

By the Roots – An Oral Health Curriculum for Children

J. Philip Ford

Teaching children to have positive dental visit and take better care of their teeth are the objectives of this oral health outreach program called, “By the Roots – an Oral Health Curriculum for Children”. “By the Roots” is being taught throughout Texas in both urban and rural communities and is reaching disadvantaged, minority, low-income families. The spiraled hands-on curriculum includes thirteen different modules that target new mothers, pre-kindergarten, and kindergarten through sixth grade children with lessons that are grade and age specific. The power and impact of this program come from the variety and presentation of the oral health lessons, and the interaction of students with dental instruments, materials, models, and the presenter. Results are measured in several ways including; teacher-surveyed comments, unsolicited parent comments, and student responses to class material, pre-tests and post-tests. Teachers have showered this program with praise and approval, not only for teaching about oral health but also about science lessons that apply to other areas of learning. Parents have reported that their children are now excited about brushing their teeth and that they shared their classroom experience with the whole family. The students’ post-test scores have been significantly higher than the pre-test scores. “By the Roots” is a new and exciting alternative to the basic “how to brush your teeth” lessons of the past. In this age of information, children enthusiastically respond to this interactive way to promote oral health and dentistry.

Better Oral Health for Infants and Toddlers

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The dental hygiene needs of infants and toddlers are unique ones requiring special attention from oral health care providers. Dental hygienists can play a positive role in improving the oral health of children at risk for Early Childhood Caries by addressing their needs at an early age in community based settings. To learn how to adapt to such settings and to fully understand the needs of the community, educational initiatives can be developed to provide practical experience to student hygienists. Lessons learned from the project may be applicable to continuing education programs for practicing hygienists.

Dental hygiene students effectively identified the oral health needs of a group of infants and toddlers enrolled in an Early Head Start Program in rural Maine. In learning to do so they worked in collaboration with program staff, university faculty, and the youngsters' families. Students gained practical knowledge about the destruction of Early Childhood Caries and experience with preventive strategies to identify and reduce the childrens' risk for the disease.

With a focus on infant oral care in general, and Early Childhood Caries in particular, dental hygiene students were able to provide much needed clinical and educational services to infants, toddlers, and their families. Community partnerships may contribute to a student's maturation into a compassionate provider, one who has an appreciation for how an individual's or group's health and quality of life may be affected by societal factors. Professional dental hygiene care to specialized child populations in community based settings.

The Oral Health Education Program (OHEF)

Shernita L. Hemphill

The Oral Health Education Program (OHEF), a prevention oriented oral health education program for targeted grade levels in selected Dayton Public Schools, was designed to provide life-long oral hygiene benefit to children and to provide the second-year dental hygiene interns (DM) at Sinclair Community College, in Dayton, Ohio with experience in a community service-learning project.

The planning and implementation of the multiphased program was directed by the following objectives:

At the conclusion of the OHEP the children should be able to

1. explain the rationale behind obtaining and maintaining optimum oral health.
2. demonstrate oral hygiene skills required to obtain optimum oral health.
3. list benefits of the oral health care team in the maintenance of optimum oral health.

A Needs Assessment was used to plan activities; lessons were age specific and culturally sensitive. Additionally, a pre and a post assessment of the oral status of each child provided pertinent information, which enabled the DM to focus lessons and identify urgencies. Two aspects of the program that illustrated utility were 1) children identified with oral health concerns were followed-up by the school nurse, and 2) parental involvement, in each of the phases, increased.

The commitment and success of this community service-teaming program is demonstrated through the continued collaboration of the program partners. This program was made possible through the contributions of Sinclair Community College, Department of Dental Hygiene, the Center for Healthy Communities and the children, parents, principal, teachers and staff at Franklin Montessori Elementary School in Dayton, Ohio.

Factors Affecting Dentists' Attitudes Toward School-based Dental Sealant Programs

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Objective: Support of the dental profession is important to the success of most health dental programs including school-based sealant programs (SBSP's). However, little is known about dentists' perceptions of SBSP's. The purpose of this study was to discover whether dentists' support SBSP's and identify the factors that play a role in their support of these programs.

