

# National Oral Health Conference®



April 30 - May 2, 2012  
Frontier Airlines Center, Milwaukee, Wisconsin  
Pre-Conference April 28-29, 2012

Presented by:

American Association of Public Health Dentistry (AAPHD) &  
Association of State and Territorial Dental Directors (ASTDD)

**Roundtable Sessions**  
**Poster Abstracts**  
**Student Abstracts**



For more information, visit:  
[www.nationaloralhealthconference.com](http://www.nationaloralhealthconference.com)

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## The National Oral Health Conference is

sponsored by the:

**Association of State and  
Territorial Dental Directors**

**American Association of  
Public Health Dentistry**

**Centers for Disease Control and Prevention**

### Conference Partners Include:

American Association for  
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American Dental Association

American Dental Hygienists' Association

DentaQuest Foundation

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## Session Objectives

Objectives for each session will be posted/announced prior to the start of each session. They will also be listed appropriately on the session evaluation.

## Disclosure

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## Table of Contents

Rountable Topics.....	3-12
Monday Poster Presentations.....	13-31
Student Poster Presentations .....	26-31
Tuesday Poster Presentations.....	31-45
AAPHD Student Merit Awards Program .....	46
AAPHD Foundation Grant Award 2011 .....	47

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# National Oral Health Conference®

## ROUNDTABLE TOPICS

Monday - April 30, 2012 - 11:30 p.m. - 1:30 p.m.

*If presenter's intent to participate was not received prior to printing, it is possible that some abstracts listed will not be presented.*

Below is a list of topics that will be discussed during the Roundtable Luncheon on Monday, April 30, 2012, from 11:30p.m. – 1:30 p.m. Please take a few moments to review this list and choose at least two topics of interest prior to the luncheon. The number listed next to the title is the table number assigned to that topic. Tables will be arranged in numerical order. Be sure to grab a box lunch before sitting down. Once attendees are settled at their tables, the first discussion will begin. After about 30-40 minutes, the moderator will direct attendees to move to a second table. We suggest that you have more than two topics chosen ahead of time since there is no guarantee you will find an open seat at your first choice. Seating will be first-come, first-seated and the maximum number of participants at a table is limited to ten.

**1 NEED ORAL HEALTH INFORMATION? CONTACT THE NATIONAL MATERNAL AND CHILD ORAL HEALTH RESOURCE CENTER**

*Jolene M. Bertness, M.Ed., Health Education Specialist, National Maternal and Child Oral Health Resource Center*

This presentation will describe services of the National Maternal and Child Oral Health Resource Center (OHRC) to assist state and territorial oral health programs in developing and promoting oral health policies, increasing awareness of oral health issues, and developing initiatives to prevent and control oral diseases. The presentation will provide an overview of OHRC services including a specialized library, educational materials produced by OHRC, technical assistance, a comprehensive website, and announcement and discussion lists.

Source of Funding: Maternal and Child Health Bureau, Health Resources and Services Administration

**2 INTEGRATION OF CRITICAL INFORMATION REGARDING SUGAR-SWEETENED BEVERAGES IN DENTAL AND DENTAL HYGIENE CURRICULA**

*Poonam Jain, BDS, MS, MPH, Associate Professor, Director of Community Dentistry, SIU School of Dental Medicine*

This session will focus on dental public health's partnership with academia. Significant increases in the incidence of obesity, diabetes and early childhood caries (in 2-5 year old children) are major public health issues currently facing the United States. Inappropriate consumption of sugar-sweetened beverages contribute significantly to these problems. Information regarding the contents, properties and effects of the most popular beverages consumed in the United States is currently presented in dental and dental hygiene curricula with varying degrees of detail. With the significant increase in availability and consumption of these drinks, it has become critical that detailed evidence-based information regarding these drinks and their effects be presented to all dental and dental hygiene students.

Following this session, participants will be able to describe what is currently taught in dental and dental hygiene schools regarding popular commercially available beverages in the United States and explain why it is critical to incorporate comprehensive information regarding sugar-sweetened and/or acidic beverages into the dental and dental hygiene curricula. The participants will also be able to categorize various beverages based on their

contents and properties. This session will enable participants to discuss the clinical recommendations for consumption of these beverages that should be included in dental and dental hygiene curricula. Session participants will be able to choose from an array of engaging and interactive techniques that may be used to incorporate this critical information in dental and dental hygiene curricula.

Source of Funding: None

**3 MANAGING FOR SUCCESS: A USERS GUIDE TO DENTAL PROGRAM SUSTAINABILITY AND ACCOUNTABILITY**

*Dori Bingham, BA, DentaQuest Institute*

This roundtable will guide dental and administrative leadership in understanding how to continuously evaluate and improve dental program performance. What data is commonly available and what can that data tell us about our program's performance? How can we use data to monitor the results of performance improvement strategies and foster dental staff accountability? How do we establish realistic and achievable financial and productivity goals that will guide the dental program to sustainability? Once we have established goals, what are the key strategies for maximizing provider productivity? How can we use our most important strategic tool, the dental schedule, to ensure program success? This roundtable will provide practical and effective guidance in creating dental programs that are goals-based and results-driven.

Source of Funding: None

**4 WHAT'S NEW IN HEAD START? THE NATIONAL CENTER ON HEALTH**

*Katrina Holt, MPH, MS, RD, National Maternal and Child Oral Health Resource Center; Kathy Geurink, RDH, MA, Association of State and Territorial Dental Directors; Beverly Isman, RDH, MPH, ELS, Association of State and Territorial Dental Directors*

Children in Head Start have well-documented challenges to their developmental, emotional, social, and physical health, including increased rates of asthma, dental caries, and obesity. In response, the Office of Head Start established the National Center on Health to help ensure that Head Start agencies have access to high-quality information, training, and technical assistance to effect the best possible outcomes for those enrolled in Head Start. NCH will build the capacity of Head Start staff

# ROUNDTABLE TOPICS

to effectively serve pregnant women, infants, and children by implementing a comprehensive health program that includes health, mental health, nutrition, and oral health with a focus on health promotion, disease prevention, and early intervention. Planned oral health activities include identifying, developing, and disseminating research- and practice-based resources; monitoring data and research; providing trainings and technical assistance; and fostering communication and collaboration between Head Start staff and stakeholders at the national, regional, state, and local levels. In addition, activities will build on previous and existing efforts to support oral health services for the Head Start population. The center includes the following partners: the American Academy of Pediatrics; the Education Development Center; Georgetown University, Department of Pediatrics, Center for Child and Human Development; Georgetown University, Health Policy Institute, National Maternal and Child Oral Health Resource Center in collaboration with the Association of State and Territorial Dental Directors; the University of California at Los Angeles, Anderson School of Management, Health Care Institute; and the University of North Carolina at Chapel Hill, National Training Institute for Child Care Health Consultants.

Source of Funding: Office of Head Start

## 5 TOOLS FOR PLANNING, EVALUATING AND IMPROVING ORAL HEALTH COLLABORATIONS

*Beverly A Isman, RDH, BS, MPH; BJ Tatro, PhD; Christine Wood, RDH, BS*

Governmental agencies, philanthropic organizations and others recognize that collaboration is needed to address complex oral health issues. Many partnerships have been formed, with varying degrees of "success." Few groups have actually evaluated the effectiveness of or outcomes from these partnerships. ASTDD recently fieldtested and released new tools to help groups be more strategic in selecting partners and in evaluating collaborative efforts. The Handbook on Planning, Evaluating and Improving Collaboration for Oral Health Programs and the accompanying Workbook include tools for 1) determining a shared purpose, 2) raising collaboration literacy, 3) inventorying and mapping communities of practice, 4) monitoring stages of development, 5) assessing levels of integration, 6) assessing inter-professional collaboration, and 7) developing a communication plan to share findings. This roundtable will provide an overview of the tools and options for using them with different groups. Participants will discuss how these tools might be useful in their own programs.

Source of Funding: CDC cooperative agreement 5U58DP001695

## 6 ENVIRONMENTAL EXPOSURES THAT INCREASE RISK FOR ORAL DISEASES

*Joel Schwartz DMD, DMedSc, Chuck Lehew PhD*

We intend to discuss oral biology responses to oral and systemic health effects resulting from exposure to environmental pollutants. These include for example, an interaction between oral microorganisms, epithelium, saliva and chemical and microbial compositions coming from tobacco (tobacco smoke and smokeless tobacco products), alcohol, sexual activities, diet, and industrial sources. This interaction produces change in oral biology to influence incidence of non-tumor and tumor oral diseases. We will also discuss these variables: Lifestyle factors,

such as smoking, drugs, and drinking habits and customs etc., which have important implications for health and are often the subject of epidemiologic investigations as they also impact oral diseases. Oral mucosa and non-oral mucosa diseases include: throat and oral cavity disorders, cancers, dental decay, and periodontal ("gum") diseases. Oral mucosa diseases are often linked to virus infection and recent reports show a growing concern with human papilloma or herpes family of viruses and this association will also be discussed.

Information to be discussed:

- 1) Populations and degree of risks
- 2) Current methods to assess effects (screening methods)
- 3) Methods for prevention or reduction in risk
- 4) Future developments underway and current changes suggested for therapy

Expectations for discussion:

- 1) Increase knowledge of recent information concerning oral biology and diseases (local and systemic environmental factors);
- 2) Enhance ability to reduce risk for oral diseases;
- 3) Promote interest to educate others about oral biology interactions and engage others in prevention methods such as oral/dental examination and in discussions of systemic health problems with oral health practitioners.

Source of Funding: UIC CCTS: Grant No. UL1RR029879; NIH/NCI: Grant No. CA139137-01A1

## 7 STRATEGIC PARTNERSHIPS TO ENHANCE THE PUBLIC HEALTH INFRASTRUCTURE

*Dr. Donald Marianos, Dr. Reginald Louie, Ms. Kathy Mangskau, Dr. Scott Tomar, Dr. Robert Weyant, Hugh Silk MD, Dr. Eleanor Gill, Dr. Steve Geiermann*

In 2009, to inform and support its advocacy position for the underserved, the ADA's Council on Access, Prevention and Interprofessional Relations (CAPIR) formed an advisory committee composed of individuals from the public health community to advise CAPIR about issues related to public health outreach and building collaborative relationships.

The goals of the Public Health Advisory Committee (PHAC) include assisting CAPIR: develop recommendations about policies, programs, interventions and research related to improving the public's oral health and public health infrastructure and capacity; understand the challenges faced by the dental public health community; enable the public health community to gain a better understanding of the private sector; serve as a conduit of information between the ADA and its agencies and the public health community; and foster collaboration and partnership between the public and private sectors. It was also deemed important that this committee be able to bring dental public health issues to the Council's attention for discussion and possible action by the ADA.

The Public Health Advisory Committee is looking to better inform itself about bridging the gap between the dental public health community and organized dentistry. Come and share your success stories, present frustrations, and hopes for the future. Strategic partnerships at the local, state and federal levels are necessary to begin bridging this gap. Your input is valued and sought after.

Source of Funding: None



## ROUNDTABLE TOPICS

### 8 DEVELOPMENT OF A COLLABORATIVE SELF-ASSESSMENT TOOL FOR PUBLIC HEALTH AND MEDICAID/CHIP DENTAL PROGRAMS

*Ms. Mary Foley, Medicaid/SCHIP Dental Association (MSDA), Ms. Cathy Coppes, Iowa Dental Medicaid, Dr. Leon Bragg, Oklahoma Dental Medicaid, Ms. Marty Dellapenna, Medicaid/SCHIP Dental Association, Dr. Steve Geiermann, American Dental Association; Dr. Lynn Mouden, Association of State and Territorial Dental Directors*

With the encouragement of CMS, a workgroup, comprised of ASTDD and MSDA leadership, state dental directors and Medicaid and CHIP Dental Program Managers, is developing a draft tool for self-assessment of collaboration between state oral health and dental Medicaid programs. This tool will include sections to be completed independently by DPH and Medicaid/CHIP dental directors, and others that will be completed jointly. Discussion of independent and joint responses is intended to identify strengths in past and current collaborative efforts and to identify opportunities for future collaboration. This roundtable is intended to solicit feedback about this draft tool and to seek ways to improve the assessment and its potential outcomes.

Source of Funding: None

### 9 MEDICAID DENTAL PROGRAM INTEGRITY INVESTIGATIONS... "GUILTY UNTIL PROVEN INNOCENT"

*Dr. Sidney Whitman, New Jersey MPAC representative, Dr. Charles Czerepak, Illinois MPAC representative, Dr. Tom Floyd, Florida MPAC representative, Dr. Tom Underwood, Tennessee MPAC representative, Dr. Steve Geiermann, CAPIR staff*

With the advent of health care reform, many states have increased their fraud investigations to protect the public good and the rapidly diminishing resources available. In many states, those few practitioners who see the bulk of Medicaid and CHIP eligible individuals are routinely flagged for investigation simply due to the volume of patients seen. A number of state Medicaid investigators are contractors who have no dental expertise. The costs and aggravation of defending oneself is driving many of these practitioners to rethink whether the hassle is worth it. Maintaining Medicaid program integrity is essential, but sane and reasonable guidelines are needed. This roundtable is an opportunity to share your experiences and insights with members of the Medicaid Provider Advisory Committee (MPAC) within the ADA's Council on Access, Prevention and Interprofessional Relations.

Source of Funding: None

### 10 CREATION OF CHILDREN'S HEAD START DENTAL HOMES WITH A PARTNERSHIP OF THE PENNSYLVANIA DENTAL ASSOCIATION

*Carolyn Kelly-Mueller, DMD, Sara Baker, MSW, MPH Capstone Project, Department of Public Health Sciences, Pennsylvania State University College of Medicine*

Access to a Dental Home in rural areas of Pennsylvania can be difficult for a Head Start Program that is federally required a 100% Dental Home placement for overall program funding. A study of the Pennsylvania Dental Associations' one-on-one personal approach contact of establishing Dental Homes for the Dental orphans (without dental homes) in the Mercer County. Success rates along with difficulties that were encountered will be reported. Solutions in the creation of children's dental homes for rural areas will be discussed in depth with hope of creating a national model for use by oral health and Head Start Programs.

