

1. PROJECT IDENTIFICATION

Title: "Sealant Placement at Community Health Fairs"

Project Number: H45MC00022 Community and School Based Sealant
Program

Project Director: Vladimir W. Spolsky, DMD, MPH

Grantee Organization: University of California, Los Angeles, School of
Dentistry

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Project Period: June 15, 1999 to June 14, 2002
(no cost extension to July 31, 2003)

Total Amount of Grant Awarded: \$ 157,292

FINAL REPORT AND ABSTRACT

Narrative

I. PURPOSE OF PROJECT AND RELATIONSHIP TO SSA TITLE V MATERNAL AND CHILD HEALTH (MCH) PROGRAMS:

Data from the California Oral Health Needs Assessment (1994) showed that 27% of participating preschool children had untreated dental caries, 14 % had Early Childhood Caries (ECC) and 9% were in urgent need of dental treatment. Low income Head Start children, in fact, had ECC rates that were 19% to 30% higher than other pre-school settings, with Hispanic child having a prevalence of 66% untreated decay, Black children 60% and Asian children 71%.

Utilization rates for dental sealants among 8-year old children was 0.6% for rural Latino children compared to 54% for non-poor White children living in fluoridated areas. Although Los Angeles will be approximately 80% fluoridated to optimal levels in the near future, the backlog of decay is so great that it will take years for its benefits to become visible clinically. Recent changes in the State of California Medicaid program (called Denti-Cal) had increased the reimbursement rates from \$9 per tooth to \$15 per tooth for sealants, which have increased utilization rates.

In summary, we plan to serve a racially and ethnically diverse group of poor, underserved children who will be identified primarily by the Los Angeles County Health and Faith Project. We plan to screen approximately 100 children at each health fair and to provide sealants for approximately 20 to 28 children at each venue. We estimate the cost to screen each child at approximately \$5 and the cost to apply sealants to be \$21 per child (based on \$7 per sealant and 3 sealants per child).

II. GOALS AND OBJECTIVES:

The overall goal of the project is to decrease untreated dental caries among low income, underserved children in Los Angeles County. A high prevalence of untreated dental caries can be the result of 1) limited access to clinical dental care, 2) low utilization of preventive services such as sealants, 3) environmental exposures and 4) high-risk behaviors. This project is designed to address the first two factors. The two specific objectives of this project are to 1) Increase access to clinical dental care; and 2) Increase the number of children with preventive dental sealants.

III. METHODOLOGY:

During the past several years we have been participating in health fairs, providing screening and oral hygiene instruction to children and adults. This has been at the request of the Los Angeles County Health and Faith Project primarily, and also from the Latin American Medical Student Association and the Venice Family Clinic. Because of the success of this program, we plan to incorporate these community health fairs into the Dental Curriculum (in a formal course on Community Dentistry) so that there is a mechanism for providing these services and to insure the future of a dental sealant program. During the first year of the project we plan to hire a part-time hygienist who will supervise two students being assisted by volunteer dental assistants, dental students and dentists in provide screening, health education and dental sealants to the most needy children. The identification of the health fair venues will be by the Los Angeles County Department for Health Services, Health and Faith Project.

IV. EVALUATION:

Our evaluation strategy will include documentation of 1) cost data, 2) population served, 3) services provided, and 4) utilization and health status. Cost data will cover supplies and management expenses in terms of time cost. The population served will be described by demographic characteristics to the extent possible, and the number of people serviced. The number of child screened, sealed and referred for dental services, and the number enrolled in Medicaid will be documented. Information concerning dental utilization (number with a regular dentist/ last visit) and dental health status (filled teeth, sealed teeth and decayed teeth) will be documented.

V. RESULTS/OUTCOMES (POSITIVE & NEGATIVE):

During the duration of this study, including the one year extension, a total of 5,526 adults (Table 1) and children were screened, given oral hygiene instructions and referred for dental services if needed. Adults also were given oral cancer screening and children were offered dental sealants.

