the Free and Reduced Lunch (FRL) program, (with the FRL being used as an indicator of children in households below 110% of the Federal Poverty Level.) This 50%+ is established to be in compliance with Washington State School Sealant Guidelines, and because our most recent Pierce county oral health data indicates that FRL-eligible children experience dental decay and rampant decay (more than seven cavities) at higher rates than non-FRL students.
- The SBOHP prioritizes elementary and middle schools due to Best Practice service administration schedules (such as with sealants) and because we historically achieve higher numbers of SBOHP participation at these grade levels than among high school students.

Why involved: Schools provide a consistent venue and means to reach children in grades K-12, to improve access to oral health preventative services, oral health education, and referral.

Students:

- The established SBOHP goal sets a minimum two percent increase in student participation annually.
- All students in SBOHP schools are eligible to participate, with signed parent permission forms.

Why involved: The SBOHP operates with the understanding that all students, regardless of age or grade level, can benefit from oral health education, and that oral health needs extend beyond FRL/Medicaid-eligible students.

Tacoma-Pierce County Health Department:

The Health Department manages the SBOHP in Pierce County, serving as a collaborator with dental and K-12 community partners to collectively improve service and economic efficiencies.

Why involved:

- Washington State legislation requires that school-based oral health programs be coordinated through local health jurisdictions (public health departments).
- Tacoma-Pierce County Health Department serves as the designated coordination conduit for Pierce County:

- Recruits SBOHP providers and schools.
- Vets dentists, hygienists, and all other SBOHP staff that come onsite to school campuses and in contact with children:
 - o Credential verification;
 - o Background check in state database for safety clearance;
 - o Current liability insurance; and
 - o Signed Quality Assurance Agreement and Memorandum of Understanding (MOU).
- Coordinates training for school-based providers.
- Matches providers with schools and oversees scheduling.
- Tracks performance measures for local, county, and state reports.
- Conducts site visits at least once annually to provider clinics and schools.

Rationale for the SBOHP:

In addition to economic efficiencies and benefits, there are clear health benefits and identified need for the SBOHP in Pierce County. The SBOHP aligns with local and national performance measures.

Local:

- *The Smile Survey:* An oral health assessment of children throughout Washington State, conducted by county every five years. Pierce County has participated since 2005. All schools in the SBOHP participated in the most recent (2015-2016) Smile Survey. Pierce County data indicates that among children attending schools with fluoridated water systems, the history of tooth decay was 18% lower and rampant decay (seven or more cavities) was 33% lower. However, only 44%--less than half of Pierce County's population, live in communities with fluoride added to their public water system to protect teeth. The SBOHP addresses this disparity by serving schools in communities without fluoridated water and by providing fluoride varnishes at established Best Practice intervals.
- *Demographic data:* Pierce County remains at risk for increasing numbers of children and families who face homelessness. Pierce County shows the largest gap between affordable rental housing and inventory, of all 39 counties in Washington State (Tacoma-Pierce County Affordable Housing Consortium). Homelessness impacts dental care and dental services, as families in poverty may be in survival mode and not prioritizing oral health; or may face limited options for care access and delivery of services. The SBOHP addresses this by providing accessible services in schools, including for students who may not have regular or permanent housing.

National:

The Centers for Disease Control and Prevention, Oral Health Program Strategic Plan

- Eliminate dental caries across the life span.
- Eliminate disparities in oral health.

Preventative services and education of the SBOHP help to set children on a trajectory of good oral health across the lifespan, and establish healthy habits for taking care of teeth. The SBOHP addresses disparities by extending eligibility to all children in a school.

Healthy People 2020

Oral health of children and adolescents:

- Reduce the proportion of children with dental caries experience in their primary or permanent teeth.
- Reduce the proportion of children and adolescents with untreated dental decay.

Access to Preventive Services:

- Increase the proportion of school-based health centers with an oral health component.
- Increase the proportion of children and adolescents who used the oral health system (saw a dental provider) in the past year.

- Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year.

Oral Health Interventions:

- Increase the proportion of children and adolescents who have received dental sealants on their molar teeth.

Outcome data is available for each of these measures across various administrations of the Smile Survey, and through SBOHP data. Highlights provided in the "Evaluation Measures / Outcome Indicators" section, below.

Oral Health in America: A Report of the Surgeon General

- Remove known barriers between people and oral health services.
- Use public-private partnerships to improve the oral health of those who still suffer disproportionately from oral health diseases.
- Build an infrastructure and capacity for state/territorial/community oral health programs.

The essence of the SBOHP is to improve oral health access and reduce health and service disparities by reaching students in schools through a public-private delivery model.

The SBOHP provides a replicable service delivery model. Tacoma Pierce County Health Department's Oral Health Program receives requests and inquiries from other counties in Washington and other states. One of our project goals for 2018 is to develop a guidance manual for other jurisdictions to replicate Pierce County's SBOHP.