Source of Funding: None

### 11 ASTDD STATE ORAL HEALTH PROGRAM REVIEW OF ALASKA: A MODEL FOR PROGRAM & POLICY AFFIRMATION AND VALIDATION

*Reginald Louie, DDS, MPH, Public Health Consultant, Association of State and Territorial Dental Directors, Brad Whistler, DMD, Dental Director, Alaska State Division of Public Health*

The ASTDD offers an opportunity for states to participate in a comprehensive state oral health program review (SOHPR) consisting of the development of briefing information, the completion of a number of self-assessment tools along with an onsite visit by a team of consultants who conduct interviews with key public health officials and stakeholders, the sharing observations and recommendations, and the provision of a final report and follow-up efforts. Between 1986 and 2004, ASTDD completed comprehensive onsite reviews for 19 states, and since then for 3 states utilizing the formal SOHPR protocol. This review protocol is based on the ASTDD Guidelines for State and Territorial Oral Health Programs. In 2011, a SOHPR was conducted for the State of Alaska. A formal report with findings and recommendations was developed and submitted to the Director, Alaska Division of Public Health and other stakeholders. This discussion will: 1) describe the ASTDD SOHPR methodology; 2) highlight key findings/'lessons learned' from the AK SOHPR; and 3) explore actual and potential program and policy development and implementation.

Website URL for SOHPR Manual:

[http://www.astdd.org/state-oral-health-program-review-\(sohpr\)-manual/](http://www.astdd.org/state-oral-health-program-review-(sohpr)-manual/)

Source of Funding: Funded by CDC Cooperative Agreement 5U58DP001695

### 12 EXPLORE OVERCOMING OBSTACLES TO ORAL HEALTH: A TRAINING PROGRAM FOR CAREGIVERS

*Paul Glassman, DDS, MA, MBA, University of the Pacific, Arthur A. Dugoni, School of Dentistry, Barbara J Smith, RDH, MPH, PhD, American Dental Association*

Overcoming Obstacles to Oral Health: A Training Program for Caregivers of People with Disabilities and Frail Elders is designed to engage two different audiences – Direct Caregivers and facility administrators and/or trainers in long term facilities. The direct caregiver training materials (created to be understood by a caregiver with a 6th grade education or equivalent) are designed to engage them in maintaining oral health of those they care for. The material for administrators and trainers provides suggestions for facility administrators, trainers, etc. about how to create and implement an oral health program in an organization. Most importantly, the training materials can be adapted to a variety of educational settings and structures and may be used in a pyramid training program where oral health professionals train facility management staff who can, in turn, train direct care staff.

Materials include a CD and a DVD organized with a Direct Caregiver Workbook, Daily Mouth Care Plan, Administrators and Trainers Manual, Pre and Post Tests, A PowerPoint presentation that covers the concepts in the Direct Caregiver Workbook, Direct Caregiver Video, MDS Oral Health Assessment Video for nursing staff. Basic information about oral diseases and their prevention is addressed as is the use of physical, medical, and behavior strategies for preventing dental diseases. Some unique characteristics are that the program uses a combination of oral health prevention, dental information and behavioral approaches that benefit caregivers of both frail elders and people with disabilities.

Source of Funding: None

## ROUNDTABLE TOPICS

### 13 HELP NURSING HOME RESIDENTS PAY FOR CARE

*Michael J Helgeson, DDS, Apple Tree Dental, Greg Folse, DDS, Outreach Dentistry, Barbara J Smith, MPH, PhD, American Dental Association*

The Incurred Medical Expense (IME) regulations can help most nursing facility residents who are enrolled in Medicaid pay for dental care. Widely used by residents who need new eyeglasses, hearing aids or podiatry services, IME can also be applied to dental services that are medically necessary but not covered by Medicaid. The process enables nursing facility residents to use their monthly income, usually applied to their nursing home care, to receive health care services not covered under Medicaid. The documents with guidelines for three distinct groups: dental professionals; state and county Medicaid caseworkers; and nursing home residents and their representatives will be provided and discussed.

Source of Funding: None

### 14 CAMPAIGN FOR ORAL HEALTH AND WATER FLUORIDATION IN NEW YORK: AN EDUCATIONAL MODEL FOR THE STATES

*Jacinta D. Watkins, DDS, MSPH; Rachel Studley, MHA; Paula Fischer, RDH; Jayanth V. Kumar, DDS, MPH; Erin Knoerl, MPH; Tom Curran, DDS; Buddhi Shrestha, DDS, MS, PhD*

Objective: To provide accurate, reliable scientific information to advocates and policy makers in New York State in order to counter misinformation on water fluoridation.

Methods: Campaign for Dental Health, a new national oral health movement launched by Pew Center on the States, is a collaborative effort between Voices for America's Children and the American Academy of Pediatrics. In November, 2011, the Campaign launched its online educational tool, [www.ILikeMyTeeth.org](http://www.ILikeMyTeeth.org).

The New York State Bureau of Dental Health and the New York State Oral Health Technical Assistance Center established the Oral Health NY partnership and collaborated with PEW to establish [www.NewYorkILikeMyTeeth.org](http://www.NewYorkILikeMyTeeth.org), a microsite meant to disseminate oral health information to all New Yorkers.

Results: This New York-specific site provides water fluoridation resources, oral health-related laws and regulations, training manuals for oral health advocates, and relevant news articles. A committee consisting of key advocates provides guidance on the content of this site and regularly updates frequently asked questions.

Links to existing materials developed by respected organizations such as the NYSDOH, CDC, and ADA were used to populate the website.

Efforts are underway to develop video testimonials discussing the benefits of water fluoridation from water operators who fluoridate their water systems, school nurses, and other stakeholders in New York.

Conclusions: This website serves as a reliable source of information on maintaining and promoting water fluoridation and dispelling misinformation on the safety and effectiveness of fluoridation. All fifty states could easily create a more localized campaign and website under the I Like My Teeth umbrella.

Source of Funding: Supported by HRSA ORAL HEALTH WORKFORCE INITIATIVE T12HP1933502 and HRI Contract 15-0587

### 15 HEALTH LITERACY INFORMATION EXCHANGE (HELIX): DEVELOPMENT OF A TOOLKIT FOR ORAL HEALTH PROFESSIONALS

*Gary D. Podschn, BA*

The American Dental Association (ADA) proposes to develop a health literacy educational video as part of a toolkit to improve provider-patient communication and increase awareness about health literacy. This interactive session will be used to solicit ideas and feedback about content, development, dissemination and evaluation. Focus will be on identifying key stakeholders needed for successful production and distribution.

Health literacy in dentistry is "the degree to which individuals have the capacity to obtain, process and understand basic health information and services needed to make appropriate oral health decisions." The ADA affirmed that limited health literacy is "a potential barrier to effective prevention, diagnosis and treatment of oral disease," and "clear, accurate and effective communication is an essential skill for effective dental practice."

Nearly nine out of ten U.S. adults have difficulty understanding and using everyday health information that is generally available in health care facilities, retail outlets, media and communities. The average American reads at the 8th to 9th grade level; however, health information is usually written at a higher reading level. People with limited health literacy are often less likely to seek preventive care, comply with prescribed treatment and maintain self-care regimens needed to control chronic diseases. People are often embarrassed or ashamed to admit they have trouble understanding health information and instruction. In the U.S., limited literacy skills are a stronger predictor of an individual's health status than age, income, employment status, education level, and racial or ethnic group.

Source of Funding: ADA

### 16 CAVITY FREE AT THREE TRANSLATION PROJECT: OVERCOMING THE LANGUAGE BARRIER IN ORAL HEALTH EDUCATION

*Karen Savoie, RDH, BS, Associate Professor, University of Colorado, School of Dental Medicine, Education Director, Cavity Free at Three, Colorado AHEC Program, University of Colorado Denver*

Background: Since 2008, Cavity Free at Three has trained over 1300 primary care providers in the provision of oral health education in a wide variety of settings. Cultural outreach efforts have led to the translation of educational materials into 9 languages. These valuable resources are distributed through community outreach locations, language resource centers and training participants.

Objectives: 1) Explain the process for language translation. 2) Identify the languages currently available for distribution through the CF3 website 3) Discuss appropriate opportunities for distribution of translated materials and outreach opportunities

Methods: Cavity Free at Three has translated two educational brochures, Child Oral Health and Perinatal Health, into 9 languages: Arabic, Chinese, French, German, Hindi, Russian, Vietnamese, Somali and Spanish. Materials are posted on the CF3 website and available for free download. Brochure copies are distributed to community groups working to overcome racial and ethnic health disparities.

Results: Over 3000 brochures have been distributed. CF3 has been able to outreach culturally diverse communities with materials in their native languages, as well as identify oral health advocates within these populations. Service learning opportunities for students at the University of Colorado have been instrumental in inter-professional education efforts.

## ROUNDTABLE TOPICS

Conclusions: Culturally appropriate translated materials provide an important tool in educating families on the importance of prevention of dental disease in children and pregnant women.

Source of Funding: Grant Funded: Caring for Colorado Foundation, The Colorado Health Foundation, The Colorado Trust, Delta Dental of Colorado Foundation, Kaiser Permanente, Rose Community Foundation and the Colorado AHEC Program

### 17 ORAL HEALTH AS A LEADING HEALTH INDICATOR

*Marcy Frosh, Children's Dental Health Project; Kathleen Mangskau, RDH, MPA, KM Consulting; Gina Thornton-Evans, DDS, MPH, CDC, Division of Oral Health, Surveillance, Investigations, and Research Team*

Healthy People (HP) 2020 is the fourth iteration of this national initiative. With the release of the national objectives in December 2010, work began to develop and launch the 12 Leading Health Indicators (LHI) for the nation. In October 2011, the Assistant Secretary for Health launched the leading health indicators, which for the first time, included oral health as an indicator. This session will focus on the background related to the development of these indicators, how states may implement and use HP 2020, along with strategies to implement oral health as a leading health indicator. In addition, this session will inform attendees on how they can become involved with HP 2020 and LHI activities during August 2012 when oral health is highlighted.

Source of Funding: None

### 18 COMMUNITY SITE DEVELOPMENT FOR UIC COD DADM 325: COMMUNITY BASED DENTAL EDUCATION; A COMMUNITY BASED EDUCATION COURSE FOR SENIOR YEAR DENTAL STUDENTS

*Aljeron Bolden, DMD, MPH, Christine Hryhorczuk, DDS, MSPH, Caswell Evans, DDS, MPH, Khatija Noorullah, MPH, MEd, Kari Radjewski, MA*

Methods: This presentation will discuss "lessons learned" in the development and the sustainment of an academic / community site partnership over a nine year period for the purpose of supporting UIC COD's student 4th year community-based clinical experiences.

Discussion will be given on the development and modification of administrative protocols and procedures, web based computer management, data collection systems, and evaluation criteria for success.

Results: Since 2003 the Extramural Education Program has been successful in developing and maintaining community-based partnership sites, credentialing adjunct community-based faculty, and assisting in student placement for over 17 clinical community-based sites and 319 UIC COD students.

Conclusion: Many challenges present when academic / community partnering relationships are formed and maintained. This presentation discusses some of those challenges and methods utilized to maintain and strengthen UIC COD Community-Based Partnerships for almost a decade.

Source of Funding: None

### 19 EMERGENCY DEPARTMENT USE FOR DENTAL PROBLEMS – ADA AND CDC COLLABORATION AND DISCUSSION OF STATE AND LOCAL AREA PROJECTS

*Sheila Strock, Laurie Barker*

Join us for a roundtable discussion about use of hospital emergency departments for dental problems. Hear about projects underway through collaboration between the ADA Council on Access, Prevention and Interprofessional Relations and CDC's Division of Oral Health and BioSense surveillance program. Share your activities, issues, and recent publications in this area. Learn about a pilot project spearheaded by members of the International Society for Disease Surveillance to compile an inventory of non-infectious disease surveillance indicators (chief complaint keywords and/or ICD-9-CM codes) that can be used with emergency department data (and potentially other healthcare data sources, e.g. primary care and inpatient data).

Source of Funding: Presenters are supported by ADA and CDC Division of Oral Health.

### 20 RECOMMENDATIONS, NEXT STEPS - NATIONAL COALITION CONSENSUS CONFERENCE: ORAL HEALTH OF VULNERABLE OLDER ADULTS AND PERSONS WITH DISABILITIES

*Barbara J Smith, RDH, MPH, PhD, American Dental Association; Teresa A. Dolan, DDS, MPH, University of Florida College of Dentistry*

In late 2010, the ADA convened a conference of 150 representatives from dentistry, medicine, public health and advocacy organizations to begin an open discussion about the increasing numbers of vulnerable older adults and people with functional limitations and complex medical conditions who live in community settings and need oral health care. Rich interactive discussions about delivery systems, financing, education, research, and policy resulted in the formulation of recommendations representing the collective wisdom of a variety of stakeholders who want to improve the overall health of vulnerable adults by improving the health of their mouths. Example recommendations include: educating dentists and the nursing home industry about Incurred Medical Expense (IME) allowance in long-term care facilities; developing financially viable models of care that bring services to places where vulnerable adults live and receive other services; promoting widespread use of surveillance tools like the Association of State and Territorial Dental Directors Basic Screening Survey for Senior; and launching a national coalition on oral health for vulnerable elderly and persons with disabilities. Proceedings from the Conference were released in the fall of 2011, followed by a national webinar highlighting the recommendations. The proceedings will be used in the roundtable to discuss recommendations, highlight progress made to date, brainstorm on next steps, and envision the launch of a national coalition focused on the most vulnerable of adult populations, the elderly and persons with disabilities.

