



Dental Public Health Activities & Practices

Practice Number: 36005
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SECTION I: PRACTICE OVERVIEW		
Name of the Dental Public Health Activity: <p style="text-align: center;">Baby Oral Health Program (bOHP)</p>		
Public Health Functions: Assurance – Population-based Interventions Assurance – Building Linkages and Partnerships for Interventions Assurance – Building State and Community Capacity for Interventions Assurance – Access to Care and Health System Interventions		
Healthy People 2010 Objectives: 21-1 Reduce dental caries experience in children 21-2 Reduce untreated dental decay in children and adults 21-9 Increase persons on public water receiving fluoridated water 21-10 Increase utilization of oral health system 21-12 Increase preventive dental services for low-income children and adolescents 21-14 Increase number of community health centers & local health departments with oral health component		
State: North Carolina	Federal Region: South Region IV	Key Words for Searches: Infant oral health, early childhood oral health, dental prevention, dental intervention, clinical intervention, dental provider training, dental workforce training, dental education
Abstract: <p>A considerable lack of access to dental services exists among young American children; only ten percent of children under age five years reported having received a preventive dental visit. With the rise in dental disease among preschool-age children and the lack of available workforce to care for their needs, a logical expansion of the safety net for children's oral health lies among general dental practitioners. The Baby Oral Health Program (bOHP) was developed at the University of North Carolina (UNC) at Chapel Hill to address this opportunity to increase the availability of preventive care to infant and toddlers. The bOHP educates dental students and dental health care providers on the principles of infant and toddler oral health, and equips them with the necessary tools to be comfortable and competent in providing preventive oral health services to young children. The bOHP trains dental students and practitioners in providing dental preventive services to infants and toddlers. The program is supported by the North Carolina Academy of Pediatric Dentistry, North Carolina Academy of General Dentists, North Carolina Dental Society, and National Children's Oral Health Foundation. The bOHP has provided every graduating student in the UNC School of Dentistry classes of 2008 and 2009 with a bOHP kit for their practice, and has expanded to offer trainings to practitioners in clinical settings.</p>		
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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

The Baby Oral Health Program (bOHP) was founded at the University of North Carolina (UNC) at Chapel Hill in 2005. The goal of the bOHP is to train the future workforce in providing preventive oral health services to infants and toddlers and improved access to preventive care for high-risk children. The program started by providing UNC School of Dentistry's dental students with didactic and clinical training but has expanded to include training for current dental providers in clinical practice.

The bOHP received funds from the North Carolina Academy of Pediatric Dentistry, North Carolina Academy of General Dentists, North Carolina Dental Society, and the National Children's Oral Health Foundation to develop and disseminate the program. During the past three years, the bOHP has provided clinical training at UNC School of Dentistry to 30-45% of senior dental students in the Classes of 2008 and 2009.

Justification of the Practice:

A considerable lack of access to preventive dental services exists among young American children. Only one in ten children under age five years reported to have accessed preventive dental care. With the rise in dental disease among preschool-age children and the lack of available workforce to care for their needs, one option to expanding the safety net for children's oral health is to increase the number of general dental practitioners who will treat young children in their practices. However, data suggests that the majority of general dentists do not see children until six years of age, leaving a gap in access to preventive dental care for infants and toddlers. The early developmental years of children is the time when preventive care is most effective in delaying dental disease and in providing the basis for a lifetime of good oral health.

Research shows that dentists provided with hands-on clinical experience are significantly more likely to provide oral examinations to infants in their current practice than those without this training. The bOHP was developed to provide opportunities for hands-on training to dental students, who will become future practitioners able to contribute to increasing access to preventive oral health care for infants and toddlers to reduce the progression and severity of dental disease in high-risk children early in life.

Inputs, Activities, Outputs and Outcomes of the Practice:

Inputs

The UNC at Chapel Hill, in collaboration with the North Carolina Academy of Pediatric Dentistry, North Carolina Academy of General Dentists, North Carolina Dental Society and the National Children's Oral Health Foundation, developed the bOHP. UNC has contributed faculty time, administrative time, graphic designers, and other in-kind donations to develop and implement the bOHP.

The bOHP is overseen by UNC School of Dentistry staff and is supported by a graduate teaching assistant who is a pediatric resident at the School of Dentistry. Two additional support staff members at UNC facilitate this program. One oversees patient coordination. The other works with the dental students to address requirements of a training rotation.

Activities

UNC senior dental students are offered training by the bOHP as an elective course. Each semester, senior students complete the bOHP training and curriculum and are assigned to one of the bOHP locations to assist in delivering preventive care to children. The bOHP elective course typically enrolls approximately 45% of the senior students each year. It is anticipated that 70% of the class of 2010 will complete the bOHP due to added capacity for rotations. A recent pilot site has been added at the Alamance County Health Department allowing for a greater number of students to participate in the bOHP rotations.

A bOHP kit was developed to supplement the education and training of the dental students. However, it became evident that the kit would also be valuable to existing dental practitioners. As the kit was further refined, its purpose has expanded to assist in educating dental students as well as to equip current dental practitioners with the knowledge and skills to provide preventive care to infants and toddlers. A continuing education (CE) course has been developed for dental practitioners to accompany use of the kit. Dentists can purchase the bOHP kit and complete the CE course (two hours of CE awarded by UNC and the American Dental Association).

