

PROJECT IDENTIFICATION

Project Title: Access to pediatric oral health services in Lane County, Oregon

Project Number: H17MC02526

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PURPOSE OF PROJECT

The rapidly changing population demographics in Lane County, Oregon is due to the ongoing immigration of Latino families, and has helped create access barriers to pediatric oral health services for low-income and uninsured families. By 2003, the absence of a coordinated system for providing dental care for low-income families contributed to a growing number of children unable to access needed dental screening, caries prevention and restorative care. Language and cultural differences, high unemployment rates, and the lack of incentives for dentists to serve Medicaid-eligible and other low-income families had exacerbated access barriers to dental health services for many Latino and other low-income and uninsured children.

In March 2004, the Latino Medical Access Coalition (LMAC), with an impressive record of facilitating service delivery changes that address the highest priority needs of the culturally diverse low income and uninsured population, facilitated implementation of

the LMAC Access to Pediatric Oral Health Project. The project involves utilization of a Dental Hygienist with an advanced practice license to provide on-site dental screening and prophylactic treatment for low-income uninsured children in multiple public settings. A contract arrangement with a Limited Access Practitioner (LAP) Dental Hygienist was negotiated for provision of dental hygiene services and case management for children in nursery schools, daycare programs, Head Start classrooms, and public schools throughout Lane County.

GOALS AND OBJECTIVES

The Latino Medical Access Coalition (LMAC), consisting of over twenty health, education, and human service agencies, currently oversees a well-established Latino outreach program, bilingual/bicultural safety net clinics (including a primary care clinic, prenatal clinic, well child clinic) and a cultural sensitivity educational program. In conjunction with the PeaceHealth Well Child Clinic and Head Start of Lane County, the Coalition proposes to address the oral health needs of disadvantaged children by: 1) ensuring that all uninsured, low-income children in Lane County have access to pediatric oral health services and ultimately establish a "dental home"; and 2) creating an environment where access to pediatric oral health services will remain a high priority concern within the provider and consumer communities. The main objectives of this project are to: 1) establish a pediatric dental screening and preventive oral health program that is available on-site in a variety of public settings; 2) provide fluoride varnish treatments as an effective prevention protocol for children seen in medical clinics; and 3) facilitate access to restorative treatment and establishment of a "dental home" for targeted children at the newly designated Federally Qualified Health Center (FQHC), Riverstone Community Health Center of Lane, County, Oregon, which opened in 2004.

Goal 1. To ensure that low-income and uninsured children in Lane County have access to pediatric oral health services and ultimately establish a "dental home".

Objective 1.1 – By August 2004, to establish a dental screening and preventive oral health program for children from low income and uninsured families by utilizing a contracted LAP Dental Hygienist to provide preventive dental services within childcare and school settings.

The Limited Access Practitioner (LAP) Dental Hygienist was hired fulltime by Riverstone Community Health Center in Springfield, Oregon, 2004. In project year 5, the dental hygienist schedules on-site dental screening clinics for low income and uninsured children at over 90 sites throughout Lane County, serving all of Head Start and other children located at Title 1 Schools, Migrant Summer School, ECCares, Relief Nursery, WIC and a variety of other public settings. In year 1, over 2,000 children were served. In years 2 and 3 of this project, approximately 4,000 children accessed prevention services. During year 4, the dental prevention program provided dental hygiene examinations, fluoride varnish applications and cleanings for 3,957 children in Head Start, Migrant summer school, public schools, EC cares and community day care sites. The prevention team conducted 5,723 dental screenings, and added an oral health component to the public schools health screening day. In year 5, the project surpassed the projected 5,000 encounters. In year 5, children receiving prevention services on site totaled 5,439. Dental sealant clinics were added in Spring 2008 in collaboration with the State of Oregon, DHS, Office of Family Health, Oral Health Section. Dental assessments were provided during school health screening days for 9,488 children.