Source of Funding: None

### 21 SMILEMAKER: A NOVEL ELECTRONIC DATA ENTRY TOOL DEVELOPED FOR THE MILES OF SMILES SCHOOL-BASED ORAL HEALTH PROGRAM IN SOUTH TEXAS

*Annaliese E. Cothron, BS, MS, Statistician Intermediate, Department of Comprehensive Dentistry, University of Texas Health Science Center at San Antonio Dental School, Jane E. M. Steffensen, MPH, MCHES, Associate Professor, Division of Research, Department of Comprehensive Dentistry, University of Texas Health Science Center*

## ROUNDTABLE TOPICS

at San Antonio, Dental School, Jennifer M. Bankler, DDS, Oral Health Program Coordinator, Dental Division, City of San Antonio, San Antonio Metropolitan Health District, San Antonio, Texas, Josefine Wolfe, MPH, RDH, CHES, School Based Dental Health Program Coordinator, Dental Division, City of San Antonio, San Antonio Metropolitan Health District and David P. Cappelli, DMD, MPH, PhD, Associate Professor and Director of Research, Department of Comprehensive Dentistry and Director, Dental Public Health Residency Program

Oral health improvements, promoted in Healthy People 2020 National Health Objectives as oral indicators, are tracked at the local, state, and national levels to monitor attainment of oral health targets for children. School-based and community-based programs are effective ways to promote oral health and prevent oral disease through collaborative partnerships. School-based dental sealant programs are recommended by the Task Force on Community Preventive Services. The Miles of Smiles school-based oral health program in San Antonio and Laredo, TX provides dental sealants for children in second grade and dental screenings and fluoride varnish for children in kindergarten, second, and third grades attending public schools with 75% or greater free and/or reduced lunch enrollment. A direct data entry software program, SmilesMaker, was developed, piloted, and implemented for collecting and analyzing oral health data based on Basic Screening Survey Protocol. Designed to track longitudinal data, SmilesMaker can collect over 130 data points per child with imbedded technology that ensures accuracy of data collection and increases functionality for clinical care coordination/case management through an efficient, user-friendly interface. Almost 5,000 children participated in the Fall and an estimated 10,000 children will be entered into SmilesMaker by the end of the school year with the potential to track these children over time. The SmilesMaker data entry program is an option for programs to monitor indicators and provide overall evaluation. As school-based oral health programs expand in the future, funding agencies and organizations will expect innovative electronic mechanisms to be ongoing for process and outcome assessments.

Source of Funding: Texas Oral Health Workforce Project Funded by the Grants from the States to Support Oral Health Workforce Activities Program, Health Resources Services Administration (HRSA), USDHHS T12HP19338

### 22 FLUORIDE SUPPLEMENTS IN COMMUNITY PROGRAMS

Howard Pollick, BDS, MPH, Clinical Professor, Dept. of Preventive & Restorative Dental Sciences School of Dentistry UCSF, Jayanth V Kumar, DDS, MPH, Acting Director, Bureau of Dental Health, New York State Department of Health, LeeAnn HoaglinCooper, RDH, BS, Consultant, ASTDD Fluorides Committee, Dental Public Health Hygienist, Snohomish Health District

ASTDD Best Practices has recommended that fluoride rinse or fluoride tablet programs be implemented in communities without the benefit of community water fluoridation. Because fluoride supplements are intended to compensate for fluoride-deficient drinking water, the dosage schedule requires knowledge of the fluoride content of the child's primary drinking water; consideration must be given to other sources of water (e.g., home, child care settings, school, or bottled water) and to other sources of fluoride (e.g., toothpaste or mouthrinse), which can complicate the prescribing decision. The CDC in 2001 and the ADA in 2010 have also recommended that fluoride supplements be limited (to children 6 months to 16 years),

based upon each child's individual risk for tooth decay, rather than solely on the absence of fluoride in drinking water. ASTDD Fluorides Committee invites you to join a discussion of how new evidence is changing recommendations for ASTDD Best Practice for school-based fluoride tablet programs.

Source of Funding: None

### 23 IS A DEAD PROVIDER LIST DRAGGING DOWN REFERRALS? GO LIVE: CALL CENTER REPLACES PUBLISHED LIST OF PROVIDERS AS A MEDICAID DENTAL REFERRAL SUCCESS TOOL

Tracey Andrews RDH, BS, Marty Milkovic, MSW, Chris Savold, Donna Balaski, DDS

The Connecticut Dental Health Partnership (CTDHP) administers the dental plans for residents enrolled in HUSKY/Medicaid Program. For three years the main tool of communication has been a call center based organization which includes enhanced care coordination for clients requiring special care, translation services and help with transportation needs. Utilization of dental services for HUSKY /Medicaid have increased steadily from 2008 to 2011 through the expanded provider network and modern communications that improve the efficiency of dental access and connect clients to dental homes. Calling one toll free statewide number allows clients and providers to connect easily with dental sources located by requested area; personnel that are able to answer questions regarding dental benefits; or answer questions regarding reimbursement and technical assistance for providers. The success of the call center has connected over 200,000 callers with a dental home. The only "list" of the over 1300 providers in the network, exists on an electronic database managed by the CTDHP. A call center representative can easily access provider contact information to match a client caller's needs. Provider panels list name, location, telephone number, hours, accessibility for special needs, wheelchair accessible and age range of client's accepted. Clients are typically given three to five referrals for providers located near their address. Roundtable discussion includes lessons learned for producing a call center driven referral system including tips for planning a statewide system. Access to live personal communication has led Connecticut's success in improving the delivery of dental services around HUSKY / Medicaid population.

Source of Funding: Department of Social Services Medicaid Program

### 24 INTEGRATING DENTAL PUBLIC HEALTH IN CURRICULUM: FOCUSING ON COMMUNITY ORAL HEALTH PROMOTION AND ORAL DISEASE PREVENTION

Jane E. M. Steffensen, MPH, MCHES, Associate Professor, Division of Research, Department of Comprehensive Dentistry, University of Texas Health Science Center at San Antonio, Dental School and David P. Cappelli, DMD, MPH, PhD, Associate Professor and Director of Research, Department of Comprehensive Dentistry and Director, Dental Public Health Residency Program

The San Antonio Dental Public Health and Diversity Pre-Doctoral Education Program includes courses in the dental school curriculum that address specific domains in the Clinical Prevention and Population Health Curriculum Framework. This framework provides structure for organizing curriculum and communicating among professions.

The roundtable will highlight aspects of a didactic course that provides dental students with the knowledge and application of



## ROUNDTABLE TOPICS

evidence-based practices to prevent oral diseases and promote oral health in communities. The course focuses on dental public health principles and epidemiology with an emphasis on the determinants of oral health. Methods to reduce oral health disparities and assure oral health equity are examined in this course. Contemporary oral health promotion and oral disease prevention practices at the community level are illustrated using a homework assignment with a community scenario about water fluoridation. This problem-based exercise develops critical thinking skills about initiating new or maintaining existing water fluoridation in a local community. The course stresses effective methods for oral health promotion and disease prevention to address unique needs of communities.

This course serves as a model for dental and dental hygiene institutions to enhance their curricula in dental public health. Strengthening the capacity of the oral health workforce is critical to the implementation of core public health functions and assuring the provision of oral health services to vulnerable populations. The presenter will share experiences so participants can develop coursework that focuses on dental public health and allow attendees to exchange information about their course models, lessons learned, and challenges.

Source of Funding: San Antonio Dental Public Health and Diversity Pre-Doctoral Education Program Funded by the Pre-Doctoral Training in General, Pediatric, and Public Health Dentistry and Dental Hygiene, Bureau of Health Professions (BHP), Health Resources and Services Administration (HRSA), Grant Number: HRSA-D85HP20041

### 25 **EXPANDING PREVENTIVE ORAL HEALTH SERVICES IN SCHOOL-BASED HEALTH CENTERS (SBHCS): QUALITY IMPROVEMENT COLLABORATIVE TO ENHANCE CAPACITY OF PRIMARY CARE PROVIDERS**

*Laura Brey, MS, Director of Programs & Professional Services, NASBHC, John Schlitt, MSW, Vice President, Policy & Government Affairs, NASBHC, Iliana Kiourkas, MPH, CHES, Program Associate, NASBHC*

In partnership with Kaiser Permanente, NASBHC launched a 10 month School-Based Health Center (SBHC) training and technical assistance project with 20 grantee sites during the summer of 2011. The aim of the initiative was to enhance the capacity of school-based primary care clinicians to deliver oral health preventive services. This includes conducting assessments for children and adolescents who may be at risk of dental diseases, providing anticipatory guidance on nutrition, applying fluoride varnish on patients' teeth to help prevent caries (tooth decay), and referring students to local dental providers for diagnostic and treatment services as necessary. Following the initial training at the 2011 NASBHC convention in Chicago, the clinics began implementing these preventive services in their SBHC practices, with many sites indicating an impact among the students they serve. This session will focus on initial outcomes of the project period, including: data on assessments, exams, anticipatory guidance, fluoride varnish application, and dental care referrals conducted by the clinics, partnerships with local dental providers and networks to ensure follow-up care, and integration of oral health prevention in overall school health services.

Source of Funding: Kaiser Permanente

### 26 **DENTAL PUBLIC HEALTH COMPETENCIES AND A CURRICULUM FOR PREDOCTORAL DENTAL AND DENTAL HYGIENE PROGRAMS**

*Ana Karina Mascarenhas, Kathryn A Atchison, Vinodh Bhoopathi*

Curriculum regarding the mission and practice of Dental Public Health is incorporated to a limited degree in many pre-doctoral dental and dental hygiene education programs, and in some instances is entirely lacking. To address this, a project supported by HRSA, in collaboration with AAPHD is underway. The goals of the program are three-fold: 1) to develop dental public health competencies and describe how they can be adopted as part of a dental or dental hygiene school competencies, 2) to develop and make available through AAPHD curriculum that addresses the competencies, and 3) a speakers' bureau to provide available trained teachers to implement the curriculum for schools that lack their own DPH faculty. This session will highlight the goals and objectives of this HRSA funded AAPHD project as well as the completed competencies and curriculum modules. Future directions and steps of the project will be discussed. Opportunities for AAPHD members and dental public health and public health faculty to participate in the project and in a speaker's Bureau will be identified.

Source of Funding: This program was supported by Health Resources and Service Administration grant, D83HP19949

### 27 **"FIRST TOOTH": PREVENTING EARLY CHILDHOOD CARIES THROUGH MEDICAL AND DENTAL PROVIDER EDUCATION AND COLLABORATION**

*Shanie Mason, MPH, CHES, Oral Health Program Manager, Oregon Health Authority; Amy Umphlett, MPH, First Tooth Grant Coordinator, Oral Health Program, Oregon Health Authority, Kristen Becker, MS, MPH, Maternal and Child Health, Assessment & Evaluation Unit, Oregon Health Authority, Karen Hall, RDH, LAP, Virginia Garcia Memorial Health Center*

The Oregon Health Authority's Oral Health Program in collaboration with the Oregon Oral Health Coalition launched a three-year workforce development project called "First Tooth" with the goal to reduce early childhood caries by training medical providers and general dentists to implement preventive oral health services for children ages 0-3. The project comprises in-person training, ongoing technical assistance, and a comprehensive, web-based oral health resource and training site. Evaluation principles were integrated into each stage of the project.

The "First Tooth" project is expanding outreach and training statewide to: 1) Engage both medical and dental providers in providing culturally appropriate early childhood caries prevention activities; 2) Facilitate referral relationships between dentists and medical providers to ensure all Oregon children have a dental home; 3) Collaborate with community partners such as Head Start and Dental Care Organizations; and 4) Report evaluation results on process and outcome measures. Both medical and dental communities can become experts in children's oral health prevention strategies and advocates for oral health as part of the continuum of care across the lifespan.

Please join us at this roundtable to learn more about:

- How an early childhood caries prevention training program was implemented that incorporates in-person and online training with technical assistance.
- The outcomes and evaluation principles used.

## ROUNDTABLE TOPICS

- The value of collaborative partnerships across disciplines to implement successful oral health promotion and tooth decay prevention efforts.

How “First Tooth” links to the new initiatives underway in Oregon – Coordinated Care Organizations and Early Learning Council.

Source of Funding: Health Resources Services Administration (HRSA) Grants to States to Support Oral Health Workforce Activities

### 28 DENTAL SEALANT PROGRAM: STREAMLINING YOUR FORMS FOR CLARITY AND EFFECTIVENESS

*Shanie Mason, MPH, CHES, Oral Health Program Manager, Oregon Health Authority; Laurie Johnson, MA, RDH, School-based Oral Health Programs Coordinator, Oregon Health Authority*

Oregon’s School-based Dental Sealant Program has been in effect for 5 years, serving 11 schools the first year and now serving 140 schools and providing sealants for 6,000 children annually. Program forms were developed through extensive brainstorming and teamwork sessions, with the ultimate goal of pleasing our partners – schools, parents, community groups, and dental providers – with form simplicity and effectiveness. The forms have been updated annually, incorporating input from all parties. The forms are appropriate for programs serving a few schools or many schools.

Standardization of forms proved to be one of the most challenging and ultimately productive of our process improvements. The clarified process has improved communication with our partners and has enabled quick data input and timely data feedback to the schools. Teachers, school staff, and parents consistently praise the program’s organization and resultant ease of participation.

The forms have already been utilized successfully by many local programs and have been requested by several state programs. All form templates will be shared at the roundtable session, with permission to insert personal logos and to adapt or incorporate the content to suite individual program parameters.

Source of Funding: State general funds, matching Medicaid funds

### 29 NEW INDICATORS FOR THE NATIONAL ORAL HEALTH SURVEILLANCE SYSTEM

*Theresa Anselmo, MPH, BSDH, RDH, ASTDD Data Committee, ASTDD Data Committee Members*

The Association of State and Territorial Dental Directors (ASTDD) is requesting new indicators for the National Oral Health Surveillance System (NOHSS). State oral health programs and state oral health surveillance systems have evolved since the nine initial indicators were established in 1999. Public health accreditation has led to state oral health programs being held to a higher level of accountability for data-driven decision-making and evidenced-based practice. As a result states have expressed increased interest in oral health surveillance and are seeking uniform and standardized measures to compare and contrast key oral health indicators against national objectives such as Healthy People 2020.