Sealant recipients: 1,148 people received preventive dental sealants on 5,061 permanent teeth, sealing a total of 5,468 teeth. In children less than or equal to 18 years of age, 1,067 had a total of 5,009 teeth sealed. This includes 4,592 permanent teeth and 417 primary teeth. The average age of these children was 9.34 years. The average number of total (permanent and primary) decayed teeth was 1.38 and the average number of total filled teeth was 1.81.

Table 1: Number of Persons Screened, Number of People Sealed and Ethnic-Racial Distribution

	Year 1		Year 2		Year 3		Year 4		Total	
People screened	671		1,508		1,951		1,396		5,526	
People sealed	76		318		409		345		1,148	
Perm teeth sealed	354		1,564		1,822		1,321		5,061	
Prim teeth sealed	8		184		163		63		418	
Total teeth sealed	362		1,748		1,976		1,382		5,468	
Ethnicity	#	%								
African American	2	2.6	22	6.9	9	2.2	5	1.4	38	3.3
American Indian	0	0.0	3	0.9	5	1.2	0	0.0	8	0.7
Asian/Pacific Island	1	1.3	4	1.3	14	3.4	1	0.3	20	1.7
Hispanic	63	82.9	221	69.5	357	87.3	287	83.2	928	80.8
White	3	3.9	15	4.7	15	3.7	8	2.3	41	3.6
Unknown	7	9.2	53	16.7	9	2.2	44	12.8	113	9.8

The racial-ethnic breakdown of the individuals who received sealants during this time is shown in Table 1. Hispanics (80.0 %) were the predominate ethnic group in this project.

Participants screened: The percentage of individuals served by the project that reported having a regular dentist was 20 %. Slightly fewer (18.6%) had dental insurance.

The breakdown by last dental visit is as follows:

Unknown	32.4 %
1 year or less	38.6 %
>1 yr. and < 2 yrs.	9.6 %

>2 yrs. and < 5 yrs	6.9 %
more than 5 yrs.	12.5 %

The average age of the participants screened (n=2190), 18 years of age or less, was 7.89 years. The average number of total decayed teeth was 1.31, and total filled teeth was 2.16. The average number of sealed molars was 0.31 and other sealed teeth was 0.04.

We found that approximately 80 % of the families are without a regular dentist for their children and without dental insurance coverage. Rarely do we see a child with previous dental sealants. One of the provisions that we requested to sponsors of health fairs was that they have a station devoted to signing families up for Medicaid, CHIP and low cost dental insurance. Almost all of the health fairs had stations where volunteers help families complete the documentation needed for Medicaid and CHIP coverage and low cost dental insurance such as Healthy Families. Our disappointment was that we were we not able to obtain the information documenting the number enrolled in Medicaid.

Students trained. The number of individuals trained during this time was a total of 275. This included pre-doctoral dental students, dental hygiene students and dental residents in Advanced Education General Dentistry (n=23) and Pediatric Dentistry (n=9). The breakdown by year for all individuals trained was 44 (2001), 137 (2002) and 94 (2003). This community activity provided an excellent teaching experience for the residents. The pre-doctoral dental students and dental hygiene students received clinical experience in applying dental sealants, not always possible at the main campus, and experienced the value of peer learning.

The students who participated in health fairs had a rich and rewarding experience. One dental hygiene student was hired by the University to provide oversight and sealants for a similar program sponsored by LACare. Overall students complied with the procedures of the program, we were, however, disappointed that they did not always complete the data entered on the record instruments. The biggest area of incomplete data was racial/ethnic background. Regarding the educational experience of the students, they learned isolation techniques that served them well in their dental school clinics, but more important, they learned patient management skills. The dental school offers no other clinical experience where students treat ten different child patients in one five hour period.