The LAP dental hygienist continues to provide on-site access to dental prevention services with wide community support and partners. Advocacy is a key factor, and the hygienist serves on a number of committees, coalitions, including Board member of State Oral Health Coalition, (OrOHC). Lane Community College Dental

Hygiene Advisory Committee, and Head Start Health Services Advisory Committee.

She is immediate past-president of the Lane County Dental Hygienists' Association and was instrumental in passage of an endorsement for fluoride varnish as an effective strategy to reduce dental caries in young children.

Objective 1.2 - By September 2004, to provide fluoride varnish treatments for low income, uninsured children who seek medical care at the safety net Well Child Clinic and PeaceHealth pediatric practices.

The PeaceHealth Medical Group (PHMG) Well Child Clinic Pediatric Nurse Practitioner has long been providing fluoride varnish treatment for low income and uninsured children who are unable to access dental care. The Pediatric Nurse Practitioner continues to provide instruction and promote the use of fluoride varnish treatment for children served by mainstream PHMG pediatricians. The educational and instructional program employed by the Pediatric Nurse Practitioner is used for indoctrination of PHMG pediatricians about the use of fluoride varnish as a method of preventing or arresting dental caries in very young children who have limited access to dental care. All PeaceHealth Pediatricians are providing ongoing oral health risk assessments and fluoride varnish applications at this time. In 2009, a rural pediatric practice has added fluoride varnish intervention during well child visits.

In year 4, the nurse practitioner provided in-services on benefits of varnish, incorporation into practice and starter kits for four pediatric clinics. This resulted in eleven providers (representing 35 percent of pediatric providers in the community) using varnish in their well child exam for vulnerable children.

The Pediatric Nurse Practitioner continued to provide information and instruction to pediatricians and general practitioners regarding the use of fluoride varnish applications for children without immediate access to a dentist. There are now 20 providers using

varnish regularly on vulnerable children and approximately 1,004 children received two or more varnishes in year 4.

Objective 1.3 – By February 2006, to further ensure availability of pediatric oral health services by promoting the use of fluoride varnish at other community pediatric clinics.

The PHMG Well Child Clinic Nurse Practitioner and selected PHMG pediatricians have continued a fluoride varnish educational and instructional program for pediatricians in other community clinics. The program has helped indoctrinate community pediatricians about the use of fluoride varnish as a method of preventing or arresting dental caries in very young children with limited access to dental care. April 25, 2009, the nurse practitioner and LAP dental hygienist assisted a local pediatric dentist with a demonstration on how to apply fluoride varnish to an infant/toddler's teeth at an Oregon chapter meeting of the American Academy of Pediatrics.

In 2008, the nurse practitioner has introduced fluoride varnish into the practice in Cottage Grove, a rural community with limited dental resources for low income and uninsured children.

Goal 2. To create an environment where access to pediatric oral health services is a high priority within the local provider and consumer communities.

Objective 2.1 – By January 2005, to facilitate adequate consumer representation on the newly designated Federally Qualified Health Center (FQHC) Board of Directors by enlisting the support of low income and uninsured parents whose children experience access barriers to pediatric oral health services.

The Community Health Centers of Lane County (CHCLC) opened the Riverstone Clinic in Springfield, Oregon in 2004 (Eugene and Springfield are twin cities in Lane County, Oregon). The clinic provides medical care for low income and uninsured families, and initiated a dental hygiene program to provide preventive oral health care for

children in a number of public settings. As stated earlier, a contract arrangement between the Sacred Heart Medical Center Foundation and the CHCLC, FQHC serves as the basis for partial funding of the pediatric oral health preventive and fluoridation program.

Initially, the Riverstone Clinic (CHC) developed a governing board with over 50 percent consumer representation. This Board serves as an advisory group for the Healthy Tomorrows Project. During Year 3, the local Oral Hygiene Coalition was formalized and involves the efforts of Lane Community College, Children's Dental clinic, Eugene and Bethel and Springfield District Public Schools, WIC, PHMG, Head Start, Public Health Department and the FQHC. The Coalition is currently developing and implementing comprehensive strategies to improve oral health across all age groups in Lane County.