Source of Funding: None

### 30 PERIODONTAL TREATMENT & ADVERSE PREGNANCY OUTCOMES: DOES OBESITY PLAY A ROLE?

*Wenche S. Borgnakke, DDS, MPH, PhD*

Infection is known to cause stillbirth and other adverse pregnancy outcomes. Cross-sectional studies often report pregnant women to have more periodontal disease than their non-pregnant peers. However, the jury is still out regarding whether treatment of periodontitis can contribute to prevention of adverse pregnancy outcomes. The four large clinical controlled trials have not demonstrated any effect, whereas several smaller studies have reported that women who received non-surgical periodontal treatment had a lower prevalence of pre-term birth and other adverse pregnancy outcomes. A recent report showed a significant positive effect of a commercially available mouthwash use alone.

Obesity causes a chronic, low-grade, systemic inflammation. The fact that in many parts of the country, up to half of pregnant women are overweight or obese, has not been the focus in reports in conjunction with periodontal infection, although some studies control for pre-pregnancy weight. It is still not known precisely what triggers the delivery of a baby. But substances, such as cytokines, play a role in starting the process of delivery. Cytokines are also part of the inflammatory immune response to infection.

May the inflammatory response to obesity be exacerbated by systemic inflammatory reactions to periodontal pathogens to such a degree that the cumulative burden of the inflammatory response might contribute to pre-term delivery?

The latest evidence will be discussed and participants are encouraged to suggest ways forward. How do we prevent any kind of infection and inflammatory response in pregnancy? -- or maybe preferably even before conception?

Source of Funding: None

### 31 DENTAL HYGIENE DIRECTIONS: CAREERS IN PUBLIC HEALTH

*Christine Farrell, RDH, MPA, Nicole Glines, RDH, MPH, Indian Health Services; Julianna Gelinis, RDH*

The American Dental Hygienists Association (ADHA) conducted an environmental scan of its members. The results demonstrated that dental hygienists were interested in dental hygiene practice settings that addressed the access to care problems. As a result, the ADHA, Council on Public Health, developed profiles of public health positions at the local, state and federal levels. This profile provides dental hygienists an overview of the education, experience and requirements necessary for these positions. This career profile is being marketed to students, dental hygiene program educators and practicing dental hygienists as a tool for dental hygienists interested in public health and/or alternative practice settings. The resource tool will be discussed and reviewed with input into the use of this resource tool and how it can be used to engage dental hygienists and students to becoming involved in public health.

Source of Funding: None

### 32 BEYOND WORD RECOGNITION: CONCEPTUALIZING PARENTAL ORAL HEALTH LITERACY IN DISADVANTAGED COMMUNITIES

*Amit Arora, Eli Schwarz*

Objectives: This qualitative study sought to record how well mothers with pre-school children living in disadvantaged areas

## ROUNDTABLE TOPICS

of South Western Sydney understood the oral health education materials commonly available in New South Wales, Australia.

Methods: English-speaking (n = 24), Chinese-speaking (n = 25) and Vietnamese-speaking mothers (n = 24) with young children were approached for a face-to-face, semi-structured interview at their homes. Two dental leaflets designed by NSW Health to give advice on looking after children's teeth were sent to mothers prior to the interview. On the day of the interview, mothers whose first language was not English were also provided with translated versions of the leaflets for comparisons. Interviews were recorded, subsequently transcribed verbatim and analysed by thematic coding.

Results: Mothers whose first language was not English generally reported that the English leaflets were difficult to read due to their lower levels of English literacy skills. Although the mothers preferred leaflets in their native language, as it improved their understanding, they noted that it did not reflect cultural differences. Those with English as their first language noted that some of the key messages were confusing with use of medical jargon. Across all three cultures mothers reported that early childhood nutrition and infant teething were inadequately addressed, and mothers preferred pictorial presentations to improve their understanding of oral health.

Conclusions: Producers of health education leaflets should keep the messages simple and straightforward, avoid the use of medical jargon, give culture specific advice, and use pictorial aids to improve communication.

Source of Funding: Australian National Health and Medical Research Council (1033213), Centre for Oral Health Strategy, NSW Health

### 33 THE IMPACT OF CUTS TO ADULT MEDICAID DENTAL BENEFITS ON THE ORAL HEALTH SAFETY-NET WORKFORCE IN CALIFORNIA

*Wides, C., MA, UCSF, Rab-Alam, S., MPH, UCSF, Tsai, C., DMD, MPH, UCSF, Mertz, E., Ph.D., MA, UCSF*

In July 2009, California eliminated funding for most adult non-emergency Medicaid dental benefits (Denti-Cal), followed by a 10% provider reimbursement rate cut in 2011. UCSF conducted a qualitative study of the impacts of these cuts on changes in service utilization, finances, and operations throughout the dental safety-net workforce.

Data were collected through seven telephone interviews, four in-person interviews with private dentists, dental directors, and administrative professionals whose tenure pre-dated the benefit cuts. Study sites included private practitioners, public health clinics, community health center dental clinics, dental schools, and Native American clinics across California. Interview transcripts were coded thematically using Atlas.ti® software.

Study participants report that the cuts have resulted in significant changes to safety-net providers' finances, operations, ability to refer, and use of ancillary dental businesses, such as dental laboratories. Participants report that Medicaid-eligible adults now primarily seek extractions and other emergency procedures still covered under Denti-Cal. Providers report expanding their pediatric and privately-insured patient-bases, while reducing staffing and training slots in order to remain solvent.

For over 40 years, the Denti-Cal program was the primary dental safety-net for Californian adults. Since cutting adult benefits, adults' service utilization has declined while children's utilization has increased. The increase in children's utilization has

not offset declines in adult utilization for the study participants, resulting job losses throughout the safety-net workforce and erosion of the dental safety-net. The cuts to adult dental benefits are likely to have far-reaching, detrimental effects on the oral and overall health of Medicaid beneficiaries and their families.

Source of Funding: California Department of Public Health & National Institute of Dental & Craniofacial Research Award # P30DE020752

### 34 IMPROVING ORAL HEALTH EDUCATION FOR MEDICAL PROVIDERS: TOOLS AND RESOURCES

*Hugh Silk, MD, MPH, Tracy Garland*

Over the last few years there has been an increasing focus on improving medical-dental collaboration in an effort to improve oral health in America. From the HRSA funded IOM Reports to the HHS Oral Health Initiative, from the ADA's Access to Care Summit to the formation of the US National Oral Health Alliance.

On the educational side, the National Interprofessional Initiative on Oral Health (NIIOH) has lead the way in engaging dental, medical, nursing, and physician assistant educators to improve oral health teaching/curriculum in medical residencies, professional CME and undergraduate schools.

This Round Table will provide an overview of the strategies being taken by the NIIOH to increase oral health education for family doctors, pediatricians, physician assistants, nurses, etc.

The core tool for this initiative is Smiles for Life (SFL), the nation's most comprehensive and widely used oral health curriculum designed for primary care clinicians. The Round Table will briefly inform participants about the web-based interactive educational tool. SFL includes interactive online courses and clinical cases for individual and small group education, downloadable PowerPoint modules suitable for larger group presentations, instructional videos, and patient education materials. Participants will be provided with the objectives and Ipad visualization for the 8 module courses that include: relationship of oral to systemic health, child oral health, adult oral health, geriatric oral health, dental emergencies, oral health in pregnancy, fluoride varnish, and the oral examination.

Participants will be engaged to brainstorm how they can collaborate with NIIOH and/or use SFL within their own current projects.

Source of Funding: Dentaquest Foundation

### 35 SUGAR-LESS DAY TO PREVENT TOOTH DECAY

*Beverly A. Kupiec-Sce, Ph.D.*

"Sugar-Less Day to Prevent Tooth Decay" is an early intervention, school and community based initiative designed to increase elementary age students' awareness of the relationship between healthy food choices and oral health. "Sugar-Less Day to Prevent Tooth Decay" began as a pilot project in 2010 and has expanded to all of the 21 counties in New Jersey. Fourth grade students participate in an interactive oral health education program and oral health themed poster contest. School nurses, classroom and art teachers, parents and siblings are included in program activities to reinforce the importance of good oral health and nutrition practices in the family and community setting. "Sugar-Less Day to Prevent Tooth Decay" serves as a model for replication in other states due to cost effectiveness, ease of implementation and sustainability.

Source of Funding: None

## ROUNDTABLE TOPICS

### 36 **DEVELOPMENT OF COALITIONS TO SUPPORT COMMUNITY WATER FLUORIDATION PROGRAMS**

*Sharon R. Clough, RDH, MS Ed, Jane S. McGinley, RDH, MBA*

In January 2011, a joint announcement by the Environmental Protection Agency (EPA) and the U.S. Health and Human Services (HHS) stated that HHS was proposing the recommended level of fluoride in drinking water be set at the lowest end of the current range (0.7ppm). This resulted in a flurry of antifluoridation activity. These challenges to long-standing, successful fluoridation programs are expected to escalate when the final recommendations are released in 2012. An effective campaign strategy to support CWF is the formation of broad-based coalitions which strengthen campaign efforts by utilizing the talents and resources of key community leaders and organizations. With the intent to provide participants a valuable tool to combat antifluoridation activities, the discussion will focus on the rationale, strengths, and development process of an effective coalition.

Source of Funding: None



# Abstracts for Poster & Student Presentations

## Abstracts for Oral Presentations are published in the Program Book.

If presenter's intent to participate was not received prior to printing, it is possible that some abstracts listed will not be presented.

### Monday Poster Presentations (Posters 1-51)

Poster Number: 1

Serial/Abstract Number: 106

#### **A CRITICAL REVIEW OF NONTRAUMATIC DENTAL CONDITION VISITS TO EMERGENCY DEPARTMENTS IN THE UNITED STATES**

*Christopher Okunseri (1) BDS, MSc, MLS, FFDRCSI; Laurie Barker (2) MSPH; Valerie Robison (2) DDS, PhD, MPH*

Department of Clinical Services, Marquette University School of Dentistry, Milwaukee, WI, USA (1), Division of Oral Health, Centers for Disease Control and Prevention, Atlanta, GA, USA (2)

**Objective:** To describe measures used to report the frequency and cost of, and disparities in, emergency department (ED) visits for nontraumatic dental conditions (NTDCs) in published studies in the United States. Stakeholders have expressed concerns about the appropriateness of ED visits for NTDCs because of cost and quality of care implications.

**Methods:** We searched Pubmed using Medical Subject Headings (MeSH) terms and text words to identify English-language human studies that reported ED visits for NTDCs in the United States. We manually searched citations to identify articles not retrieved by the electronic search. Abstracted information included ICD-9 codes used in definitions, data source, costs, and disparities findings, if reported.

**Results:** The search strategies yielded 91 citations; 51 were reviewed in entirety and 31 met the inclusion criteria. Most of the published articles were retrospective; 84% used State Medicaid claims data or self-reported information, and 16% used national data. In 61% of studies, NTDC visits were defined with varying combinations of ICD-9 codes; the number of ICD-9 codes used in each definition ranged from 2 to 25; study definitions most commonly used codes 521 (n=14), 522 (n=12), 523 (n=10) and 525.9 (n=6). Racial and ethnic minority groups were more likely to use EDs for NTDCs. Cost implications were reported variously by charges or claims paid.

**Conclusion:** Our review highlights inconsistencies in definitions used to report frequency and costs of, and disparities in, ED visits for NTDCs. Common definitions for measures to monitor these aspects of ED visits for NTDC are needed.

**Source of Funding:** This critical review was supported in part by an appointment to the Research Participation Program at the Centers for Disease Control and Prevention (CDC) administered by the Oak Ridge Institute for Science and Education through an interagency agreement between the U.S. Department of Energy and CDC.

Poster Number: 2

Serial/Abstract Number: 123

#### **PREVALENCE AND SEVERITY OF DENTAL CARIES AMONG AMERICAN INDIAN AND ALASKA NATIVE PRESCHOOL CHILDREN**

*Timothy Ricks (1) DMD, MPH; Kathy Phipps (1) DrPH; Mike Manz (2) DDS, MPH, DrPH; Patrick Blahut (1) DDS, MPH*

Indian Health Service, Rockville, MD, USA (1), University of Michigan, Ann Arbor, MI, USA (2)

**OBJECTIVES:** To describe the Indian Health Service (IHS) oral health surveillance system and the oral health status of American Indian and Alaska Native (AI/AN) children 1-5 years of age.

**METHODS:** A stratified probability sample of IHS/tribal sites was selected. Children were screened by trained examiners at community-based locations including medical clinics, WIC, Head Start, preschools and kindergarten. Data collection was limited to the primary dentition and included number of teeth present plus number of teeth with

cavitated lesions, restorations and extracted because of decay. Number of molars with sealants and urgency of need for dental care were also obtained. Statistical analyses were performed with SAS. Sample weights were used to produce population estimates based on selection probabilities.

**RESULTS:** A total of 8,461 AI/AN children 12-71 months of age were screened at 63 IHS/tribal sites; approximately 7% of the estimated IHS user population of the same age. Overall, 54% of the children had decay experience, 39% had untreated decay, 7% had primary molar sealants, 36% needed early or urgent dental care and 6% needed urgent dental care. The mean dmft was 3.5 (95% CI, 3.1-3.9). The prevalence of decay experience increased with age; 21% of 1 year olds and 75% of 5 year olds had a history of caries. When stratified by IHS Area there were substantial differences in the oral health of preschool children.

**CONCLUSIONS:** The results confirm that in the United States, AI/AN children served by IHS/tribal programs are the racial/ethnic group at highest risk of caries.

**Source of Funding:** SOURCE OF FUNDING: Indian Health Service

Poster Number: 3

Serial/Abstract Number: 52

#### **CHANGES IN MATERNAL KNOWLEDGE AND BEHAVIOR INTENTION ITEMS AFTER INTERVENTION**

*Deborah Dawson (1) PhD, ScM; Karin Weber-Gasparoni (1) DDS, PhD; Katherine Kramer (1) PhD, MA, MA; John Warren (1) DDS, MS; David Drake (1) MS, PhD*

University of Iowa College of Dentistry, Iowa City, Iowa, USA (1)

**OBJECTIVES:** Mothers of WIC-enrolled children aged 6 to 48 months were exposed to an autonomy-supportive psychoeducational videotaped oral health message informed by self-determination theory. Previous results demonstrated significant gains at six-month follow-up in overall maternal oral health knowledge and behavioral intent relative to baseline. The present study examined patterns of change in individual constituent items of these instruments.