Communities participating. The totaled number of health fairs funded by this project was 77. The total number of health fairs where sealants were placed was 73. Health fairs were staffed in 25 different communities through the greater Los Angeles area.

Providing dental sealants at community fairs generated a great deal of interest and excitement among health fair organizers and attendees. In the second and third years of the grant, participants would ask the sponsors if the dental station would be available at the fair. We were pleased that the various communities received our services with enthusiasm.

Our experiences. On the main campus of the School of Dentistry we developed a formal selective course “Oral Health Education, Screening and Service,” that has captured the interest of the third and fourth year students. The course provides a didactic overview of reaching out to the community to provide services as part of the University's

mission. It provides a mechanism for giving students academic credit for their community service and an opportunity to earn preventive dentistry credits. Prior to this project, coverage for community fairs was provided on a purely volunteer basis. We have received many constructive ideas from the students as to how to get more student volunteers on a consistent basis for the fairs. In addition, the Curriculum Committee of the School of Dentistry has passed a resolution requiring that all students participate in Community Service activities during each of their four years in dental school. The School has taken an important step in formalizing this educational experience for students.

Some of the negative experiences we had at health fairs were resolved. However, describing them may be helpful to similar programs in the future. We have had fewer problems with outdated electrical wiring and tripping circuit breakers due to the power surges of the air compressors. We resolved the problem by having and running more extension cords from adjacent structures that are on different electrical circuits.

We used our time more efficiently by getting children as soon as the fair starts rather than waiting to get them at the end of the fair schedule. However, this also depends on how well the fair is organized by the sponsors.

We have been assigned better examination stations at health fairs, which may be due to our insistence or simply because the organizers of the fairs know what our basic needs are. We no longer have to worry about being located adjacent to the station where blood samples are being drawn from children.

Two other complementary opportunities have emerged as the result of the enthusiasm generated among administrators of various organizations for our sealant program.

In the first opportunity, we were invited by the Northeast San Fernando Valley Community Oral Health Initiative (COHI) in conjunction with the Los Angeles Educational Partnership, to provide oral health screening, oral health education, and sealant placement to children in underserved families at ten health fairs that they will sponsor. This was funded by a grant from the UniHealth Foundation to the Division of Public Health and Community Dentistry, UCLA School of Dentistry (PI: Dr. Marvin Marcus). At least 50 children needing complex restorative treatment will be referred to the Northeast Valley Health Corporation Facility (a federally funded Neighborhood Health Center) which will be paid for from the UniHealth grant. Hence, we will be able to continue the placement of sealants at community health fairs.

In the second opportunity, we developed a school based sealant program for three of the neediest elementary schools in the Northeast San Fernando Valley. This is sponsored by the Northeast San Fernando Valley Community Oral Health Initiative (COHI) in conjunction with District B of the Los Angeles Unified School District (LAUSD). This includes approximately 1,200 elementary school children from three schools and extends over a period of three years. This is funded by a grant from the Wellness Foundation to the Division of Public Health and Community Dentistry, School of Dentistry (PI: Dr. Marvin Marcus).

In summary, I believe that we have made important progress with the placement of dental sealants at health fairs. We have provided children living in low income areas of

Los Angeles County with an important preventive service, which they would never have received privately. We have increased the awareness of the children's parents about the importance of dental examination, health education and most of all dental sealants. We think that we have influenced the culture of their health behavior from seeking dental care for emergency reasons only to seeking preventive care as a priority. The organizers and administrators of health fairs have also learned a great deal about prevention in Dentistry, and have become enthusiastic about our efforts. We hope to continue our present activities. Without the initial funding from HRSA we would not have been able to demonstrate the feasibility of providing sealants in a community setting.

VI. PUBLICATIONS/PRODUCTS:

One of the products developed on the grant was a voice-over in Spanish of the video "Seal in a Smile" for use in educating lay people about dental sealants and their benefits. A second product, a Spanish translation of the parent oral health education booklet "A Parent's Guide to Children's Dental Development: Youth Tooth Guide" by Kenneth Whitcomb, was used in the sealant project but was developed with resources provided by the UniHealth Foundation.