Impact/Effectiveness/Efficiency

Benefit to the oral health and well-being of populations or communities:

- The SBOHP benefits children and their families through the school setting as a convenient, child-friendly, affordable, and consistent venue for children to receive preventative oral health care, learn about oral health, and receive referral to a dental home.
- The SBOHP reaches children who experience financial, transportation, social, or cultural barriers that may prevent them from receiving preventative oral health services in a traditional dental setting, or who would not otherwise receive care.
- Schools benefit from hosting on-site preventative dental services by reducing the number of hours and days that students miss from school due to tooth pain, dental appointments off-site, and other oral health-related illnesses and absences.

SBOHP providers benefit by making a positive difference in the lives of children, by potential for increased revenue or tax write-offs, minimizing "no show" appointments, potential to receive referrals, and opportunity to become a "dental home."

Achievements / Highlights of SBOHP growth:

Number of participating elementary and middle schools:

2010-2011 school year: 34, plus 10 ECEAP/Head Start locations
 2011-2012 school year: 71, plus 24 ECEAP/Head Start locations
 2012-2013 school year: 81, plus 32 ECEAP/Head Start locations
 2013-2014 school year: 103, plus 30 ECEAP/Head Start locations
 2014-2015 school year: 123, plus 37 ECEAP/Head Start locations
 2015-2016 school year: 125, plus 51 ECEAP/Head Start locations
 2016-2017 school year: 146, plus 47 ECEAP/Head Start locations

Number of students screened:

2010-2011 school year: 6,043

2011-2012 school year: 12,155
2012-2013 school year: 11,743
2013-2014 school year: 13,168
2014-2015 school year: 16,666
2015-2016 school year: 20,824
2016-2017 school year: 19,305 (from reporting schools; one school did not report)

Number of students receiving fluoride varnishes:

2010-2011 school year: 1,910
2011-2012 school year: 5,464
2012-2013 school year: 5,341
2013-2014 school year: 5,553
2014-2015 school year: 7,314
2015-2016 school year: 7,389
2016-2017 school year: 6,952 (from reporting schools; one school did not report)

Costs, Staffing and Resource Efficiency:

- The Health Department's SBOHP budget for 2017 is approximately \$86,870. This includes salary and benefits for one .5 FTE SBOHP-dedicated employee, a percentage of Division management salary for percentage of time in support of SBOHP initiatives, the Health Department's mandatory indirect assessment of 20%, and \$9,000 allocated for a menu of value-added options from which SBOHP providers can select.
- The Health Department offers value-added benefits to SBOHP providers by allocating up to \$1,000 annually per provider for maintenance or repair of equipment used in the SBOHP, by covering costs associated with trainings and continuing education credits, and bulk purchase of SBOHP supplies (such as fluoride varnishes and sealants) at our government rate.
- SBOHP providers cover their own costs for travel to and from schools, and copies of paperwork (such as parent permission forms). SBOHP providers also furnish equipment and supplies for their on-site visits (such as a portable dental unit, fluoride varnishes, sealants, and toothbrushes).

Collaboration/Integration

How the SBOHP builds, or involves, effective partnerships among various organizations:

- Prior to 2010, Tacoma-Pierce County Health Department's Oral Health Program operated with a staff of nine in a direct service model, with Health Department staff providing oral health services in schools and childcare centers. However, by 2010, public, flexible, and grant funding sources could not keep pace with need. Our Oral Health Program sought alternative operational models to sustain and increase community service levels, despite internal staff and funding reductions.
- *The Solution:* Collaboration and partnership with private dentists, dental assistants, and dental hygienists who commit to provide preventative services to students in the school setting, with coordination through the Health Department. Through a public RFQ process, the Health Department selects and vets providers for SBOHP participation, recruits schools, and provides on-going guidance and support to providers and schools.

How the SBOHP integrates oral health with other health projects and issues:

The SBOHP aligns, complements, and integrates other components of our county's public health initiatives, including Access to Baby and Child Dentistry (ABCD) and the Comprehensive Community Oral Health Plan.

- ABCD targets oral health services to children ages 0 – 5 in ECEAP/Head Start and daycare centers. ABCD provides referrals to ABCD-certified dentists who are specially trained to work with very young children, in order to establish a dental home. By focusing on babies, toddlers, and pre-Kindergarten children, ABCD helps parents learn about good oral health practices for their families, and helps children start school cavity-free, so they can continue preventative services offered by the SBOHP.
- The Comprehensive Community Oral Health Plan guides our oral health priorities in Pierce County and provides a venue for both advocacy and action. The Plan is led by an Advisory group of dental professionals as well as community organizations not traditionally associated with oral health. The Advisory and the Plan operate with the recommendation of the Surgeon General of the United States, *"Everyone has a role in improving and promoting oral health."*

Demonstrated Sustainability

- The Health Department's shift from providing direct services to individuals via Health Department staff, to a population health approach using public-private partnerships with schools and private providers, allow the us to operate the SBOHP with reduced costs; efficiently and collectively reach more individuals and targeted groups of children and adolescents; and demonstrate and improve oral health outcomes.
- In 2017, our SBOHP now operates with a Health Department staff of one .5 FTE SBOHP-dedicated coordinator, with ad hoc support from other staff. This is far below the Health Department's Oral Health staff levels just a decade earlier. Yet, the SBOHP demonstrates significant increase in the number of schools and students served over the past decade (as highlighted in the "Achievements" section, above).