Methods: Full-time, private practicing, Iowa general and pediatric dentists were surveyed on their perceptions of SBSP's (n=564).

Results: 346 dentists (61%) responded. 75% overall supported SBSP'S. However, 63% believed they were not a good use of public funds. 21% believed SBSP's would unfairly take away business from private practitioners. 54% believed they would have to restore teeth sealed in SBSP's eventually. 37% believed schools are not the best place for caries prevention programs for low-income children. 27% did not believe sealants could be effectively placed using portable equipment. Logistic regression analysis found that 1) dentists' belief that portable equipment can be effective in sealant placement, 2) those who practice with one or more dentists, 3) dentists' belief that low-income children in their county do not have adequate access to dental care, and 4) dentists' who prefer placing sealants over restorations on incipient lesions were significantly related to dentists' supporting SBSP's ($p \leq 0.05$).

Conclusions: 75% of Iowa general and pediatric dentists support SBSP's overall, yet responses to individual aspects of SBSP's are varied suggesting support is not as widespread. This study suggests that support for SBSP's may be improved by dentists' having a better understanding of portable equipment, long-term studies on sealant retention and caries prevention, access to dental care issues for low-income children, and the distribution of dental caries in children.

Community Coalition

E. Kramer

Residents and providers in the racially and culturally diverse city of Cambridge, Massachusetts, were concerned about excessive dental problems in elementary school children. Health of the City and Harvard Dental School collaborated to carry out an assessment (n=270) of children in grades 1 and 8. Screening with a mouth mirror indicated that 44% of the children had cavities and 33% had untreated cavities. A school-based dental education, screening and referral program for children in grades 1 and 4 was funded. Collaboration with a research program made screening available for children in grades 1,2,3,4. In 1997/98, 1206 children were screened in grades 1 to 4 in 14 elementary schools; 583 were referred for care, In 1998/99, 1193 were screen and 578 were referred. Evaluation: The mouth mirror screen, validated against examination in a dental clinic with radiography, was able to predict caries in 98% of cases. Parents of children classified as urgent triage and a sample of children who need dental care (non-urgent) were interviewed by phone to determine whether they were able to get care for their child. A dentist./epidemiologist is analyzing data on children rescreened in the second year of the program to see whether caries were treated. Due to the long waiting list (6 months) to get dental care for low income children, the Cambridge Health Alliance created a new dental clinic staffed by two culturally competent dentists equipped to serve the culturally diverse Cambridge population and six dental residents supported by a training grant.

Healthy Schools! Healthy Kids! (HS! HK!),
Robin M. Lawrence, DDS, MPH

In October 1998, *Healthy Schools! Healthy Kids! (HS! HK!)*, Rhode Island's comprehensive school health program received a one-year grant from the CDC to plan for improved oral health among school-aged children through school-based and/or school-linked programs. To coordinate the *HS! HK!* Oral Health Initiative effectively at the state level, this joint effort of the Rhode Island Departments of Health and Education partnered with the Rhode Island Department of Human Services, the state's Medicaid agency. By fostering a cooperative relationship, *HS! HK!* has been able to articulate the differing Departmental roles/responsibilities in improving the oral health of Rhode Islanders and reduce duplication of effort to increase the delivery of oral health education/preventive services to school-aged children in school/ community settings.

In its initial year, the *HS! HK!* Oral Health Steering Committee (comprised of individuals representing stakeholder state agencies, schools, providers, third-party payers and parents) considered data and direct testimony on oral health status, existing programs, and needs. Finalized in October 1999, the recommendations identify four focal areas: 1) school-based services; 2) community-based services; 3) family outreach and education; and 4) oral health education and policies for schools provide the basis for the work to be accomplished by the *HS! HK!* Oral Health Initiative over the subsequent three years.

An unanticipated benefit of the *HS! HK!* Oral Health Initiative is the formation of a work group that is exploring options with key stakeholders to reinforce oral health infrastructure at safety net sites and to address sustained funding alternatives for effective school-based/school-linked models.