VII. DISSEMINATION/UTILIZATION OF RESULTS:

Within the state of California we have shared information about the scope of services, cost, and acceptance of dental sealants performed in a Health Fair environment with community organizations and foundations. As a result the UniHealth Foundation, the Urban Education Partnership (formerly the Los Angeles Educational Partnership) and

UCLA School of Dentistry had a three-year partnership to provide sealants at school-based health fairs in the San Fernando Valley region of Los Angeles. LACare awarded a grant to Mission Community Hospital, San Fernando, CA to continue these services. A west Los Angeles group of hospitals, the Western Area Community Benefits Consortium (WACBC), began conducting community Health Fairs in 2003. WACBC supports UCLA School of Dentistry to provide sealants at these Health Fairs.

We have also used our experience with portable equipment and planning sealant programs to promote school-based sealants. School sealant programs are conducted at three 21st Century Schools LAUSD in the San Fernando Valley, funded by the California Wellness Foundation. Inyo County First Five Commission included a school sealant program in their comprehensive oral health plan. The California Endowment funded this program that will begin in February, 2004. Northeast Valley Health Corporation (NEVHC) submitted a grant to the Robert Wood Johnson Foundation for a school-based sealant program. The project was not funded, however, NEVHC has determined that a school-based sealant program is sustainable through Medicaid billing and will seek foundation funding for start-up costs.

VIII. FUTURE PLANS/FOLLOWUP:

The UCLA Chancellor's office refocused the involvement of UCLA students and faculty in the varied communities of Los Angeles through its "UCLA in LA Initiative." As a consequence of a renewed emphasis on community service, the UCLA School of Dentistry has established a community service requirement. Dental students who volunteer to participate in the Community Based Oral Health Screening and Sealant

program receive credit toward this requirement. Because of the UCLA School of Dentistry's commitment to community service we will continue to seek funding to support the supplies, transportation and equipment maintenance of the sealant program.

IX. TYPE/AMOUNT OF SUPPORT AND RESOURCES NEEDED TO REPLICATE:

The costs of carrying out this program falls into four categories: start-up equipment and instruments, disposables and supplies, transportation, and personnel.

Start-up equipment and instruments: We purchased portable equipment for two portable operatories. This included patient chairs, operator stools, lights, dental units and commercial compressors. We purchased the following sterilizable instruments: explorers, cotton pliers, cotton roll holders. Sterilization of these instruments was done at the central sterilization of the UCLA School of Dentistry. We did not purchase equipment to clean and sterilize instruments.

Equipment and instruments for two portable operatories = \$9,835

Hand instruments = \$2,104

Unit/light/compressor/chair/stools = \$7,731

Supplies and disposables: Disposable instruments and supplies were used whenever possible. The following are items included in this category: patient education brochures, toothbrushes (dental school prices), toothpaste, dental floss, other oral hygiene aids, flashlights and batteries for screening, infection control supplies, operatory supplies, and Delton self-curing sealant material (special pricing from Dentsply Preventive Care). We chose self-cure unfilled sealant material to eliminate the need for a curing light and

occlusal adjustments.

Supplies per event (total supply cost / # events) = \$440

Transportation: We accepted invitations to health fairs throughout the greater Los Angeles metropolitan area. We attended events within a 40 mile radius of the dental school. In order to remove mileage costs as an impediment to student participation, we offered reimbursement of travel expenses. We also rented a van to transport the equipment at an average of \$150 per event.

Mileage and van rental per event (total mileage reimbursement + van rental / # events) = \$200

Personnel: Student and faculty participation was on a volunteer basis. However, we did pay one part time faculty dental professional with responsibilities for community liaison, scheduling, recruitment of student and faculty volunteers, equipment and supply maintenance, and record keeping. One part time undergraduate student worker was hired to help prepare equipment, load and unload, and set up equipment at the community site.