The bOHP kit includes the following:

- A DVD produced by a medical journalist for MSNBC. The DVD is 13 minutes in length and provides an overview of Early Childhood Caries. The training focuses on assisting the dental team in developing interviewing skills with caregivers, examining infants and toddlers, and educating caregivers on oral health-related issues.
- A written outline of the DVD as a reference for the dental team.
- A form discussing how to implement bOHP into a clinical practice.
- A guide to early childhood development and its implications to pediatric dental care.
- An educational flip chart. The flip chart outlines important domains related to infant and toddler oral health to help educate caregivers in the dental office. The flip chart is in English and Spanish.
- A bOHP form used for new patient encounters. Part of this form includes the domains outlined in the caregiver educational flip chart. This provides an easy reference for the dental team while interviewing a parent/caregiver on his/her child's oral health practices (i.e., questions regarding feeding, oral hygiene, dental trauma, and injury prevention). The back of this form includes talking points. The form also provides a section to document clinical findings and recommendations made by the dental team. A copy of the form can be printed from the DVD.
- An infant and toddler oral health resource list with information for both the dental team and caregivers.
- An optional two hour Continuing Dental Education credit is offered through the University of North Carolina with self-study of the bOHP Kit.

Outputs

To date, the program has provided every graduating student in the Class of 2008 and 2009 (approximately 85 students per year) with a bOHP kit for their practice. The kit has also been disseminated to approximately 300 general practitioners in North Carolina and is available online for widespread use.

For the past three years, bOHP has trained 30-45% of the UNC senior dental students. The clinical training sessions take place at the UNC School of Dentistry with patients who are migrant children enrolled in Early Head Start and at the Lincoln Community Health Center in Durham (both locations serve low socioeconomic status and minority groups).

Approximately 75 children enrolled in Early Head Start and another 500 children at the Lincoln Community Health Center have been treated by dental students participating in bOHP each year.

Outcomes

A study was undertaken to examine senior dental students' knowledge, confidence, opinions and behaviors following completion to the bOHP curriculum. Results showed that the average post-scores differed significantly in the control and intervention groups for all constructs. Eighty-eight percent of students enrolled in the bOHP stated they were "more likely" to treat infants and toddlers following this clinical experience. The study concluded that the establishment of an infant and toddler oral health program in dental training significantly influenced students' knowledge,

confidence, opinions, and overall behavior scores when compared to those who did not receive the training.

Budget Estimates and Formulas of the Practice:

- Budget estimates are not available for the bOHP.
- The price of the bOHP kit is approximately \$99.

Lessons Learned and/or Plans for Improvement:

Several key lessons have been learned from implementing bOHP at the UNC School of Dentistry:

- Incorporating a didactic and clinically based infant and toddler oral health program is feasible in dental school curricula.
- The bOHP rotations significantly influenced enrolled students' knowledge, confidence, opinion, and behaviors regarding infant and toddler oral healthcare; the greatest effect observed was increased knowledge. However, the sustainability of these changes warrants future research considerations.
- Students having had experience caring for young children prior to bOHP were more confident in treating infants and toddlers than students without prior experience; multiple exposures to young children should be considered when implementing an infant oral health training program.
- The growing Hispanic population in the United States was reflected by the large Spanish-speaking patient population seen during the bOHP rotations. Better command of the Spanish language provided greater comfort and confidence for students and should be considered in dental curricula development to address equitable access to dental care for ethnic/racial groups.
- The bOHP provides an opportunity to broaden the safety net for young children's oral health. A large majority (89%) of the dental students who completed the program stated that they were now "more-likely" to care for children under the age of three.

Available Information Resources:

Baby Oral Health Program Web site at <http://www.bohp.unc.edu/>.

North Carolina Academy of Pediatric Dentistry Web site at <http://www.ncapd.net/>.

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 program goal is that every senior student will participate and gain the skills and knowledge to be competent in the preventive care for early childhood oral health. Eighty-eight percent of students who completed the program stated they were more likely to treat infants and toddlers following their clinical experience. The bOHP significantly influenced dental students' knowledge, confidence, opinions, and overall behavior scores in treating infants and toddlers. The bOHP also showed increasing the oral health knowledge of the Early Head Start children who received preventive care through the bOHP.

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.

Integrating bOHP into the UNC School of Dentistry didactic and clinical training curriculum has allowed great efficiency in implementing the program. This includes cost efficiency in staffing the program, arranging for faculty time for training, and providing dental care to participating children. For example, a UNC translator serves as the bOHP patient coordinator and bOHP clinical training is offered as a rotation for the students.

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?

Being integrated into the UNC current dental school curricula will sustain the bOHP, which was developed in 2005. With each year, more students are enrolling in the bOHP as an elective course. For the Class of 2010, 70% of the senior class will have participated before graduation, an increase from 30-45% in past years.

Providing hands-on training to the current and future dental workforce has the potential to provide sustainable benefits in expanding the dental workforce to deliver preventive dental care to infants and toddlers. Additionally, the bOHP has developed tools (e.g., the bOHP kit) to assist existing and future providers to deliver preventive care for infants and toddlers in their practices and improve access to preventive care for infants and children.

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 bOHP is the result of numerous partnerships and collaborations among public and private entities. The University of North Carolina at Chapel Hill developed bOHP, with contributions from departments and staff including the School of Dentistry, Office of Technology and Development, and graphic design staff. Other funders include the North Carolina Academy of Pediatric Dentistry, North Carolina Academy of General Dentists, North Carolina Dental Society and the National Children's Oral Health Foundation. A clinical psychologist provided resources on child development and its implications for dental care for incorporation into the kit. Early Head Start and the Lincoln Community Health Center partner with bOHP as clinical sites for student rotations.

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 bOHP addresses the following Healthy People 2010 objectives:

- Reduce the proportion of young children with dental caries experience in their primary teeth.
- Reduce the proportion of children, adolescents, and adults with untreated dental decay.
- Increase the proportion of children and adults who use the oral health care system each year.
- Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year.

Extent of Use Among States

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

The extent in the use of bOHP among other states is not known; however, the bOHP kit is available online to practitioners in all states. Also, the bOHP has noted that practitioners in Canada have shown much interest in the kit.