Highlights of Evaluation Measures / Outcome Indicators:

- Pierce County Smile Survey: Untreated Decay
2010: 18.3%
2015: 10.8%
Decline of 41% in untreated decay
- Healthy People 2020 Decay Experience: 49%
Pierce County (2015) Decay Experience: 46%
- Healthy People 2020, Untreated Decay: 26%
Pierce County (2015) Untreated Decay: 11%
- Healthy People 2020, Dental Sealants: 28%
Pierce County (2015) Dental Sealants: 84%

Pierce County's SBOHP has exceeded each of these HP2020 objectives.

Note: HP2020 objectives are for children ages 6–9. In Pierce County, most children screened (99%) were ages 8–9.

In May, 2017, Washington Dental Service Foundation published a report stating: "Pierce County school-based oral health programs show impressive results."

Lessons Learned:

What we've learned from schools:

- Schools are an important partner to provide accessible venues for oral health services to students during school hours. The commitment level of the school principal, school nurse, and teachers to the SBOHP is a strong indicator of Program success in a school. Health Departments can help educate school staff reluctant to participate that having a student away

from class for approximately 30 minutes to receive preventative oral health services will help prevent longer absences from school for more extensive oral health treatment.

- Schools benefit from SBOHP oversight and coordination provided by the Health Department to maintain Program fidelity and improve efficiency. Schools appreciate that Program participation will require minimal time commitment of their staff since the Health Department leads oversight, coordination, and scheduling. Schools are confident that providers assigned to their schools are already vetted for professional credentials, with signed MOU and quality assurance agreements, liability insurance, and background clearances to work with children.

What we've learned from students:

- SBOHP recruitment efforts are best prioritized in elementary and middle schools, since older students are often hesitant to participate, or not as interested to participate, in the SBOHP, particularly after 7th grade.
- Recruitment efforts are also best prioritized in new schools. Providing services in schools new to the SBOHP tend to yield more student participation and more cost-effectiveness for providers than schools which already participate in the SBOHP. A newly-participating school offers potential for un-tapped student participation, whereas an existing school draws from virtually the same cohort of students each school year, with students who may already participate in the SBOHP, or have had the opportunity to participate but do not. Parents who have declined to give participation permission in earlier grade levels may continue to decline permission as their child advances through different grades.
- Another reason why targeting new schools can help maximize participation is that many students in existing schools have already received dental sealants at appropriate intervals, (2nd and 6th grade, based on usual age of eruption for 1st and 2nd molars) so do not receive sealants each school year (but are eligible to receive the other preventative services each school year).

What we've learned from SBOHP providers:

- Providers who participate in the SBOHP genuinely love children and providing service delivery in a school setting.
- Mobile dental vans are expensive to purchase and operate, and few providers have capacity to do either. However, portable dental units (dental chair and mobile equipment) are feasible to purchase and transport. These can be set up inside a school in a limited space, such as a small classroom or the corner of a gym or stage.
- Providers benefit from value-added services that the Health Department can offer them, such as fluoride varnish and other bulk supply purchases at our government rate, or the maintenance and repair costs of their equipment used in the SBOHP. Our independent hygienists have indicated that fluoride varnish, in particular, is especially expensive for them to purchase, so the option to purchase at the government rate is useful.

What we've learned as a Health Department from a Program administration perspective:

- Return of parental permission forms is crucial to ensure student participation. The Health Department, providers, and schools need to work together to address barriers and implement participation strategies that appeal to students and their parents. (Barriers and strategies may vary according to school and student population).
- Site visits to schools by Health Department SBOHP staff, and regular conversations to check-in with schools and providers initiated by the Health Department, are important to demonstrate Health Department support to providers and schools, monitor Program effectiveness, and address challenges.

- Socio-economic status of children in Pierce County is not a predictable indicator of oral health status. We have learned that dental decay and dental neglect exist in children in our community across all income levels. Therefore, offering school-based oral services to all students, and not only those of lower income (based on Federal poverty levels, such as those who qualify for Medicaid and free or reduced lunch) can help improve oral health for children of any socio-economic status.
- Extending SBOHP services to all students helps eliminate possible stigma within a school for students being singled out for services based on their family's income.
- Public-Private partnerships between the Health Department and private, community providers to offer fluoride varnishes and other oral health services in a school setting offer both health and economic benefits. Such partnerships provide long-term, sustainable solutions to provide access to oral health services to children without reliance on health department staff for delivery. This SBOHP partnership model operates successfully despite the potential for decreasing public funds or term-limited grants and limited Health Department staffing capacity.
- The SBOHP partnerships help maintain Program integrity, sustain Program longevity, improve access to oral health services, and expand service levels to meet increasing community needs.

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