

Dental Public Health Activity Descriptive Report

Practice Number: 07006
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SECTION I: PRACTICE OVERVIEW		
Name of the Dental Public Health Activity: Cost Study of Colorado School-based Dental Sealant Programs		
Public Health Functions: Assessment – Acquiring Data Assessment – Use of Data Policy Development - Collaboration and Partnership for Planning and Integration Assurance – Building State and Community Capacity for Interventions Assurance – Access to Care and Health System Interventions Assurance – Program Evaluation for Outcomes and Quality Management		
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-8 Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year OH-12 Increase the proportion of children and adolescents who have received dental sealants on their molar teeth		
State: Colorado	Federal Region: Region VIII	Key Words for Searches: School-based program, dental sealants, prevention, children services, oral health data, partnership planning
Abstract: The Cost Study of Colorado School-based Sealant Programs (SBSP) was designed to analyze existing SBSP utilization data, recorded in the using the Sealant Efficiency Assessment for Locals and States (SEALS) software, collect and analyze SBSP cost information, and use the SEALS and cost data to develop an economic model to estimate potential cost savings associated with SBSP implementation during the 2010-2011 academic year. Researchers from the Colorado School of Public Health at the University of Colorado Denver conducted the work. The project totaled \$97,855 and the work was conducted over a 20.5 month period (4/15/2010 - 12/31/2011). The funding included indirect costs billed as part of the university contract. Benefits and Achievements: This project provided the first detailed analysis of SBSP enrollment, utilization, and cost data for SBSP in Colorado. In addition, the findings included an analysis of the oral health status of second grade children enrolled in the program and screened for sealant placement. Using Colorado SBSP program data, information on dental treatment patterns for first molars in Colorado, and other information, an economic model was developed to estimate cost savings associated with the SBSP. The Cost Study findings were disseminated through written reports and multiple presentations to oral health experts and SBSP providers in Colorado. This work led to other related work during the following years. During the past two years, work was conducted to develop educational materials on the benefits of school dental sealant programs to positively influence program enrollment. A two-page flyer was developed for school personnel and an oral health booklet was developed for children, parents, and other family members. In addition, work was initiated to create a data application that would improve the ability of school dental sealant providers to report program data efficiently and with		

improved accuracy. Finally, each year available SEALS data are analyzed.

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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

The project was implemented in 2010 to increase understanding the current status of SBSPs in Colorado and to provide information for program planning and expansion. Information was obtained from Colorado school dental sealant programs and from a large dental insurer. Colorado School of Public Health personnel conducted the analyses.

Justification of the Practice:

An understanding of the cost-effectiveness of SBSP was needed in order to assess program resource gaps. Many SBSPs do not track or understand all of their costs. Many would not survive without grant funding. The state of Colorado would like SBSPs to become sustainable based purely on reimbursement for clinical services.

Colorado School of Public Health personnel collaborated with SBSP to estimate their costs for providing services. They developed a model to estimate health outcomes (that is reduced caries) and cost outcomes (that is short-term and long-term cost savings associated with SBSP).

Inputs, Activities, Outputs and Outcomes of the Practice:

The Cost Study was conducted over a 20.5 month period (4/15/2010 - 12/31/2011).

Project milestones included:

1. Obtained SEALS data from the Colorado Department of Public Health and the Environment (CDPHE)
2. Analyzed SEALS data
3. Reviewed findings with CDPHE, SBSP personnel, and other oral health experts
4. Met in person and by phone with SBSP personnel to review SEALS SBSP cost data and revise, as needed, reported costs.
5. Worked with a large provide of dental insurance in Colorado to obtain dental claims data that included information on dental treatment patterns for persons age 5 years and older.
6. Analyzed the dental claims data.
7. Developed an economic model to estimate SBSP cost savings
8. Wrote reports and disseminated findings

Budget Estimates and Formulas of the Practice:

The project totaled \$97,855. The work was conducted over a 20.5 month period (4/15/2010 - 12/31/2011). The majority of funding was allocated to project personnel costs and the budget included indirect costs billed as part of the university contract.

Lessons Learned and/or Plans for Improvement:

The report on SBSP utilization and costs included information for 10 programs that provided SEALS data to CDPHE. Two large urban programs that provided services to the majority of children served by SBSP were included. However, data for all SBSP in Colorado were not available and not included in

this report. Since that time, CDPHE has worked with the Colorado School of Public Health and others to develop a statewide list of SBSP in Colorado and the schools they serve.

The SEALS data for the 10 Colorado SBSP during the year reported did not include information on sealant retention, types of referrals for follow-up care, and which children had a dental home. Such data could potentially be collected in future efforts.

Efforts are underway in Colorado to increase the ability of SBSP to report their utilization data to CDPHE and CDC. This includes the development of a data application for program entry to reduce time spent by SBSP personnel on administrative tasks. In addition, the data application will provide for more detailed data entry for some measures (e.g., retention by specific molar) in the future.

The SBSP report documented how program services were provided (e.g., two-handed versus four-handed) and which services were provided (e.g., fluoride varnish application). The project was not designed to assess 1) SBSP best practices, 2) whether or not evidence based practices were being followed by SBSP, 3) SBSP length of program/track record, 4) SBSP collaborative relationships or program goals, or 5) SBSP enrollment forms. Nor was the project designed to assess the effectiveness of two-handed versus four-handed approaches. These issues could be addressed in future work. For example, CDPHE is currently in the process of reviewing SBSP enrollment forms.

The cost of SBSP follow-up activities related to tracking the provision of treatment for children with identified dental needs, nor how such follow-up was conducted by schools, were assessed in the project. These issues could be addressed in future work.

Available Information Resources:

SAS programs were developed to analyze SEALS data. The same programs were used to analyze data in later years. Information used to develop the cost savings model could be utilized by other states in such efforts. Colorado School of Public Health personnel have collaborated with Dr. Susan Griffin on their efforts.

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 findings provide information about reductions in tooth decay associated with SBSP. The findings may be used by organizations that support SBSP to promote their expansion and financial support. For example, the findings may be used to support changes in state Child Health Plan reimbursement policies that allow for reimbursement for services provided in a school.

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 information is being used to develop a data application to facilitate reporting by SBSP and analysis of those data. The application will reduce SBSP personnel administrative time and accuracy of billing efforts.

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 information is being used to develop SBSP enrollment materials for school personnel and families to increase awareness of the program and SBSP enrollment.

The information is being used to develop a data application to facilitate reporting by SBSP and analysis of those data. The application will reduce SBSP personnel administrative time and accuracy of billing efforts.

The information is being used to assist SBSP in becoming financially sustainable.

The findings may be used by organizations that support SBSP to promote their expansion and financial support. For example, the findings may be used to support changes in state Child Health Plan reimbursement policies that allow for reimbursement for services provided in a school.

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?

Collaboration with the Colorado of School of Public Health, SBSP, state foundations that support these efforts and Oral Health Colorado – the state advocacy group – continue.

Objectives/Rationale

How has the practice addressed HP 2020 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?

By following the suggested next steps in the discussion section, SBSPs may decrease their costs and increase their reach, building oral health infrastructure and increasing access to preventive services for vulnerable children.

Given competing demands for school and health resources, findings from such studies inform decisions about which types of school and health programs should be implemented. The findings support expansion of SDSPs.

Extent of Use Among States

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