Objective 2.2 – By November 2005, to facilitate improved access to pediatric oral health services for children from low income and uninsured families by creating partnerships with dental staff at the FQHC in Springfield, Oregon.

Between April and September 2004, a contracted LAP Dental Hygienist functioned under the auspices of the PeaceHealth Medical Group (PHMG) Well Child Clinic and received consultative support from the Lane County Public Health Officer. In September 2004, the LAP dental hygienist contract was transferred to the Federally Qualified Community Health Center (RiverStone Clinic) in Springfield, Oregon.

RiverStone Clinic has hired a professional team to operate its on-site dental program. The team includes the LAP dental hygienist at a full-time salaried position. About half of the hygienist salary has been supported by the Healthy Tomorrows grant award, and the dental hygienist receives consultative support from a staff dentist at Clocktower Dental Clinic, Lane Community College. The LAP dental hygienist continues

to offer dental assessments, fluoride varnish treatment, dental cleanings and sealants for low income and uninsured young children in a variety of settings.

In addition to the above objectives under Goal 2, the Healthy Tomorrows Project implemented fluoride varnish clinics at Lane Community College in conjunction with Children's Free Sealant Day, where children with advanced decay received a fluoride varnish application and referrals to a dentist. Also, a partnership with EC Cares was developed to address the oral health of special needs children.

Working contracts were negotiated to follow Head Start children as they transition into kindergarten, and case management continues through second grade. Head Start was awarded a contract from UCLA to promote family oral hygiene for the target population. A total of 80 children and families received restorative work at LCC as part of this program. In April 2009, the second annual "Head Start Family Dental Day" occurred at Clocktower Dental Clinic, Lane Community College, as part of this project case management for uninsured Head Start children receiving restorative services in a family-centered and culturally competent environment. These clinics have been highlighted for the last two years as a National Head Start model of care.

During year 4, the dental program expanded to Bethel School District via a liaison with a community dentist where annual free children's restorative clinics are now occurring. Children without dental homes are case managed into this clinic with the assistance of the school nurses. South Lane School District, a rural underserved area implemented school-based sealant and varnish services in 2008, project year 5. Additional clerical staff, volunteer hygienists, and a half time dental hygienist were hired to increase numbers of children reached with varnish and sealants.

Three prevention clinics were held during Summer 2007 at the Migrant Summer School with Lane Education Service District (Lane ESD), providing dental hygiene exams, cleanings, and fluoride varnish applications, and also assisting with dental

referrals. In addition, 40 children received restorative services during Year 3, plus the 80 family members previously mentioned. In July and August 2007, seven migrant school visits reached 176 children and provided dental screening exams, fluoride varnishes and cleanings. In Summer 2008, sealant services were provided to Migrant children.

Children from the CHCLC, Safe and Sound Clinic receive free restorative dental care at White Bird Clinic, a safety net clinic. These children are homeless, runaway and at risk youth, often without the resources to pay even a co-pay. White Bird Dental Clinic has been partnering with the CHCLC to serve these children. Dental prevention clinics have been held at Women, Infants & Children (WIC) offices in Lane County. Oral health education was provided to caregivers. A "Lift the Lip" video is being provided in both English and Spanish. Dental screenings and fluoride varnish applications were also provided. WIC participation varied between five to twenty children at each clinic.

Dental screenings and referrals were provided at the Centro LatinoAmericano Health Fair during Summer 2006. The Nurse practitioner has spoken with the Prenatal Safety net clinic to promote dental cleaning, chlorhexadine rinse and xylitol gum as a way to reduce low birthweight infants and vertical transmission of bacterial flora from mother to infant. During year 4, many pregnant clients requested refills on their rinse after having experienced the improved oral health engendered by higher awareness.

