Pierce County school-based oral health programs show impressive results

A dramatic increase in the use of dental sealants and significant reduction in untreated decay demonstrate that school-based oral health programs in Pierce County are very effective.

Dawn Jacobs CDA, RDA, oral health promotion coordinator at Tacoma-Pierce County Health Department, helps lead an innovative department initiative connecting children in elementary and middle schools (and some high schools) to dental professionals who provide school-based oral health programs (SBOHPs).

"I know many school principals in my county, and I *love* getting called into the principal's office," Jacobs said with a smile. "Our school principals are so important to our oral health program. We are thrilled with the results."

Recent Smile Survey [1] data (2015) shows that untreated decay in Pierce County declined from 19 percent in 2010, to 11 percent in 2015 - a 41 percent reduction, and well below the Healthy People 2020[2] target of 26 percent. The use of sealants increased from 38.1 percent (2010) to 83.8 percent (2015) of all 3rd graders in the county, much higher than the Healthy People 2020 goal of 28 percent.

41%
reduction in untreated decay

84%
3rd graders received sealants

Tacoma-Pierce County Health Department's school-based oral health program vets and connects high quality dental professionals with schools to reach children effectively.

Sealants

Dental sealants are thin coatings placed on teeth to protect them from cavities. Sealants protect against 80% of cavities for 2 years and continue to protect against 50% of cavities for up to 4 years. The sealant coating flows into the deep grooves of teeth and hardens immediately on the chewing surfaces of the back teeth (molars), protecting deep groves from the germs and foods that cause cavities.

Sealants can be applied by a dentist, dental hygienist, or other qualified dental professional, depending on state law and regulations. This can be done in dental offices or using portable dental equipment in community settings like a school.

School-age children (ages 6-11) without sealants have almost 3 times more first molar cavities than those with sealants. Although the overall number of children with sealants has increased over time, low-income children are 20% less likely to have them and 2 times more likely to have untreated cavities than higher-income children.

Untreated cavities can cause pain, infection, and problems eating, speaking, and learning.

The CDC advises that states can help millions more children prevent cavities by starting or expanding programs that offer dental sealants in schools.

Washington Dental Service Foundation
Community Advocates for Oral Health

"More than simply matching a provider with a school, we provide each organization with a formal agreement, guidelines, tools and shared expectations to ensure the school-based oral health care program is easy, efficient and successful for the provider, the school and the child," said Sharon Freeman, assistant division director, Strengthening Families Division of Tacoma-Pierce County Health Department, Dawn Jacob's supervisor. "We believe our schools, from principals to teachers, have a greater awareness of oral health through our discussions and meetings with them and the presence of school-based sealant programs."

"I don't think I'll ever forget "Chrissie" a 2nd grader that was constantly in the nurse's office with pain - infections from tooth decay. She had extensive decay. Our program's provider caught this and got her into a dentist's office. We need to catch these kids early. There are all kinds of statistics showing that oral health problems are a top reason why children miss school -- but it's this little girl that really stays with me. That's why I do what I do."

Dawn Jacobs CDA, RDA,
oral health promotion coordinator,
Tacoma-Pierce County Health Department

What is a school-based oral health program?

SBOHPs provide dental screenings, sealants to protect molars from decay, oral health instruction and other oral health services. If a child doesn't have a routine dental provider the SBOHP will refer the child to a dentist. Sealants are a key element of these programs.

"Sealants may prevent dental disease that can cause pain, difficulty eating, and an inability to concentrate in class, and also prevent the need for more invasive and expensive treatments like dental fillings or crowns," Jacobs said. The CDC reports that dental sealants prevent 80 percent of cavities in the back teeth, where 9 in 10 cavities occur. The CDC estimates that applying sealants in schools for about 7 million low-income children who don't have them could save up to $300 million in dental treatment costs across the country.

Why in schools?

"It's important that care is provided at school. Parents often don't have to take time off work to take their kids to a dentist's office. It takes the child away from class for only 30 minutes versus what is often a half day off to get to and from a dentist's office," Jacobs explained. "And sadly, while parents prioritize dental visits for tooth pain, preventive care can sometimes be delayed with busy schedules and a lack of awareness of the need."