J.M. Colfer

Baltimore County Department of Health (BCDH) in collaboration with Baltimore County Public Schools (BCPS) has implemented a school-based dental sealant program targeted to children in Title One elementary schools. The program is comprehensive and free of charge. It includes dental education by our tooth fairy, screening, sealants, follow-up letters to parents with three different referral options, and in 2000 case management will be added to the program.

The primary outcome objective is directly from the Healthy Communities 2000: Model Standards document: "...to increase to at least 50% the proportion of children who have received protective sealants on the occlusal surfaces of permanent molar teeth." A University of Maryland study indicated that only 20.7% of examined children had one or more teeth with sealants in Maryland.

The program collaborators include school nurses from BCPS; the local dental association ad hoc committee that reviewed protocols, the local medical association and board of health, which endorsed the program. Funding has included grants from the state; a local hospital and the county teacher's credit union, which has committed to incrementally increased funding over five years. The Baltimore County Health Council has agreed to assist with fund raising this year to include outreach to businesses in communities with Title One schools.

Time frames, over the past four years, have been to each year increase the number of Title One schools reached from the initial five to currently seventeen schools. In FY 2001 we hope to reach all 24 of the Title One schools in our county.

Program impact to date has been dental education provided to 7,500 children in grades K-3, dental screens of 3,000 children and sealants applied to 2,471 children.

This is a textbook example of taking a fundamentally tertiary prevention program, which primarily did restorative dentistry, and redirecting it to create a primary prevention program.

Seal America: The Prevention Invention

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In 1984, following the 1983 NIH Consensus Development Lecture on the use of Dental Sealants, the Cincinnati Health Department initiated a school-based dental sealant and referral program. At the time, portable dental equipment was in its primitive stages and there were no program standards in existence. With the experience gathered in the first years of the program, expectations were developed for program cost, penetration, efficiency, etc. As sealant awareness grew, more agencies began to contact staff at the Cincinnati Health Department for program information. In 1993, the Maternal and Child Health Bureau of the Health Resources and Services Administration agreed to fund the American Association of Community Dental Programs to develop a school-based sealant program development and operations manual. The manual, "Seal America: The Prevention Invention" was completed in 1995 and distributed to 500 state and local health departments. The model presented in the manual has been utilized by many cities and states throughout the country. This paper will review the challenges of beginning a program and the contents of the manual.

Follow-up Treatment in a School-based Sealant Program

Lawrence F. Hill, DDS, MPH

Michael Kelsch

The Cincinnati Health Department, in partnership with the Greater Cincinnati Oral Health Council, a private non-profit agency, and the pediatric dental residency program at Cincinnati's Children's Hospital Medical Center, has operated a school-based dental sealant and referral program for sixteen years. The program targets 2nd and 6th grade children and all children in special education classrooms in schools in which 50% or more of the children are eligible for the subsidized meal program. Each participating child is examined by a dentist. The parents of those needing treatment are notified by letter. The school nurse is also notified. When one year sealant retention checks are done in 3rd grade, the examiner records which of the children who had been found to need treatment at the initial exam, had actually received any care. More than 70% of the children examined at one year had received care. In response to this problem, a case management model, similar to one successfully utilized in a program for persons of low income and/or with disabilities was implemented. Preliminary findings for the first 11 schools indicate that of all children examined, 33.1% were in need of treatment. The majority had no public or private insurance. Of those covered by public or private insurance who needed care, 46% of the parents could not be contacted or failed to respond to letters or calls from the case manager. Twenty-four per cent stated they had a dentist and 30% accepted case management. Only 15.4% of insured children needing treatment actively participated in the CM program. This preliminary data indicate the need to develop more effective methods to improve parent compliance and/or institute school-based treatment programs. Because school administrators are increasingly concerned about the ancillary services competing with instructional time, longer school days may be warranted.

Partners in Prevention: Sealants Today for Smiles Tomorrow 1996-2000

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Northeast Wisconsin Technical College Dental Hygiene Program, in cooperation with Fort Howard-Jefferson Neighborhood Resource Center, are in the fourth year of program operation to increase awareness of disease prevention, and reduce the prevalence and incidence of disease through service-learning educational and dental sealant programs. Dental hygiene students provide oral health education and dental sealants to second grade children. Hilbert Elementary School, Hilbert, WI expanded the program during 1997-98 only.