Legislative changes that occurred during Year 3 strengthened the position of LAP Hygienists, including the ability to provide sealants and work at WIC sites. The legislation that was passed stating that hygienists could "provide" sealants in 2005 but had to re-worded to define "provide" in the subsequent legislative session. In 2007, sealant legislation passed stating that this service could be provided without a dentist's prior exam in schools and other limited access sites Legislative changes during year 4 include a new law that allows hygienists to diagnose, develop treatment plans, and place sealants in the public schools without a dentist. This came as good news since we are in

a HRSA Dental Health Professional Shortage area with only one dentist to serve over 14,000 residents, and without fluoride in our water supply. According to surveys conducted by Oregon Department of Human Services in Lane County, Oregon, there are only 7.7 FTE dentists willing to serve low-income residents. In 2006, estimated low-income population was 114,200 living below 200% of Federal Poverty Level. In the 2009 economy, the need is to maximize the impact, intervene earlier, with less personnel and a tighter budget.

During Year 3, The Oregon Health Plan (OHP) decreased the numbers of varnishes that will be reimbursed from four to two annually, and has insisted that reimbursement come through contracted dental programs. During year 4, a state sponsored study placed Oregon seventh from the bottom in oral health markers.

METHODOLOGY

The LMAC Access to Pediatric Oral Health Project involves utilization of a Dental Hygienist with an advanced practice license to provide on-site dental screening and prophylactic treatment for low-income uninsured children in a variety of public settings. This innovative service delivery model reduces barriers to accessing care by taking the service to areas where clients congregate. This model also eliminates the disparity that exists for low-income and minority children to receive dental healthcare preventive services. This on-site LAP Dental Hygiene model represents an expansion of the same, piloted by Head Start of Lane County. The LAP Dental Hygienist is a Medicaid Provider and will facilitate the use of preventive oral health practices, including fluoride varnish treatment, for children served by local pediatricians, and promote long term and patient centered access to the new Lane County Community Health Center.

Cost associated with building a dental clinic and employing dentists are reduced by having portable equipment and using existing areas to provide services, such as, empty school classrooms, stage, Head Start Family Centers, and the like. Cost is also

reduced by partnering in the community with existing Safety Net Clinics, White Bird Dental Clinic, Children's Dental Clinic, Lane Community College Clocktower Dental Clinic, and Dental Managed Care Organizations. At the start of this Project, the Healthy Tomorrows grant provided for 0.5 FTE dental hygienist. Now, the Community Health Centers of Lane County, Oregon provides 1.0 FTE plus 0.5 FTE dental hygienists and has become a sustainable program. One Title One School Principal said that the program has become part of the fabric of their school culture.

COORDINATION

The LMAC has a lengthy working relationship with the Oregon MCH Department, Lane County Public Health, and the American Academy of Pediatricians Oregon Chapter. The primary collaborating agencies are PeaceHealth Medical Group Well Child Clinic, Head Start of Lane County, the Lane County Health and Human Services, Public Health Department, WIC, Lane Community College, Willamette Dental Group, Hayden Family Dental Group, Capitol Dental Care, and Community Health Centers of Lane County, Oregon.

EVALUATION

The impact of the project on improving access to pediatric oral health services for children from low income and uninsured families, and on establishing a dental home for targeted children was measured by monitoring oral health indicators for Head Start enrollees as well as the number of children from uninsured families who utilize local emergency rooms and elective hospitalizations for pediatric dental treatment. A process evaluation collected data on the number of children served by the visiting on-site dental hygienist, local pediatricians using fluoride varnish for pediatric patients, low-income and uninsured consumer representatives participating in policy development activities and

serving as members of the FQHC Board, and the number of low-income and uninsured children who gain access to long term dental care at the proposed FQCHC.

RESULTS and OUTCOMES

This Healthy Tomorrows Project has been more successful than anticipated. Data collected by Head Start of Lane County has been able to track many positive outcomes.

- Dental homes have been increased by over 50%.
- Prevention services in Head Start increased from less than 10% to nearly 100%.
- Hospital surgeries have been reduced by an estimated 75%. Early in the Project, one year showed general anesthesia hospital surgeries reduced from 27 to 2. Head Start has 1,023 enrolled slots and pays for 2 or 3 hospital surgeries per year.
- Dental budget dollars used to serve less than 2% of the Head Start of Lane County (HSOLC) populations, now serve 100% of the children.
- Volunteerism among dental providers has grown as a result of this Healthy Tomorrows project, including those of Pediatric Dentists.
- Families no longer access the emergency room department for urgent dental needs since all children have access to care, or dental homes.