SBOHPs need very little space and many providers can set up a portable chair in an unused classroom, music room, library, stage, principal's, or nurse's office. SBOHP leaders focus on schools with high numbers of children eligible for the federal free and reduced-price meal program, as this is an indicator of children at high risk for dental decay. Low-income children have higher risk for decay partly because they are more likely to experience barriers to accessing dental care. Using this data, Jacobs and others prioritize schools and focus resources where there is the greatest need.

The Pierce County Program

The Tacoma-Pierce County Health Department program gives schools and providers an efficient way to connect. While in theory providers could reach out to individual schools and create their own systems, consent forms and education programs for school leaders, nurses and teachers, the reality is that few would likely pursue it without guidance.

In Pierce County, the school districts requested that the Health Department provide them with a connection to vetted providers and the systems and tools to deliver SBOHPs. The result is that providers don't need to market themselves to schools, allowing them to spend more time delivering care and less time on administration or marketing, and schools use the program to easily find a vetted, qualified and high quality provider suitable for their school in a time-efficient manner.

Jacobs explains: "We know the schools, the principals, the nurses and teachers, and we approach them with information on how a school-based program helps students have better oral health that can help them in the classroom by lessening the chance they will be unable to concentrate due to dental related pain. We explain that we have established program guidelines, match credentialed providers with schools, and assist the provider and schools with any changes to the standard memorandum of understanding. We answer questions so when the matched provider contacts the school, they both are ready to schedule the program. We collect data that reinforces the need and positive impact of the program and share this with schools and providers."

139

schools (of 200 county schools)

20,824

children screened annually

8

provider organizations

"All these different provider organizations work well," Jacobs said. "They each have slightly different approaches with their models. Some use dental hygienists to deliver care, and others have a dentist supervising several dental assistants who place sealants. They are a bit different, yet they share the same quality standards, motivations and face similar challenges to make the program work."

Dawn Jacobs CDA, RDA, oral health promotion coordinator, Tacoma-Pierce County Health Department

The Pierce Country program is large with 139 of the 200 county schools participating, reaching most schools with high-risk children. The Health Department has agreements with eight very different provider organizations, including:

Private practice dentists (who visit schools with dental assistants)

- Two larger organizations staffed with hygienists dedicated to school-based programs who serve 7,000 and 11,000 children (in Pierce County and other counties)
- A solo hygienist who works part time one day a week serving 500 children annually
- A hygienist with 2-3 registered dental hygienist team members, focused mainly on SBOHPs and other mobile programs for high need patients
- A Federally Qualified Health Center that has dentists, dental assistants and can make direct referrals to community clinics for follow-up care and regular treatment

Challenges and solutions

1. Support from school administrators. A big challenge for SBOHPs is to secure commitment from school leaders. Schools can be resistant to taking a child out of the classroom and are very protective of academic time given the many pressures for strong academic performance. Some school leaders are not aware of the oral health challenges their students face and the impact of poor oral health on learning. The Pierce County Program uses education and data to help schools understand the need and positive impact of SBOHPs. The Health Department and dental providers report they work closely with schools to find a champion for the program – usually a nurse, teacher or principal – and work hard to fit in with the school schedule, their health fairs and their availability.

> "I'm a clinician and I love to be a clinician. This program allows me to just deliver care and not hassle with the admin. "
>
> Leena Jacob, RDH Solo Provider in the Tacoma-Pierce County OH Program

2. Financial sustainability. Providers report that finances are workable, but tight. Due to low reimbursement rates (and delivering some care without any reimbursement), providers must deliver quality care very efficiently. Washington State allows providers to bill under Apple Health (Medicaid) for school-based preventive services at the following reimbursement rates:

- Oral health screenings – $10.20
- Fluoride varnish – $13.25/application
- Sealants – $21.98/tooth
- Oral health instruction for school-based programs (only for children under 8 years old) – $12.97

The largest cost to programs is for labor, with some supply costs and also can include costs to operate vans. Each organization has a different provider model and cost structure, yet they all focus on efficiencies.

3. Providers. It can be challenging to find the right provider for a school-based program. They need to enjoy working with children, be comfortable with providing care with mobile units, and be "problem solvers," such as being able to set up equipment in unusual spaces. Many providers (employees or self-employed providers) work only eight to nine months of the year, with no income in the summer months. Some providers find variable income a real challenge, while others prefer this eight-month schedule. Some employers find offering the option to work in school-based programs, in different locations, to be a strong recruiting tool, as employees enjoy the variety in their work and the challenges these programs offer.