**METHODS:** Item data were rated by mothers at baseline and six-month follow-up using five-point Likert scales of agreement with either factual statements related to oral health or statements of behavioral intent. Shifts in response between the two time points were assessed using Bowker's test of symmetry. The level of significance was 0.05.

**RESULTS:** Follow-up data for 181 mothers showed significant improvement relative to baseline for the majority of knowledge items, demonstrating retention over the six-month period of follow-up. Strong evidence ( $p < 0.0001$ ) of improvement in behavioral intent were identified for items related to fluoride toothpaste use, checking for white spot lesions and sharing of utensils between mother and child. Other behavior intent items showing significant improvement were related to frequency of consumption of cariogenic snacks and dental consultation upon identification of white spot lesions. Some measures, such as those related to consumption of sugary beverages, appeared to be resistant to change.

**CONCLUSIONS:** These results may help identify areas where the video intervention may profitably be strengthened. In addition, the instruments used in the study may be a means for practitioners to identify and target areas where behavioral change may be helpful.

**Source of Funding:** FUNDING SOURCE: NIH/NIDCR GRANT R21 DE016483-02

# Abstracts for Poster & Student Presentations

Poster Number: 4

Serial/Abstract Number: 2

## PREVALENCE OF EARLY CHILD CARIES IN HEADSTART PROGRAMS OF NORTHEAST OHIO

*Chandra Drews (1,2) RDH, EFDA, Dental Laboratory Technician; Gerald Ferretti (1,2) DDS, MS, MPH; Kelly Stamberger (1,2) Dental Assistant*

Case Western Reserve University, Cleveland, OH, United States Minor Outlying Islands (1), Rainbow Babies & Children's Hospital, Cleveland, OH, United States Minor Outlying Islands (2)

**Objectives:** To determine the prevalence rate of early childhood caries in headstart and early headstart children from ages two to five in Northeast Ohio.

**Method:** An institutional pediatric dental service set up initial and 6 month recalls with 243 headstart and early headstart centers in nine counties in Northeast Ohio. 15,000 children ages two to five received oral health exams. This was followed by a dental prophylaxis and fluoride varnish application. All the children who received treatment were classified as having no tooth decay, moderate tooth decay or severe tooth decay.

**Results:** Four out of every 10 children have ECC. Of the 15,000 examined, 15% have severe ECC, and 23% have moderate ECC. 62% of the children had no visible sign of ECC.

**Conclusions:** A total of 38% of children suffer from moderate to severe ECC. This is 10% greater than the national ECC rate of 28% in children ages two to five

Source of Funding: None

Poster Number: 6

Serial/Abstract Number: 117

## INITIAL ACQUISITION OF MUTANS STREPTOCOCCI AND GENOTYPES IN AMERICAN INDIAN CHILDREN

*Bonny Olson (1); Alissa Villhauer (1); Dave Lynch (1); David Drake (1) University of Iowa, Iowa city, USA (1)*

**OBJECTIVE:** To assess the initial acquisition of mutans streptococci and genotypes in American Indian children.

**METHODS:** Plaque samples of 80 infants (1 - 16 months) were spiral-plated at 4 month intervals onto MSKB, Rogosa, Acid Sucrose, and blood agar to enumerate bacterial concentrations. Mutans Streptococci (MS) were enumerated, isolated and identified utilizing MSKB and SMStrepID agar TM which contains mannitol, sorbitol, salicin, raffinose, and arginine agars. The *S. mutans* (SM) isolates were cultured in TSB-YE media followed by DNA extraction and clonal typing utilizing primers OPA 2 and OPA 13. We report here on the diversity of SM genotypes initially acquired by 18 American Indian children.

**RESULTS:** In this ongoing study our current percentages of the total number of children acquiring MS (based on MSKB enumeration) by 0,4,8,12, and 16 months of age is 1.4%, 3%, 17.5%, 57%, and 72% respectively. To date, we have observed 16 genotypes of *S. mutans* in eighteen different children and our analyses of SM genotypes from children in our study are ongoing.

**CONCLUSIONS:** Currently, 72% of American Indian children enrolled in our *S. mutans* transmission study acquired mutans streptococci by 16 months of age.

Source of Funding: SOURCE OF FUNDING: NIH 1 RO1 DE017736-01A1

Poster Number: 7

Serial/Abstract Number: 34

## MATERNAL FACTORS ASSOCIATED WITH DENTAL CARIES IN VERY YOUNG AMERICAN INDIAN CHILDREN

*Kathy Phipps (3) DrPH; Katherine Kramer (1) PhD; John Warren (1) DDS, MS; Deborah Dawson (1) PhD; Delores Starr (2) BS, RDH; Teresa Marshall (1) PhD; David Drake (1) MS, PhD*

University of Iowa, Iowa City, IA, USA (1), Indian Health Service, Pine Ridge, SD, USA (2), Consultant, Morro Bay, CA, USA (3)

**OBJECTIVE:** To identify maternal demographic and behavioral factors associated with early childhood caries (ECC) among 16-month old American Indian children.

**METHODS:** Mothers from a Tribal community were recruited to participate in a longitudinal study of risk factors for ECC. Mother-child dyads were enrolled when the child was approximately 1 month. Baseline data included mother caries exam, detailed information regarding maternal demographics and nutrition, oral hygiene, and other caries-related variables. Follow-up visits were completed when the child was approximately 4, 8, 12, and 16 months. All visits included a surface specific caries examination for the child. Assessments of association between maternal characteristics and child's caries status were performed using Kruskal-Wallis tests or Spearman rank correlations.

**RESULTS:** We enrolled 239 mother-child dyads, 233 completed the 16 month follow-up. At enrollment, mothers were 15 to 47 years (mean=23.7), 45% had less than a high school education, 40% lived in households with an annual income < \$10,000, 60% reported less than annual dental visits, and 27% smoked. Sugared beverages were the most common beverage consumed with meals for 36% of the mothers. The mean DMFS for the mothers was 27.6 and 88% had untreated decay. At approximately 16 months of age, 32% of the children had a history of caries, mean dmfs=1.57. Lower maternal education ( $p=0.004$ ) and lower annual household income ( $p=0.017$ ) were associated with higher dmfs scores.

**CONCLUSIONS:** Among this high risk population, mother's education and household income can potentially be used to identify children at highest risk of ECC.

Source of Funding: NIH Grant RO1-DE017736

Poster Number: 8

Serial/Abstract Number: 86

## AN ACADEMIC-COMMUNITY PARTNERSHIP FOR A SERVICE-LEARNING SEALANT PROGRAM

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**OBJECTIVE:** Provide oral exams and sealants to students in the Cleveland Metropolitan School District (CMSD) through a service-learning program.

**METHODS:** A tri-member academic-community partnership among the CWRU Dental School, CMSD and Saint Luke's Foundation has supported Healthy Smiles Sealant Program for 10 years. Dental students participate in Healthy Smiles as a curriculum-based service-learning requirement. All K-8 CMSD buildings are visited annually. Dental students record caries, sealants, oral health status, and referral needs. Child data are de-identified and analyzed as cross-sectional data.

**RESULTS:** From 7 years of data collection (2004-2010), 37,931 children have received oral exams, 107,200 sealants have been placed and 500 dental students have participated. Participation rates range from 50% among 6th graders to 68% among 2nd and 3rd graders. On average, 3.3, 2.9, and 4.1 sealants are placed per child on 2nd, 3rd and

## Abstracts for Poster & Student Presentations

6th graders, respectively. Presence of first molar sealants on 6th grade participants has improved from 7% in 2004 to 55% in 2010; the percent of 6th graders with untreated molar caries has decreased from 57% to 35% during that time period. The Healthy People 2010 goal for sealant prevalence was met in this population, with 70% of eligible 3rd graders with one or more sealants.

**CONCLUSIONS:** The continued presence of the Healthy Smiles Sealant Program has produced significant gains in sealant coverage in urban Cleveland children and impacted oral health of participants. Dental students benefit from early clinical experiences and caring for children in the context of their environment at school.

Source of Funding: Saint Luke's Foundation of Cleveland

Poster Number: 9

Serial/Abstract Number: 121

### **DENTAL SURVEY OF ELEMENTARY SCHOOL CHILDREN IN KEALAKEKUA, HAWAII**

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**OBJECTIVE:** To examine dental caries prevalence in elementary school children in Kealakekua, Hawaii and to establish baseline data.

**METHOD:** An oral health survey of children in an elementary school in Kealakekua, HI was conducted. Among those who consented, children from Grades Pre-K through Grade 5 were examined by 3 trained general and pediatric dentists. All carious, restored and sealed teeth were recorded. Treatment needs were determined.

**RESULTS:** A total of 352 children participated in the study. The response rate was 59.8%. The children were of ages between 3 and 16 years. Among those who responded, there were 53.8% Pacific Islanders, 22.5% Asians, 10% Hispanics and remaining 10% Caucasians and African Americans. Of the 86% children that had insurance paying for dental care, 50.2% had MedQuest Medicaid. While less than one third of children reported that they did not have a dentist, almost three fourth of them had seen a dentist in the last 12 months. About 46% of children had carious teeth and 54% had filled teeth. Only one fourth of children had sealants. There was a significant difference in caries presence in children based on race/ethnicity ( $p < 0.05$ ). Only 11% had urgent treatment needs and 35% needed treatment.

**CONCLUSIONS:** Oral health disparities exist in this group of children in Kealakekua, Hawaii. Interventions such as dental sealants with a targeted approach to reduce the prevalence of caries are needed.

Source of Funding: County of Hawaii (Small grant)

Poster Number: 10

Serial/Abstract Number: 102

### **ORAL HEALTH IN THE MEDICAL HOME: ILLINOIS' EXPERIENCE**

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**Objectives:** The American Academy of Pediatrics and the American Academy of Pediatric Dentistry recommend that primary care providers incorporate oral health into well child visits beginning at 6 months. However, primary care providers receive little to no education on oral health during their training. In 2005, the Illinois Chapter, American Academy of Pediatrics (ICAAP) developed Bright Smiles from Birth to educate primary care providers on oral health in young children including application of fluoride varnish. Working with a large coalition of medical and dental professionals, Bright Smiles from

Birth has conducted over 250 in-office trainings for over 1200 primary care providers.

**Method:** To determine the overall success of the program, ICAAP conducted a review of claims submitted for fluoride varnish to the Illinois Department of Healthcare and Family Services (D1203 and D1206). In addition, claims related to initial dental visits were also reviewed.

**Results:** The number of claims for fluoride varnish increased from 331 in FY07 to 4,027 in FY10. In addition, initial dental visits among children 0-24 months increased from 10,660 in FY07 to 18,029 in FY09. However, less than 45 children received three applications of varnish in FY10.

**Conclusions:** More physicians are incorporating oral health into well child visits and increase referral from physicians may be responsible for the increase in the number of dental visits among children 0-24 months. However, primary care providers need more support in scheduling repeat applications of varnish.

Source of Funding: Bright Smiles from Birth is funded by the Illinois Children's Health Care Foundation, the Illinois Department of Healthcare and Family Services and the Illinois Department of Public Health. It is a collaborative effort between ICAAP, the University of Illinois at Chicago, the Illinois Society of Pediatric Dentists, IDPH and IDHFS.

Poster Number: 11

Serial/Abstract Number: 31

### **DENTAL CARIES IN VERY YOUNG AMERICAN INDIAN CHILDREN**

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University of Iowa, Iowa City, Iowa, USA (1), Indian Health Service, South Dakota, USA (2), Consultant, Morro Bay, CA, USA (3)

**OBJECTIVES:** Dental caries is a very prevalent disease among American Indian children; however, little is known about caries occurrence in the youngest of these children. The purpose of this paper is to report on the prevalence and severity of caries in a group of 16-month-old American Indian children.

**METHODS:** Expectant mothers from a Northern Plains Tribal community were recruited to participate in an ongoing longitudinal study of risk factors for caries in their children. Children were examined for caries by one of four trained examiners, and risk factor data collected at 4, 8, 12 and 16 months of age. Surface-specific caries data were collected and the presence of pre-cavitated "white spot" lesions was recorded at the subject level. Risk factor data included demographic, dietary, bacteriological and maternal factors. This paper reports descriptive data on caries at age 16 months.

**RESULTS:** The final sample size was 233 children with a mean age of 15.4 months. Caries prevalence was 31.8%, while an additional 29.6% had white spot lesions only. Mean dmfs was 1.57, and ranged from 0 to 44 surfaces. Nearly all (97%) of dmfs was decayed. Maxillary central incisors had the highest prevalence of caries (22%). Among all children, 2.8% of erupted tooth surfaces were affected; among children with caries, 8.6% of erupted surfaces were affected. Mean dmfs did not differ significantly ( $p < 0.05$ ) between males ( $n=103$ ) and females ( $n=130$ ).

**CONCLUSIONS:** Even among the very youngest children, our findings suggest that dental caries prevalence is very high among American Indian children.

Source of Funding: NIH Grant RO1-DE017736

## Abstracts for Poster & Student Presentations

Poster Number: 12

Serial/Abstract Number: 63

### COMMUNITY FLUORIDATION OPTIMIZATION THROUGH A STATEWIDE COMPETITIVE FUNDING PROCESS

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Minnesota Department of Health, St. Paul, MN, USA (1)

**OBJECTIVE:** To increase the number of Minnesotans receiving the oral health benefits of optimally fluoridated drinking water by assisting community public water supplies with fluoridation implementation or process optimization.

**METHODS:** The Minnesota Department of Health (MDH), through collaboration between its Oral Health Disease Prevention Unit and Drinking Water Protection Section, agreed to offer funding through a competitive grant process for the design, purchase, and/or installation of fluoridation process and testing equipment at community public water supplies. MDH Community Fluoridation Grant awards were issued as reimbursements. Chemical, administrative, or other indirect costs were not eligible for award funds. Applicants were required to provide in-kind or matching funds equivalent to 20 percent of final project costs.