Personnel = \$1,133 per event

Faculty instructor (33% time for \$76,372 over 4 years / # events) = \$1,046

Equipment loading and set up per event (10 hours @ \$8.70/hr) = \$ 87

Total costs of carrying out the program.

Equipment and instrument purchase for two operatories = \$ 9,835

Cost per event excluding equipment and instruments = \$ 1,773

Excluding start up costs of equipment and instruments the average cost per sealant provided = \$ 23.64.

ANNOTATION

The goal of this project was to improve the oral health of low income, underserved children in Los Angeles County and raise the awareness of benefits of dental sealants among community members. This was accomplished by providing dental screening, health education, dental sealants, and referral to dental care for children attending weekend Community Health Fairs. The target population included 3.3 % African-American children, 1.7 % Asian-Pacific Islander, 0.7 % Native American, 3.6 % White and 80.8% Hispanic. Over 5,500 people participated in the program and over 1,100 people received dental sealants. The program was carried out initially by a collaboration of the Health and Faith Project of the Los Angeles County Department of Health and the Division of Public Health and Community Dentistry of the UCLA School of Dentistry, later to be joined by the Los Angeles Educational Partnership (now the Urban Education Partnership) and LACare. Pre-doctoral dental students, dental hygienists and dental residents under the supervision of a licensed dental hygienist or dentist provided the services.

KEY WORDS

Access to Health Care Prevention	Health Professionals
Children's' Health Insurance Program	Oral Health
Community Based Health Services	Patient Education
Community Based Preventive Health	Referrals
County Health Agencies	Screening

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Total Amount of Grant Awarded: \$ 157,292

ABSTRACT OF FINAL REPORT

PURPOSE: Sealants are an underutilized, effective decay preventive procedure. The purpose of this project is to raise the awareness of a dentally underserved community as to the benefits of preventive sealants.

GOALS AND OBJECTIVES: The long term goal of the project is to increase the oral health of children in dentally underserved communities of Los Angeles. Specific objectives are 1) to provide dental sealants, and 2) to increase access to oral health services through a program of oral health education, screening and referral.

METHODOLOGY: Sealant programs have a long, successful history in school-based programs. However, since elementary schools operate during the same hours as the dental school curriculum, alternative venues were used in this sealant program. Residents, dental students and dental hygiene students provided screening, oral health education and sealants at community health fairs. The events were planned and carried out by community organizations and took place on weekends.

EVALUATION: 5,526 individuals received oral hygiene education and screening. 1,148 individuals received dental sealants. Demographic characteristics of the people who participated indicate that the program reached a dentally underserved population: 80% were Hispanic, 80% did not have a regular dentist, and 81.4% did not have dental insurance. Although enrollment in Healthy Families and DentiCal may have increased during the period of the grant, this was not evident in the communities we served because there was a high proportion of undocumented immigrants. The health fair venue was adequate for access to children who could benefit from sealants. Among

participants under age 18, 22% were caries free. The average number of decayed teeth was 1.31 and the average number of filled teeth was 2.16. The overall cost of the program was \$9,835 for an initial investment in equipment and instruments plus \$640 per event.

RESULTS/OUTCOMES: Overall, 275 residents, dental students and hygiene students participated in 75 community health fairs over a period of 3 1/2 years for an average of 2 events per month while school was in session. One of the hygiene students was subsequently hired to help conduct a sealant program. 1,148 people received preventive dental sealants on 5,061 permanent teeth, sealing a total of 5,468 teeth. In children less than or equal to 18 years of age, 1,067 had a total of 5,009 teeth sealed. This includes 4,592 permanent teeth and 417 primary teeth. The average age of these children was 9.34 years.