An unintended positive outcome was that more Head Start children ages 4 and 5 were able to tolerate chairside dentistry with a general dentist because they had been preconditioned to having their teeth cleaned at their preschool.

Early in the project, we noticed that when children left Head Start, they did not necessarily enroll in their public schools prevention program. During kindergarten health screening days, we observed that many former Head Start children were showing early signs of decalcification in their newly erupting permanent molars. These children had a

higher caries risk and level of cariogenic bacteria. During a site review visit by Healthy Tomorrows team, a suggestion was made to enroll Head Start children in their kindergarten dental prevention program before they exit. In 2008, we implemented the T-2-K process, or Transition-To-Kindergarten. Families were offered the opportunity to enroll the exiting Head Start child and siblings in the public school prevention program during Spring parent/teacher conferences. Almost 100% of families took advantage to the opportunity and 600 consent forms were returned. This year, if there is a 100% consents returned, a potential 931 Head Start and siblings will enroll. Re-enrolling in their public school prevention program will allow us to preserve newly erupting molars until eligible for sealants. A Statewide Smile Survey compared data in 2007 and found that decay has been worsening in Oregon's children, so continuing to serve more of our target population through the T-2-K process should have a positive impact.

Based on the LAP Dental Hygienist Triage Exam, cavitated lesions, or holes in teeth from obvious visual decay has been reduced. Over time, applying two or more fluoride varnish to Head Start children on-site has improved their oral health.

An explanation of the following pie chart defines the dental hygiene exam and corresponding triage levels.

Level one – routine dental referral - white spot lesions

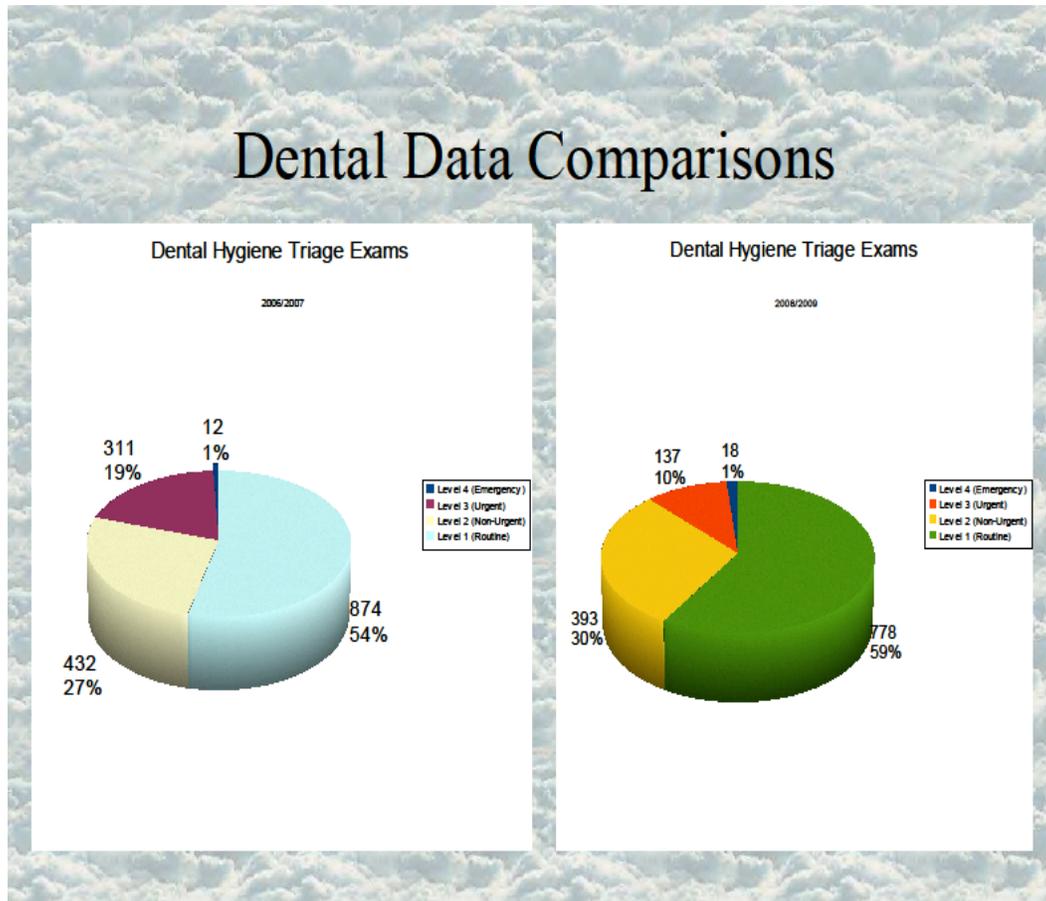
Level two - non-urgent dental referral – brown spot lesions