**RESULTS:** Municipalities lacking necessary fluoridation systems expressed very little interest in the MDH Community Fluoridation Grant. Each of the five applicants proposed fluoridation optimization projects, which were approved based on municipal status, treatment and testing equipment needs, and project organization. Due to a Health and Human Services proposal for a recommended fluoridation concentration of 0.7 mg/L, MDH required selection of chemical feed pumps capable of achieving current optimal fluoride levels (0.9 to 1.5 mg/L) while allowing for future fluoridation to between 0.6 and 1.0 mg/L. Consistent fluoridation to 0.7 mg/L was confirmed following project completion.

**CONCLUSIONS:** This competitive grant process optimized fluoridation of drinking water provided to approximately 27,000 people within five municipalities, primarily through process equipment replacement.

Source of Funding: Health Resources and Services Administration (HRSA) T12HP14659

Poster Number: 13

Serial/Abstract Number: 71

### PREVALENCE OF UNTREATED TOOTH DECAY AMONG PRE-SCHOOL CHILDREN IN THE MISSISSIPPI DELTA REGION, RELATED RISK FACTORS AND BARRIERS TO ACCESSING CARE

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Mississippi State University, Starkville, MS, USA (1), Mississippi Department of Health, Jackson, MS, USA (2)

**OBJECTIVES:** We assessed the prevalence of early childhood caries, related factors, and provided screenings and referrals to children ages 5 and younger, in 6 Mississippi Delta counties.

**Methods:** The Delta Oral Health Project, a collaboration of Mississippi State University and the Mississippi Department of Health, aims to screen, identify children with treatment needs and refer them into care. From October 2010 to March 2011, dental hygienists screened and provided fluoride varnish to 1,612 children on site at 79 child care centers. Dental caries experiences (untreated decay, treated decay) and treatment needs were documented. A survey with parents assessed children's snacks, drinks, and brushing practices. A case manager followed up with parents of children who had treatment needs.

**RESULTS:** Thirty-one percent of all the children (n=501) had prior or current experience with tooth decay. Twenty-two percent of the children had current untreated decay (n=358). Most untreated decay

and urgent needs was among 3-5 year olds; however there was a surprising prevalence of urgent needs among 2 year olds. Almost 50% of all the children had never been to a dentist office. The case manager reminded parents of their child's treatment needs and resolved barriers that parents presented. Drinking sweet drinks was associated with having untreated decay.

**CONCLUSIONS:** About 1 in 4 young children in the Delta have untreated tooth decay.

Dental screenings at child care centers help identify treatment needs. Young children in Mississippi could benefit from a coordinated community model of dental care starting as young as 2 years old.

Source of Funding: The Delta Health Alliance is gratefully acknowledged for support of this project through HRSA Grant Number D04H12672.

Poster Number: 15

Serial/Abstract Number: 122

### TRENDS IN ORAL HEALTH STATUS OF LOW-INCOME PREGNANT WOMEN AT A COMMUNITY SITE

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Nationwide Children's Hospital, Columbus, Ohio, USA (1)

**OBJECTIVE:** To assess and monitor oral health status of low-income pregnant woman at a community site in Columbus, Ohio over a three year period.

**METHODS:** Basic oral health screening was performed at a local prenatal clinic targeting low-income pregnant women in Columbus, Ohio over three consecutive years (2009-2011). Data gathered included demographics, caries prevalence, gingival health status, smoking habit, and past history of dental care.

**RESULTS:** Demographic data for all three years showed the majority of the women were African American, followed by Caucasian, and Hispanic. The caries prevalence rate was 59% in 2009, 57% in 2010 and 57% in 2011. Gingival bleeding was present in 50% of the women in 2009 with a similar trend in the following years. Also, self-reported smoking rate remained relatively constant; 16%, 14% and 16% respectively from 2009 to 2011.

**CONCLUSIONS:** There was a high prevalence of untreated decay among low-income pregnant women in Columbus, Ohio. There was no change in trends for caries rate over the three year period. Efforts should be directed toward improving oral health of low-income pregnant women.

Source of Funding: None

Poster Number: 16

Serial/Abstract Number: 37

### THE IMPACT OF STATE TORT REFORM LAWS ON DENTAL MALPRACTICE PAYMENTS

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Texas A&M HSC, Baylor College of Dentistry, Dalls, TX, USA (1)

**Objective:** To study the impact of State Tort Reform Laws on Dental Malpractice payments.

**Methods:** This record based retrospective study used data from dental malpractice payments as reported in the National Practitioner Data Bank (NPDB) from 2000-2010 (n=20,586). A state was classified as having tort reform if there were caps on the dollar amounts for non-economic and punitive damages. Mean and median malpractice payment amounts by state were compared using the Mann-Whitney test to determine any differences in malpractice payment amounts among states with and without tort reform. Generalized linear models based on inverse Gaussian probability distribution were also used to determine if non-economic damages and punitive damage limits were significantly associated with award amounts of malpractice payments



## Abstracts for Poster & Student Presentations

for dentistry. With the dependent variable of 'payment amount' and independent variable of 'year of original report', trends of payments from 2000-2010 were identified.

Findings: There is a significant difference in the malpractice payment amounts as seen by the Mann-Whitney test ( $p=0.001$ ), and the regression models. As compared to the payment amounts in the year 2000 to years 2008, 2009, and 2010, the trend shows a significant rise in mean malpractice payment amounts ( $p=0.001$ ).

Conclusions: Though there is a statistically significant difference in the mean malpractice payment amounts in the states that have tort reform (\$48,489.61) compared to those states without tort reform (\$59,807.37), it is not known if the difference contributes to lower the premiums for dental malpractice insurance, or reduces the prevalence of malpractice lawsuits.

Source of Funding: None

Poster Number: 17

Serial/Abstract Number: 9

### **GRADUATE'S PERCEPTION OF THE ASDOH'S INTEGRATED COMMUNITY ORAL HEALTH CURRICULUM - SELF-REPORTED PRACTICE CHOICE AND VOLUNTEER ACTIVITY**

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A.T. Still University, Mesa, AZ, USA (1)

OBJECTIVES: To determine if the ASDOH curriculum, specifically the community oral health curriculum, influenced graduate's dental practice choice. To determine if the graduates were showing leadership qualities by volunteering in the community

METHOD: Cross-sectional descriptive study using a survey method. Target population was the four graduated classes of ASDOH. Total number of graduates was 215 and 208 of those graduates had contact information a twenty-nine item, electronic survey was sent

#### RESULTS

- Ninety-four graduates returned the survey
- 85% felt the community oral health curriculum influenced their practice choice
- Influence of each component: certificate in public health - 54%; service-learning - 65%; clinical rotations - 98%
- 76% reported that they volunteered in their community
- 67% volunteer by treating the underserved

CONCLUSIONS: Educating and training dental professionals in a way that potentially influences their practice choices is paramount. Infusing public health theory, service-learning, and clinical rotations in community clinics is one model that appears to have some influence. ASDOH students have exposure to various underserved populations and this exposure seems to translate into future volunteering for that population.

Source of Funding: None

Poster Number: 18

Serial/Abstract Number: 60

### **A COMMUNITY MODEL TO ADDRESS ADULT ORAL HEALTH IN WEST VIRGINIA SERVING A SIX COUNTY REGION OF THE MID-OHIO VALLEY HEALTH DEPARTMENT.**

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OBJECTIVES: Reduce the number of adult patients who suffer from chronic dental pain, disease and infection. Reduce the number of emergency room visits by this population. Develop and document this model of care to present to the State Oral Health Council with a goal to expand this opportunity to other parts of the state.

METHODS: 2009 Mission of Mercy (MOM) free dental clinic raised awareness, demonstrated need and was the catalyst for action and change. January 2010 - MOM follow up appreciation dinner was held with area dental providers to discuss future models of care to address needs. 2010-2011 one on one meetings with area dentists to seek their input for a feasible working model that they would support. 2010-2011 Mid-Ohio Valley Health Department sought funding through several sources to develop and implement the chosen model of care. The local Dental Society appointed a committee to work with the Health Department on the fine details of the project.

RESULTS: Smiles for Life adult dental screening and referral program began in September 2011. Smiles for Life is a means for adults below 250% Federal Poverty Level to obtain most needed dental treatment on a sliding fee scale or at no cost.

CONCLUSIONS: Collaboration with area dental providers established a program to begin to address the oral health needs of low income adults.

Source of Funding: Sisters of St. Joseph Charitable Fund; Claude Worthington Benedum Foundation; West Virginia Department of Health and Human Resources

Poster Number: 19

Serial/Abstract Number: 96

### **TRANSLATING POLICY INTO PRACTICE-EXPANDING ACCESS TO PREVENTIVE CARE**

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Objectives: To understand barriers and opportunities in implementing the direct access (limited authorization) dental hygiene statute in Minnesota. To improve infrastructure, design tools and educational opportunities that support dental hygienists and dentists in developing service models for underserved populations.

Methods: A needs assessment to determine the effectiveness of Minnesota's direct access model began in Spring of 2011. In-person interviews were conducted with dentists, hygienists, and collaborative agreement content experts, and a representative sample of dentists and hygienists from the general population was surveyed. The educational component of the project was developed in partnership with content and curriculum design experts to create and implement dental hygiene collaborative agreements.

Results: The needs assessment found that that only 2.5% of hygienists and 2.3% of dentists licensed in Minnesota have negotiated agreements for dental hygienists to practice in limited authorization settings. The variety of responses demonstrated that the statute is not well understood. While developing the series of five online courses we learned that the direct access statute is interpreted and applied differently across providers and settings. There is confusion about payment mechanisms and liability, which create barriers to providing support and guidance about its adoption in underserved areas.

Conclusions: In order for direct access to be adopted more widely by providers and integrated into designated care settings there is a need for improved understanding about dental public health benefits, authorized services, and operationalizing dental hygiene practice in settings indentified in the statute.

Source of Funding: Health Resources and Services Administration T12HP14659

# Abstracts for Poster & Student Presentations

Poster Number: 20

Serial/Abstract Number: 56

## **DATA-DRIVEN APPROACHES TO ADDRESS INAPPROPRIATE USE OF HOSPITAL EMERGENCY DEPARTMENTS/URGENT CARE CENTERS FOR DENTAL EMERGENCIES IN DANE COUNTY, WISCONSIN**

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Public Health Madison and Dane County, Madison WI, USA (1), American Family Children's Hospital, Madison WI, USA (2), Meriter Hospital and Clinics, Madison WI, USA (3)

**OBJECTIVE:** To analyze data to identify the extent of the problem and those populations at highest risk, to determine strategies to redirect hospital and clinic funding from expensive palliative care to definitive treatment.

**METHODS:** Public Health Madison and Dane County is analyzing hospitalization/urgent care data for oral health diagnoses (ICD-9 520.0 - 529.9). The Oral Health Coalition of Dane County's Data Committee is facilitating conversations between local hospitals and clinics, local dental and medical providers and Coalition members to develop proposals that meet the needs the population at risk and the providers. The recommendations will be presented to institutional, local and state policymakers for input and commitment.

**RESULTS:** The county-wide data was analyzed and presented to community stakeholders who identified the significant impact to their organizations and their need for collaboration. Tangible solutions are being developed to address the inappropriate use of hospital emergency departments/urgent care clinics for preventable dental pain.

**CONCLUSIONS:** The data has provided an opportunity to have individual community organizations identify the extent of the problem and its impact on their agency; helped to target specific at-risk populations; and encouraged collaboration between stakeholders to achieve a mutually beneficial solution to a growing problem.

**Source of Funding:** Public Health Madison and Dane County with potential funding sources through Dane County hospitals, clinics, medical/dental providers and community organizations.

Poster Number: 21

Serial/Abstract Number: 101

## **THAT MUST HAVE BEEN SOME TOOTHACHE! ESTABLISHING STATE-BASED EPIDEMIOLOGIC SURVEILLANCE OF ORAL HEALTH COMPLAINTS IN EMERGENCY DEPARTMENTS**

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**Objective:** To establish an epidemiologic surveillance system for oral health and to determine baseline incidence and characteristics of traumatic and nontraumatic dental emergencies that present to Minnesota's emergency departments (EDs).

**Methods:** We used statewide Minnesota hospital treatment and discharge data. Hospital treated cases were identified using ICD-9-CM diagnostic codes, V-codes, and procedure codes. Using 2007-2011 data, we describe nontraumatic dental related complaints. We also analyzed the incidence and characteristics of trauma related dental data, beginning in 1998.

**Results:** Bivariate and multivariate analyses of the data will be presented. Results include calculation of risk ratios and trends of selected population groups presenting to the ED.

**Conclusions:** Oral pain from toothache and other causes is a significant problem. Prior studies indicate that ED visits and hospital admissions for dental problems have been increasing and that most are nontraumatic in nature. EDs are an important point of care for

dental-related complaints, particularly for individuals who lack private insurance. ED providers regularly triage, diagnose, provide basic treatment, and ensure appropriate follow-up care for dental problems. More training for emergency medicine providers about the importance of dental care during and after ED visits is needed. Use of risk ratios allow identification of high risk groups that may benefit from targeted interventions and early and ongoing preventative dental care.

**Source of Funding:** Centers for Disease Control and Prevention 1U17CE002036-01 Revised and Centers for Disease Control and Prevention RFA-DP08-802

Poster Number: 22

Serial/Abstract Number: 93

## **ENVIRONMENTAL ASSESSMENT- A KEY TO PROGRAMATIC SUCCESS**

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**OBJECTIVES:** To engage public health professionals and policy makers in assessing the political and oral health environment for change, and to plan strategies to achieve desired outcomes by recognizing inhibiting factors and building and leveraging supportive systems.

**METHODS:** In November 2010, an online, adapted version of CDC's Environmental Assessment Instrument's Rating Form (RF) was sent to 42 individuals in the Governor's Office, Legislature, Department of Health and local health departments with a response rate of 69%. The form listed forces that may support or inhibit program progress. The rating scale ranged from strongly supports to strongly inhibits. Average scores for each force were plotted on Change Force Analysis Grid. The Grid determined whether a particular force was supportive or inhibiting for the program.