Eighty-five to ninety-three percent of the families who have children enrolled at Fort Howard and Jefferson Schools are eligible for the free and reduced lunch program. Ethnicity includes approximately; 46% European White American, 34% Southeast Asian, 12% Native American, 5% Hispanic, and 3% African American.

College objectives include: providing school-based, service-learning opportunities, communicating effectively in a multidisciplinary, culturally diverse environment and valuing differences.

Resource Center and school objectives include: providing an opportunity for parent and child preventive health services and education.

1996-1999 Outcomes: 100% (231 children) received oral health classroom education, 58% (135 children) received dental screening services, 72 (53% of those children screened), were referred for restorative services, 96 (71 % of those children screened), received sealants. Short-term follow-up studies showed a 94% retention rate.

Different Strokes

Chris Shea and Trish Eggers

With dental services provided to over 9,000 low-income individuals each year and frustration over follow-up and good hygiene, the dentists of Cherry Street Health Services have learned that one size does not fit all. Children who come from families, in which access to dental services has not been available, tend to view the need for dental services very differently than what we would like to see. Several years of dental services that have focused on the needs of students have led us to the conclusion that a variety of approaches with a variety of partners are necessary to have a positive impact on the oral health habits of children. Our approaches include:

- Dental hygiene teams offering prophylaxis, bite wing X-rays, fluoridation, application of sealants to 21 schools in close cooperation with an inner city school system and a rural school system.
- Sending dentists to these same schools to examine all students and refer for restorative care.
- Operation of a year-round school-based health center at an elementary and middle school to provide preventive and restorative care.
- Operation of a school-based health center high school.
- Operation of five other community based sites for restorative follow-up and emergencies.
- Cooperative arrangement with a major hospital system for dental funding and community collaboration projects.
- Cooperative arrangements with faith based groups for facility space, shared administration, funding and tie-in to special populations.

These approaches require the cooperation of Cherry Street staff, encouragement of an enlightened board of directors and partnerships that cover a variety of organizational, funding and clinical needs.

IMPROVING THE ORAL HEALTH OF CHILDREN IN HEAD START

Sharon J. Perman

Assuring the oral health of Head Start children is a daunting challenge when faced with the limited access to care, high caries rates and a prevailing attitude that primary teeth are not important. The Cook County Department of Public Health Dental Health Services Unit (CCDPH) and the Community and Economic Development Association of Cook County (CEDA) Head Start established a partnership to address the oral health care needs of the children participating in the Head Start programs in the suburban Chicago region.

Specific objectives include: compliance with federal requirements regarding all children receive preventive dental care; the enactment of a plan to eliminate pathology among the children of Head Start; encouragement of the entire family of the Head Start attendee to obtain and access a dental home; and an increase awareness in preventing dental disease. In addition to providing dental care, CCDPH created easy-to-understand educational materials, provided motivating programs to the children, parents, Head Start staff and community, and developed strategies to address caries not only in the children participating in Head Start, but in the families of these children.

PROMOTING PREVENTION THROUGH PRAIRIE'S PARTNERS

Sharon J. Perlman

School-based dental sealant programs are effective in preventing dental caries. However, the success of a sealant program is limited by the number of children that enroll in the program. The Cook County Department of Public Health provides a number of dental sealant programs to schools with established need in the Chicago suburban region, but it does not have funds available for personnel to visit each site and promote sealants to children.

To increase the number of participating students in sealant programs, the Cook County Department of Public Health (CCDPH) established **Prairie's Partners**, a partnership with the Prairie State College Dental Hygiene program and Proctor & Gamble. The hygiene students obtain the didactic information about public health and dental sealants, including instruction from a CCDPH dentist, and they create, schedule, and present an educational program for grade school children on sealants, thus completing their educational requirement in community dentistry. Proctor & Gamble provides the toothbrushes and incentives to increase school participation, and CCDPH is able to effectively service more children. This model demonstrates a synergistic working relationship that can be easily replicated, allowing for similar organizations to increase their success.