4. Consent for dental services. The toughest challenge for these programs is ensuring high returns of consent forms from parents enabling the providers to deliver care (and do so with enough volume for efficient use of resources). To get consent forms returned, providers work closely with school superintendents, principals, teachers and nurses so they have support from the top and practical solutions that work in classrooms. For example, providers often create a packet of forms for a specific teacher and classroom, and provide incentives for the classroom for form return (pencils, a lunch party for teachers). Providers report that, not surprisingly, children lose forms, parents can be overwhelmed with paperwork, and school nurses or teachers don't always chase down the forms. "Classrooms are busy places and we need to help make it easy for schools," said Jacobs.

Washington Dental Service Foundation

Community Advocates for Oral Health

Resourcing the Pierce County Program

"It takes leadership," said Freeman. "You need someone who understands oral health, preferably with experience in delivering dental care and most importantly deep relationships with schools and providers. Dawn works on this program and other initiatives. We also have a part-time analyst to collect and analyze the data by school. We need to find ways to sustain the program because children benefit from getting needed dental services that keep them free from pain and in their classrooms. These programs are particularly beneficial to families with limited resources. Our program has to consider the impact of reduced public health dollars on our budget. We do what we can to keep the level and quality of service high while working with a lean budget."

The Health Department invests approximately $200,000 annually in personnel to operate this program. The State of Washington though Apple Health (Medicaid) reimbursement pays for the treatment and care provided.

DAWN JACOBS, CDA

Dawn Jacobs: Oral Health Promotion Coordinator at Tacoma-Pierce County Health Department

- CDA for 31 years, focused on pediatric dentistry
- Coordinator of the Oral Health School-Based Program at the Health Department for 10 years
- Chair of the Tacoma- Pierce County Oral Health Coalition
- ABCD Coordinator Pierce County

The impact

A SBOHP has many returns; some are short-term "hard dollar" savings to the State from preventing cavities. The CDC reports "school-based sealant programs can be cost-saving within 2 years of placing sealants, and delivering sealants to children at high risk for cavities can be cost-saving to Medicaid."[3] Other benefits are longer term and harder to quantify such as reduced decay rates that lead to improved learning. Children with poor oral health status were nearly three times more likely than their counterparts to miss school as a result of dental pain.[4]

Tacoma-Pierce County Health Department invests scarce resources in this school-based program to increase access to oral health.

"In the past, the Health Department could only deliver oral health services to one or two school districts. We are thrilled that this private-public partnership has allowed us to reach all 15 school districts and 70% of schools in the county," said Dr. Anthony L-T Chen, MD, MPH, Director of Health of Tacoma-Pierce County Health Department.

For more information, contact Dawn Jacobs, CDA, RDA, Oral Health Promotion Coordinator, ABCD / Oral Health School-Based Oral Health Program, Pierce County Oral Health Coalition: Chair, Tacoma-Pierce County Health Department at djacobs@tpchd.org.

For more information on the Tacoma-Pierce County Health Department go to www.tpchd.org/ABCD

For more information on the effectiveness of sealants, visit

http://www.cdc.gov/oralhealth/dental_sealant_program/index.htm

Washington Dental Service Foundation

Community Advocates for Oral Health

Endnotes

1. Pierce County Smile Survey 2015
2. Healthy People 2020 is an initiative of the U.S. Department of Health and Social Services Office of Disease Prevention and Health Promotion. It tracks about 1,200 objectives in 42 topic areas, with the goal of improving health and quality of life for all people across all stages of their lives.
3. Griffin SO, Naavaal S, Scherrer CR, Patel M, Chattopadhyay S. Evaluation of school-based dental sealant programs: an updated Community Guide systematic economic review. Am J Prev Med. In press 2016.
4. Jackson SL, Vann WF, Kotch JB, Pahel BT, Lee JY. Impact of Poor Oral Health on Children's School Attendance and Performance. American Journal of Public Health. 2011;101(10):1900-1906. doi:10.2105/AJPH.2010.200915.