**RESULTS:** Responses revealed the overall environment for promoting oral health is promising and shows trends of continuous change. Supporting forces for implementing and maintaining the oral health program are stronger than the inhibiting forces. Supporting forces included: the legislature, Department of Health, Oral Health Unit itself, local public health agencies, partners, available resources, infrastructure, communications, and policies. Inhibiting forces were: political environment, state geography and population.

**CONCLUSIONS:** The environmental assessment methodology is a practical tool which states can easily adopt to inform strategic planning. Findings suggest that the environment for oral health in Minnesota is open to change and leveraging opportunities exist.

**Source of Funding:** Centers for Disease Control and Prevention RFA-DP08-802

Poster Number: 23

Serial/Abstract Number: 98

## **ORAL HEALTH AND DENTAL SELF-CARE HABITS IN RECENTLY DEPLOYED ARMY NATIONAL GUARD SOLDIERS**

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Office of the Army Surgeon General, Falls Church, VA, USA (1), Walter Reed National Military Medical Center, Bethesda, MD, USA (2)

**Objective:** To examine factors affecting oral health in Army National Guard (ARNG) soldiers.

**Methods:** Soldiers of the Pennsylvania ARNG recently deployed to Iraq and Afghanistan had dental examinations and answered questions on dental self-care habits. The Army DENCLASS system was used to categorize oral health: Class I requires no further treatment. Class II denotes need for non-urgent treatment. Class III identifies urgent conditions that will likely cause a dental emergency within 12

## Abstracts for Poster & Student Presentations

months. Class IV is denoted if there is no examination within 12 months or panoramic dental x-ray is not on record. Statistically, Pearson (rp) correlations were assessed.

Results: Of 265 soldiers, 43 soldiers were Class I (16%), 193 Class II (73%), 17 Class III (6%), and 12 Class IV (5%). There were statistically significant correlations with dental classification including dental self-care habits (dental classification improved as brushing increased,  $rp = -0.111$  and as flossing increased,  $rp = -0.118$ ). Other significant correlations with better dental classification included higher educational achievement ( $rp = -0.138$ ) and healthy eating habits ( $rp = -0.132$ ). Dental class did not correlate with age, use of mouth wash, use of dental-recommended chewing gum, smoking or recent dental cleaning. Only 2/3 of soldiers brushed twice per day and only half flossed once per day. Smoking was common (prevalence of 41%).

Conclusions: We report the novel finding that intensity of dental self-care habits of brushing and flossing correlates with improved dental class. The survey questionnaires of these National Guard soldiers revealed frequent opportunities to improve dental self-care habits.

Source of Funding: This research was performed as Approved Proposal #08016001, funded by the Telemedicine and Advanced Technology Research Center, United States Army Medical Research and Materiel Command, 504 Scott Street, Fort Detrick, MD 21702-5012.

Poster Number: 24

Serial/Abstract Number: 105

### QUALITY OF CARE IN DENTISTRY: A CALL TO ACTION

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Standardized evidence-based quality indicators for assessing practice performance have not yet been applied widely in dental settings. A recent case study using existing social and clinical indicators to evaluate patient outcomes and technical competency in the Alaska Dental Therapist Program suggests that quality of care evaluations might be possible in private, public, and institutional settings. Baseline assessments are needed that will then lead to longitudinal studies to measure change and progress, enabling comparisons in a variety of practice settings.

Source of Funding: for RTI study: WK Kellogg Foundation

Poster Number: 25

Serial/Abstract Number: 90

### APPLICATION OF HRSA HAB/HIV PERFORMANCE MEASURES: ORAL HEALTH SERVICES

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Lutheran Medical Center, Brooklyn, NY, USA (1), El Rio Community Health Center, Tucson, AZ, USA (2)

OBJECTIVE: To assess the effectiveness of applying five performance measures developed by HRSA's HIV/AIDS Bureau for oral health services for persons living with HIV/AIDS.

METHODS: Lutheran Medical Center and El Rio CHC applied five of HRSA's HIV Oral Health Performance Measures to electronic dental patient records of persons living with HIV/AIDS for calendar years 2009-2011.

RESULTS: Analysis over three 12-month measurement years showed that 100% of patients had a dental and medical health history; 96% had a dental treatment plan developed or updated; 75% received oral health education; 75% had a periodontal examination or screening; and 49% had a Phase I treatment plan completed within the year. An added measure showed 49% were in the recall/recare system.

CONCLUSIONS: The HAB/HIV oral health performance measures can be applied to an electronic dental record system in a community health center. Analysis showed some variations in treatment coding across multiple providers in the three El Rio dental clinics. As El Rio plans an electronic chart review process, it should evaluate its clinical care protocols to correlate them with ADA CDT codes and reinforce orientation processes for clinicians to make use of CDT codes more uniform and the application of performance measures more meaningful.

Source of Funding: U.S. Department of Health and Human Services, Health Resources and Services Administration, Community-Based Dental Partnership, Grant #H65HA01122.

Poster Number: 26

Serial/Abstract Number: 42

### EVALUATING THE IMPACT OF DENTAL CARE ON OUTCOMES IN HOMELESS INTERVENTION PROGRAMS FOR VETERANS

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OBJECTIVES: To evaluate the impact of dental care on established outcomes of homeless Veteran rehabilitation. Primary outcomes of interest are intervention program completion, employment upon program discharge, and transition to housing.

METHODS: This is a retrospective longitudinal cohort study, designed to compare Veterans who have participated in a homeless intervention program and received dental care as part of the program to those Veteran participants who did not receive dental care. Analyses were conducted on data from 17,019 Veterans who were admitted into VA homeless intervention programs from Aug 1, 08 thru Sept 30, 2009. Of these, 5,388 Veterans did not receive dental care. The 11,631 Veterans who did receive care were provided 235,493 CPT-codable treatments in 83,808 episodes of care.

RESULTS: Veterans who received dental care had significantly longer lengths of stay in the housing intervention program and had an approximate 30% increase in the probability of completing the program successfully. Equivalent results were found for outcomes in employment and housing. More detailed analyses examined several factors that may serve as moderators or mediators of these outcomes.

CONCLUSIONS: Dental care had a substantial impact in improving outcomes in housing intervention programs for homeless veterans.

Source of Funding: None

Poster Number: 27

Serial/Abstract Number: 1

### WORKPLACE ORAL HEALTH WELLNESS PROGRAM WOW!

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University of Kentucky, Lexington, KY, USA (1), Creation Technologies, Lexington, KY, USA (2)

Objectives: To improve the oral health of workers through educational interventions delivered in the context of workplace wellness.

Methods: A manufacturing company located in Lexington, Kentucky employs about 280 workers. A worksite oral health wellness program was implemented from 2010- 2011. The program consisted of an orientation, a dental screening, posted monthly dental tips, and four 'lunch and learn' presentations. A dental health survey was completed by workers and a dental screening chart was completed by a licensed dental professional. At the end of one year, a program evaluation survey was completed by participants. Measurements of success were

## Abstracts for Poster & Student Presentations

identified as increased use of dental benefits and development of novel effective program strategies to improve oral health literacy and change the culture from 'reactive to proactive' dental care.

Results: Of the workers who participated in the dental screenings and completed dental histories, 40% reported brushing one time or less a day and 72% reported rarely or never flossing. Nearly 35% reported needing dental work. The dental screening showed that 68% required "early care" and 2% required "urgent care". At the end of one year, 79% of workers reported a dental visit after participating in the oral wellness program. Sixty-one percent reported a change in behavior related to oral health after participating. Forty-seven percent now brush longer after participating. Thirty-nine percent reported flossing more often after participating.

Conclusion: Wellness programs that include a focus on oral health have the potential to improve oral health behaviors.

Source of Funding: Supported by a contract from the Kentucky Department of Public Health.

Poster Number: 28

Serial/Abstract Number: 46

### **WOMEN'S LEADERSHIP STRATEGIES: DOES GENDER MATTER? AN EMPIRICAL EVIDENCE FROM JORDANIAN DENTAL CLINICS**

*AYA Shakra (1)*

Jordan University, Amman, Jordan (1)

OBJECTIVE: The intent of this study is to investigate women's leadership strategies in dental clinics among professionals, a subject that to date has received little attention.

METHODS: The researcher independently contacted dental clinics using a random sample of the general population within Jordan. Appointments were made to visit various dental clinics in order to explain the objectives of the survey. If access was gained in dental clinics, a subsequent meeting was arranged in order to plan and distribute the material. The method of distribution of the questionnaire varied according to the type of dental clinics under study and its size. For example, the distribution of the material included postal systems, direct contact, and "pick up" at various locations within large dental clinics.

RESULTS: Women whose years of experience in the dental clinics is less than 10 years feel strongly that turn challenge into opportunity are one of the Women's leadership strategies more than the ones whose Years of experience is 15 years and more. The women feel weakly with Social benefits in the organization women who works in location of the dental clinics is Irbid city feels strongly that opportunities for advancement, women's tenure in the organization and work satisfaction scale are one of the women's leadership strategies more than the ones who worked in Amman city.

CONCLUSIONS: Women feel strongly that opportunities for challenge are one of the Women's leadership strategies. The single women feel strongly that Inspiring a shared vision more than the ones whose Married.

Source of Funding: None

Poster Number: 29

Serial/Abstract Number: 4

### **ORAL HEALTH DISPARITIES: A MODEL TO ADDRESS ORAL HEALTH NEEDS OF A REFUGEE POPULATION**

*Lynn Austin (1) RDH, MPH, PhD*

Western Kentucky University, Bowling Green, KY, USA (1)

OBJECTIVE: There are over 1,000 documented Burmese refugees in Kentucky. Oral health care has been identified as one of the chief needs of this population. The objective of this project was to develop a model where dental hygiene students could provide prophylaxes and referral services to this population.

METHODS: The Dental Hygiene Program Director at Western Kentucky University had been contacted by an area church leader for assistance in addressing the oral health needs of the Burmese population attending the church. As part of the curriculum, dental hygiene students routinely plan, implement, and evaluate community health projects. When the refugee population was introduced as a possible group with whom to work with on the community project, the students readily agreed. Working through the steps of Program Planning, the students developed a program which included treatment and referrals. Additionally, provisions for child care, transportation, and translators had to be made.

RESULTS: The oral health needs of the population were immense. Over 60 patients were seen in the Dental Hygiene clinic; none of whom had ever received any dental treatment before. Each of the patients received an oral prophylaxis and, working with interpreters, oral hygiene instruction. Eighteen of the patients received referrals for restorative work.

CONCLUSIONS: This project can serve as a model for addressing the oral health needs of a refugee population. Additionally, the students gained an immense appreciation for people from different cultures from the event.

SOURCE OF FUNDING: Western Kentucky University

Poster Number: 30

Serial/Abstract Number: 47

### **ATRAUMATIC RESTORATIVE TREATMENT IN THE US: IS IT CONSIDERED AS DEFINITIVE OR INTERIM TREATMENT?**

*Elham Kateeb (1) BDS MPH PhD candidate; John Warren (1) DDS MS; Gary Gaeth (1) PhD; Peter Damiano (1) DDS MPH; Micheal Kanellis (1) DDS MS; Elizabeth Momany (1) PhD; Karin Weber-Gasparoni (1) DDS PhD*

University of Iowa, Iowa City, Iowa, USA (1)

Objectives: Atraumatic Restorative Treatment (ART) is a means of restoring caries in populations with little access to traditional dental care or patients for whom traditional cavity preparation is not feasible. However, the American Academy of Pediatric Dentistry (AAPD) views ART as acceptable only as an interim treatment. This study reports US pediatric dentists' views of ART as definitive or interim caries treatment.

Methods: An on-line survey was sent to a random sample of 2237 AAPD members. Nine patient scenarios were presented with factors such as lesion location, depth and extension being fixed and age of the child, level of cooperation, type of insurance were varied. Demographic and practice characteristics were used to explain the odds of consideration of ART as definitive or interim treatment.

Results: 723 pediatric dentists (32%) completed the survey, and 18.3% of the respondents considered ART as definitive treatment while 81.7% considered ART as interim treatment most of the time. A logistic regression model showed that working in public health clinics increased the odds to consider ART as definitive treatment by 3.7; (95% CI 1.5-14.7). In contrast, having a practice in a small city (0.29; 95% CI 0.12-0.68) and learning about ART in pediatric dentistry residency programs (0.57; 95% CI 0.36-0.90) decreased the odds of considering ART as a definitive treatment.

Conclusion: AAPD guidelines encourage the use of ART as an interim treatment, and results suggest AAPD members consider ART as an interim procedure, but those in public health clinics have a somewhat different view.

Source of Funding: This project was funded by NIH/NIDCR T32 grant DEO 14678-06



# Abstracts for Poster & Student Presentations

Poster Number: 31

Serial/Abstract Number: 99

## **THE CANARY IN THE COAL MINE: USE OF SENTINEL SCHOOLS WITH THE BASIC SCREENING SURVEY**

*Jon Roesler (1) PhD; Ayo Adeniyi (1) MBBS, MPH; Barbara Hann (1) BA; Bilquis Khan Jiwani (1) MSc., MBA, MSc.; Merry Jo Thoele (1) RDH, MPH*  
Minnesota Department of Health, St. Paul, MN, USA (1)

**Objectives:** To establish baseline measures for monitoring oral disease trends and to characterize oral health status in high risk minority and/or low socioeconomic populations.

**Methods:** During the 2010 academic year, the Minnesota Department of Health conducted a basic screening survey of third graders in public schools. A simple random sample of 40 schools was selected from 837 elementary schools. In addition, ten sentinel schools were selected; these had higher proportions of students from minority and/or lower socioeconomic communities.

**Results:** In randomly sampled schools, caries experience was 54.9% (95% C.I = 50.3% - 59.5%), 18% (14.9% - 21.4%) had untreated caries, and 64.1.9% (60.0% - 68.2%) had a dental sealant on at least one permanent molar. In the sentinel schools, percentages of children with caries experience, untreated caries and sealant rates were 77.0%, 34.5% and 62.1%, respectively.

Furthermore, in sample schools 81.5% (78.3% - 84.8%) had no obvious dental problems, 16.8% (14.1% - 19.4%) required early care, and 1.7% (0.9% - 2.5%) required urgent care. In sentinel schools, 63.3% had no obvious dental problems, 30.9% required early care, and 5.9% required urgent care.