Level three – urgent dental referral – obvious visual decay, or cavitated lesions.

Level four - emergency dental referral – abscess and/or pain.

Data collected in Head Start 2007/2008 found that 20% were level three or four, and 54% were level one. In 2008/2009, 11% were level 3 or 4, and 59% were level 1. Therefore, as the Project progressed, advanced decay found in children was reduced. More Head Start child had only white spot lesions, rather than holes in teeth or

advanced dental decay. Head Start still pays for about 2 – 3 hospital surgeries each year for those children arriving with already “bombed-out mouths”



In the overall project, over 2,000 children were reached during Year 1 of this project, and about 4,000 children were reached during Year 2 and Year 3. During Year 3, The Dental Hygienist Outreach Program reached about 3,445 children, The PHMG Well Child Clinic reached about 400 children, and local pediatrician practices reached about 265 children. During year 4, the dental hygienist reached almost 5,000 children with oral health team services. Peace Health Medical Group physicians reached 1,000 children in medical practice with fluoride varnishes. All Peace Health Medical Group pediatricians provide oral health risk assessments and fluoride varnish services. In year 5, children receiving fluoride varnish and prevention services totaled 5,439. Sealant services were added in Spring 2008. In addition, 9,488 dental assessments were

provided during school health screening days. Access to dental prevention services for low income and uninsured children is successfully occurring in 13 school districts in Lane County targeting Title 1 Schools, Head Start, and Community Daycare programs. Through a well-established community network of partners and safety net clinics, restorative services are provided to children at the newly created Clocktower Dental Clinic at Lane Community College, Children's Dental Clinic, White Bird Dental Clinic, Quest Dental Clinic, United Way 100% Access Initiative Medical Access Project, and Head Start Family Dental Days.

Successful case management by the FQHC limited access dental hygiene practitioner and the school nurses has resulted in more children with urgent oral health needs receiving care. The partnership between the FQHC, Head Start, Peace Health, Public Schools, and others has enabled us to better track children as they move from district to district within Lane County, and continue to provide preventive sealant, fluoride and restorative services.

Head Start continues to have leftover money in their dental budget. At the beginning of this project, their budget served about 10 children out of 700. Few received prevention services or ever saw a dentist, though many had the Medicaid Oregon Health Plan. Hospital surgeries with general anesthesia were reduced due to an increase in cooperation by the preschoolers while at their general dentist's office. Dental homes in Head Start of Lane County are approaching 100%.

PUBLICATIONS/PRODUCTS

A dental packet was utilized to enroll children at various sites during Head Start and Public School registration. The packet includes a health history/ consent form, privacy practices notice, fluoride varnish information sheet, and sealant information sheet. A dental hygiene examination form was created to gather intraoral and extraoral

information in order to formulate a client care plan, and treatment plan for sealants as allowed by Oregon Dental Practice Act within the scope of practice for Limited Access Permit Dental Hygienists. The dental hygiene examination assists in triage level of dental referral. The dental chart from DHS, Office Family Health, Oral Health Section, currently used in State sealant programs, was implemented in Spring, 2008. After a dental prevention clinic, a dental referral recommendation and post treatment form goes home with the child.