PUBLICATIONS/PRODUCTS: One of the products developed on the grant was a voice-over in Spanish of the video “Seal in a Smile” for use in educating lay people about dental sealants and their benefits. A second product, a Spanish translation of the parent oral health education booklet “A Parent’s Guide to Children’s Dental Development: Youth Tooth Guide” by Kenneth Whitcomb, was used in the sealant project but was developed with resources provided by UniHealth Foundation.

DISSEMINATION/UTILIZATION OF RESULTS: Foundations and service organizations throughout Los Angeles county and California have observed the program at various venues. It has enjoyed wide community support. As a result, UniHealth Foundation, the California Wellness Foundation, LA Unified School District, LACare, Inyo County First Five Commission, and the Northeast Valley Health Corporation have

developed plans and / or carried out similar programs.

FUTURE PLANS/FOLLOWUP: On the main campus of the School of Dentistry we developed a formal selective course “Oral Health Education, Screening and Service,” that has captured the interest of the third and fourth year students. The course provides a didactic overview of reaching out to the community to provide services as part of the University's mission. In addition, the Curriculum Committee of the School of Dentistry has passed a resolution requiring that all students participate in Community Service activities during each of their four years in dental school. The School has taken an important step in formalizing this educational experience for students. We will continue to partner with county and community organizations to obtain funding to maintain this program.

SUPPORT AND RESOURCES NEEDED TO REPLICATE: The costs of carrying out this program fall into four categories: Start up equipment and instruments, disposables and supplies, transportation, and personnel.

Equipment and instruments for two portable operatories = \$9,835

Disposable instruments and supplies were used whenever possible. We were able to obtain special pricing on toothbrushes and self-cure sealant material.

Supplies per event (total supply cost / # events) = \$440

Students were reimbursed for their mileage expense. We also rented a van to transport the equipment at an average of \$150 per event.

Mileage and van rental per event = \$200

Student and faculty participation was on a volunteer basis. One part time faculty dental professional and one part time undergraduate student worker was paid

Personnel = \$1,133 per event

Total costs of carrying out the program was:

Equipment and instrument purchase for two operatories = \$9,835.

Cost per event excluding equipment and instruments = \$1,773

Excluding start up costs of equipment and instruments the average cost per sealant provided was \$23.64.

Listing of Equipment Purchased with Grant Funds

H45MC00022

CISS – Community and School Based Sealant Program (Vladimir Spolsky)

(1) Acquisition Date	(2) Description		(3) Acquisition cost	Amount charged to grant	(4) Location & condition of equipment	(5) Anticipated need and use of equipment
	model	serial number				
2/7/00	Craftsman Air Compressor	2 hp/12 gal 2 hp/4 gal	9902284059 9902373895	\$189.99 \$259.99	\$189.99 \$259.99	UCLA School of Dentistry room 63- 023 CHS. Working condition. Currently being used and antici- pate being used for health fairs
11/16/00	2 - Aseptico light (1350VBC859)	ALU-29	SH22399-110-20 SH22399-110-21	2 @ \$695	\$1,621.18	UCLA School of Dentistry room 63- 023 CHS. Working condition. Currently being used and antici- pate being used for health fairs.
11/29/00	Adec Porta-chair w/ carrying bag (1350PBD463)	3460	SNH151855 SNH151856	\$1,550x2	\$3,348.00	UCLA School of Dentistry room 63- 023 CHS. Working condition. Currently being used and antici- pate being used for health fairs
01/17/01	2 - Adec PortaChair	3460	SNH151857 SNH151858	2 @ 1376 + tax = \$2,972.16	\$2,972.16	UCLA School of Dentistry room 63- 023 CHS. Working condition. Currently being used and antici- pate being used for health fairs
3/13/01	4 - Aseptico Portable Operator Stool with carry bag (1350VBE148)	ADC-08		4 @ \$495 + tax = \$2166.88	\$2166.88	UCLA School of Dentistry room 63- 023 CHS. Working condition. Currently being used and antici- pate being used for health fairs