Information sheets on fluoride varnish in English and Spanish were utilized from the Healthy Smile Happy Child program of U. S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau. Some of their post fluoride varnish information material was used to help create the post treatment/ referral sheet for parents. Their health history/consent form was expanded upon with the goal to continue to keep it simple.

DISSEMINATION/UTILIZATION OF RESULTS

The Pediatric Nurse Practitioner and Limited Access Dental Hygienist Practitioner presented at National, State and Local association and coalition meetings.

In April 2009, at the Oregon Chapter annual meeting, American Academy of Pediatrics, the LAP Dental Hygienist assisted Dr Jake Felix, and local Pediatric Dentist with a fluoride varnish application demonstration on a toddler, using knee-to-knee exam technique.

The Nurse Practitioner, LAP Dental Hygienist and key community partners presented, "Building Synergy-A Community in Action" and panel discussion, November 14, 2008 to Statewide Oregon Oral Health Coalition meeting held in Springfield, OR 97477. The community collaboration has been highlighted by National Head Start Association. For "Access to Oral Health Lane County" and other power points, contact:

State of Oregon, DHS-OFH, Oral Health Section, Attn: Carol Dobrovolny, 800 NE Oregon St., Ste. 365 Portland, OR 97232. carol.dobrovolny@state.or.us Phone: 971-673-1376. For information about state coalition: www.orohec.org

Nurse Practitioner, LAP Dental Hygienist and community team presented at National Assembly on School-Based Health Care, (NASBHC), June, 2006 Portland, OR. “Miles of Smiles: New Strategies in Oral Health Promotion and Caries Prevention” and “Finding the Voice to Advocate for Dental Health Programs”

Contact: NASBHC, 666 11th St, NW, Ste 735 Washington, DC 20001
www.nasbhc.org TEL: 202-638-5872 email: info@nasbhc.org

Nurse Practitioner presented “Low cost and Low-tech Interventions to Reduce Dental Caries in Low Income and Uninsured Children” to the National Association of Nurse Practitioners (NAPNAP) conference, March, 2007. This was also presented at the Oregon Public Health Association State meeting, October 2007.

Contact: Charlotte Writer, PNP cwriter@peacehealth.org

FUTURE PLANS/FOLLOWUP

The need is to more fully develop an early intervention through WIC and connect pregnant and post partum mothers to primary dental services. We plan to expand on this model by partnering with moms and grow healthy teeth for their children. Oral health education at WIC, primary dental care through Clocktower Dental Clinic or managed care dental groups, and fluoride varnish for infant/toddlers at WIC would be major components of the expanded project. A HRSA grant has been submitted by the Community Health Centers of Lane County, Oregon that fully develops this idea. Head Start of Lane County has also applied for a grant to start an Early Head Start program in Lane County. If grant awarded, the plan is to expand the existing Head Start prevention program to include the moms and children 0-3 yrs of age. Basically, future

plans include continuing the existing program, expanding to include more site and intervene earlier.

ANNOTATION

In response to the serious oral health care barriers experienced by children from low-income and uninsured families in Lane County, Oregon, the Latino Medical Access Coalition (LMAC) proposes to initiate an on-site visiting dental hygienist program to help meet the preventive oral health needs of children, promote the use of fluoride varnish as a preventive procedure in pediatric medical clinics, and utilize dentists at a forthcoming Federally designated Community Health Center to provide long-term pediatric oral health services for the target population.

KEY WORDS

Dental Treatment of Children, Oral Health, Well Child Care, Head Start, Low Income Population, Hispanics, Access to Health Care, Bilingual Services, Community Based Health Services, Interagency Cooperation, Medical Home, Minority Health, Outreach, Pediatricians, Preventive Health Care, Public Private Partnership, Schools, Screening, Uninsured