**Conclusions:** Sentinel methodology can be an appropriate strategy for describing populations that cannot be adequately characterized from limited samples. Challenges exist in reporting findings because sentinel data is indicative rather than definitive or descriptive. Furthermore, as the sentinels are not selected as part of a randomized sample, use of confidence intervals is inappropriate.

**Source of Funding:** Centers for Disease Control and Prevention RFA-DP08-802

Poster Number: 33

Serial/Abstract Number: 39

## **LESSONS FROM NORTHWEST FLUORIDATION POLITICS**

*Charles Haynie (2) MD; Kurt Ferré (1) DDS*

Oregon Healthy Smiles Coalition, Oregon, USA (1), Hood River Healthy Water, Oregon, USA (2)

**OBJECTIVES:** 1. Increased understanding of and confidence in the scientific, legal and ethical arguments which favor community water fluoridation (CWF). 2. A better appreciation of the political, non-scientific, aspects of successful fluoridation politics. and 3. Oral public health advocates will learn of ready reference sources to use in their own communities.

**METHODS:** The authors draw on "ground zero" experiences in political campaigns over the past 10 years; some won, some lost.

**RESULTS:** Despite near unanimous agreement amongst North America's public health scientists fluoridation remains politically controversial in Oregon and the Pacific Northwest. Arguments against CWF often involve exaggeration of risk, selective literature citations, outright falsehoods, and questionable ethical analyses. Fear of big government, big business and environmental concern wedded to chemophobic anxiety help anti-fluoridationists to win votes despite campaigns of deeply flawed rhetoric. Opponent's impassioned belief and fervor can be destructive to civility. Legal resources must often fight prejudicial ballot measures. Specific campaign experiences, both wins and losses, are analyzed for lessons learned.

**CONCLUSION:** Election success requires logic, legitimate science, clear thinking and a common-sense appeal in support of the common

good be coupled with generic political and organizational skills. Science is not sufficient. Consistent advocacy messaging should argue that community water fluoridation brings better oral health to all citizens

**Source of Funding:** None

Poster Number: 34

Serial/Abstract Number: 67

## **"ENGLISH LEAFLETS ARE NOT MEANT FOR ME": A QUALITATIVE APPROACH TO EXPLORE THE DIMENSIONS OF ORAL HEALTH LITERACY IN CHINESE MOTHERS IN SOUTH WESTERN SYDNEY, AUSTRALIA**

*Amit Arora (1) BDS, MDS (Hons), Grad Cert Health Couns; Mandy Nga-Man Liu (1) BDent; Rainbow Chan (1) BDent; Eli Schwarz (2) DDS, MPH, PhD, FHKAM, FCDSHK, FACD, FRACDS*

University of Sydney, Surry Hills, Australia (1), Oregon Health and Science University, Portland, USA (2)

**OBJECTIVE:** To record the views of Chinese mothers living in South Western Sydney on the value of commonly used dental health education materials which gave behavioural advice on looking after the oral health of young children.

**METHOD:** This qualitative study was nested within a large cohort study in South Western Sydney. Chinese-speaking mothers (n = 27) with young children were approached for a face-to-face, semi-structured interview at their home. Two dental leaflets in English which gave behavioural advice on monitoring young children's oral health were sent to each mother prior to interview. On the day of the interview, mothers were also given translated versions of the leaflets for comparison. Interviews were recorded and subsequently transcribed verbatim. Transcripts were analysed by thematic coding.

**RESULTS:** Mothers reported that the leaflets were not tailored to match the different levels of English literacy within the Chinese community, and participants favoured health information material written in their first language with the use of illustrations. However, translations had to take account of the Chinese culture, as some of the advice in the leaflets presented did not reflect Chinese family values. Mothers also felt that the information should be more specific to provide a better understanding of the rationale for changing or implementing a different behaviour.

**CONCLUSIONS:** Dental health information literature for Chinese people should not be translated directly from those intended for an English-speaking audience, but should reflect Chinese culture specific advice. Supportive illustrations were also preferred.

**Source of Funding:** This project is funded by the Australian National and Medical Research Council Project Grant (1033213), Centre for Oral Health Strategy - NSW Health, Colgate Palmolive, and the Australian Dental Research Foundation. Dr Amit Arora was supported by the Oral Health Foundation and the University of Sydney International Research Scholarship.

Poster Number: 35

Serial/Abstract Number: 97

## **UTILIZING REGISTERED DENTAL HYGIENISTS WITH A COLLABORATIVE AGREEMENT IN SCHOOL-BASED DENTAL SEALANT PROGRAMS**

*Patti Ulrich (1) RDH; Merry Jo Thoele (1) RDH, MPH*

Minnesota Department of Health, St. Paul, MN, USA (1)

**Objectives:** To develop a statewide coordinated school-based dental sealant program that utilizes registered dental hygienists with a collaborative agreement to address the oral health disparities of children in Minnesota.

**Methods:** A request for proposal, which included planning and implementation deliverables, was published in the state register

## Abstracts for Poster & Student Presentations

to fund new school-based dental sealant programs and/or expand existing programs. Funding criteria required that programs have a registered dental hygienist who holds a collaborative agreement with a dentist. The agreement allows the hygienist to place sealants without a dental exam. To assure quality, attendance at a sealant calibration workshop was required. Ongoing technical assistance is provided to grantees, including sealant advisory meetings and interim review.

Results: Six grantees were funded; two community health centers and four non-profit organizations. The program targets children in 2nd grade, provides dental screenings, referrals, education, fluoride varnish, and dental sealants. Evaluation data is collected using qualitative instruments such as questionnaires and quantitative instruments such as the Sealant Efficiency Assessment for Locals and States tool (SEALS), and interim reports. Information about cost effectiveness is also obtained through SEALS.

Conclusions: Dental hygienists working with a collaborative agreement have the potential to increase the number and type of oral health services available in school-based programs and to achieve the Healthy People 2020 goal to increase the proportion of children and adolescents who have received dental sealants on their molar teeth.

Source of Funding: Health Resources and Services Administration T12HP14659 and Centers for Disease Control and Prevention RFA-DP08-802

Poster Number: 37

Serial/Abstract Number: 91

### AGE OF THE FIRST DENTAL VISIT AT IOWA COMMUNITY HEALTH CENTERS

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Department of Preventive and Community Dentistry, University of Iowa, Iowa City, IA, USA (1), Public Policy Center, University of Iowa, Iowa City, IA, USA (2), Department of Biostatistics, University of Iowa, Iowa City, IA, USA (3), Department of Community and Behavioral Health, University of Iowa, Iowa City, IA, USA (4), Department of Dental Public Health Sciences, University of Washington, Seattle, WA, USA (5), Department of Health Management and Policy, University of Iowa, Iowa City, IA, USA (6)

Objective: To evaluate age at the First Dental Visit (FDV) of Medicaid-enrolled children at Iowa Community Health Centers (CHCs) and its association with demographic, Well-Child medical Visits (WCVs) and birth certificate variables.

Method: Using Medicaid dental claims, 200 children who were seen for their FDV at one of five Iowa CHCs were randomly selected for participation. Dental service data were abstracted from children's CHC dental charts. WCVs from medical claims files and birth certificate information such as number of prenatal care visits, tobacco use during pregnancy, apgar score and delivery mode were amended to this dataset. Linear regression analysis was used to assess relationship of the age at FDV with demographic, WCVs prior to FDV and birth certificate variables.

Results: The mean and median for FDV age were 26.0 ( $\pm 13.0$ ) and 23.2 months, respectively. Of 190 subjects with documented treatment plan for the first episode of dental care, 162 (85%) received at least one preventive dental procedure, including prophylaxis, topical fluoride, dietary counseling or oral hygiene instruction. Sixteen subjects (8%) needed restorative treatment; however, only 7 of them completed the entire restorative treatment plan at the center. Linear regression analysis showed that unlike demographic variables and prenatal visits, number of WCVs at the CHC was significantly associated with age at FDV ( $P=0.004$ ). Also, FDV age was significantly different among the 5 Iowa CHCs ( $p<0.0001$ ).

Conclusion: Overall, children who had more well-child medical visits at community health centers were seen earlier for their FDV at the center.

Source of Funding: Research was funded by a grant from National Institute of Dental and Craniofacial Research [5R01DE020303-02].

Poster Number: 38

Serial/Abstract Number: 87

### COLLABORATIVE EFFORT TO INCREASE ACCESS TO ORAL HEALTH CARE FOR UNDERSERVED CHILDREN PHILADELPHIA, PA

*Julianna Gelinias (1) RDH, BS; Leyla Moreno (2)*

St. Christopher's Foundation for Children, Philadelphia, PA, USA (1), Health Partners, Philadelphia, PA, USA (2)

OBJECTIVE: To increase utilization of Medicaid benefits and provide a dental home for young children in North Philadelphia

METHODS: In 2009, the St. Christopher's Foundation for Children's mobile dental program, and Health Partners, a managed care insurance carrier for Pennsylvania Medicaid, formed a collaboration to offer "Chopper Check" events at least 3 times a year. Health Partners identifies children members up to age 9 who have not received dental treatment for over a year and send the invitation to the event with gift incentives if they attend the event and receive a free dental preventive visit on the Care Mobile. The Care Mobile dentists and hygienists are culturally competent for the population located in a target area defined as a Dental Health Provider Shortage Area in North Philadelphia. At the time of this first visit, the child is offered a "Dental Home" and any needed restorative treatment is scheduled for an appointment within a week.

RESULTS: 302 underserved children at 11 events received diagnostic and preventive services. Untreated decay was diagnosed in 64%. Success for the number who kept follow-up visits is 29% and who maintains regular checkups is 11 %.

CONCLUSION: This unique collaborative effort has connected young children to a dental home. Better success rates for regular checkups may be achieved with additional strategies.

Source of Funding: St. Christopher's Foundation for Children and Health and Health Partners

Poster Number: 39

Serial/Abstract Number: 53

### THE COLUMBIA UNIVERSITY STUDENT COMMUNITY PARTNERSHIP (SCP): PROMOTING SUSTAINABLE STUDENT INVOLVEMENT WITH POPULATIONS ACROSS THE LIFESPAN

*Safiya Smith (1) BS; Chelsea Brockway (1) BS; Burton Edelstein (1) DDS, MPH; Courtney Chinn (1) DDS, MPH; David Albert (1) DDS, MPH; Kavita Ahluwalia (1) DDS, MPH; June Levine (1) MS, RD, CDN, CDE; Sharifa Williams (1) MPH, CPH*

Columbia University College of Dental Medicine, New York, NY, USA (1)

The Columbia University Student Community Partnership (SCP) supports community-based learning experiences for dental students to engage in service to underserved populations. The populations highlighted over this five year Program are: young children, adolescents, the disabled, elderly/frail adults, and special populations such as immigrants, low income adults, the homeless, and/or HIV patients.

The SCP involves three activities: 1) an annual request for proposals (RFPs) for funding of student organizations for population-based extramural activities in partnership with local community organizations, 2) screenings at the Columbia University Head Start, and 3) activity booths at the annual Washington Heights and Inwood Community Block Party.

In year one, three student organizations: the American Student Dental Association (ASDA), Student National Dental Association (SNDA),

## Abstracts for Poster & Student Presentations

and Michael S. Yuan student-run free clinic (MSY) participated in the RFP, providing oral health screenings, education, and fun activities for over 200 young children throughout Harlem, Washington Heights, and Inwood. Three screening events, engaging 11 dental students, were held and 86 children from the local community received dental care. The Block Party was supported by four student organizations: American Association of Pediatric Dentists (AAPD), American Association of Public Health Dentists (AAPHD), ASDA, and MSY who met with over 300 families.

CDM students remain committed and excited about the SCP. There has been increased interest in the Program. Forty students have signed up for screening training planned for fall 2011. SCP to date has advanced its goal of increasing meaningful, sustainable student engagement with the local community.

Source of Funding: Health Resources and Services Administration Title VII Training Grant D88HP20109 on Building a sustainable network of pediatric dentists committed to care of underserved children

Poster Number: 40

Serial/Abstract Number: 108

### **DENTAL CARIES EXPERIENCE IN NORTHERN MANHATTAN HEAD START POPULATION**

*David A. Albert (1) DDS, MPH; Sharifa Z. Williams (1) MPH, CPH; Prema Kapur (1) DDS; Asma Muzaffar (1) DDS; Stephen Marshall (1) DDS, MPH*

Columbia University College of Dental Medicine, New York, NY, USA (1), Columbia University Mailman School of Public Health, New York, NY, USA (2)

The purpose of this study was to determine the prevalence of early childhood caries (ECC) and untreated caries in a disadvantaged predominantly Hispanic or African-American urban population. This is a follow up to a 1995-1997 study in this population.

A retrospective chart review was conducted for children seen on the Columbia University College of Dental Medicine mobile dental van in the communities of Washington Heights and Central and East Harlem between 2007 and 2008. The study included children 3 to 4 years of age at initial examination. The mean number of decayed and filled teeth (dft), decayed teeth (dt), filled teeth (ft), and percentage of decayed of total decayed and filled teeth (%d/dft) were calculated. Further, we analyzed the sample for differences based on sample characteristics.

Our sample included 815 children. There were 412(50.6%) boys, and 492(60.4%) 3 year olds in the data. About half (51%) had decay, and 8% had filled teeth. Mean dft in our sample was 2.08 and 4.01 in children with at least one decayed tooth. Mean dt was 1.87 and mean ft was 0.213. In children with disease, mean dt was 3.67 and mean ft was 0.34. Further, decay was 92.4% of decayed and filled teeth. In children with decay, decay was 95.1% of decayed and filled teeth. There were no gender or age differences in having decayed or filled teeth ( $p>0.05$ ).

The high levels of untreated decay found in these communities suggest that further services are needed.

Source of Funding: None

Poster Number: 41

Serial/Abstract Number: 48

### **TRAINING NORTH CAROLINA EARLY HEAD START STAFF IN BRIEF MOTIVATIONAL INTERVIEWING TO IMPROVE COMMUNICATION ABOUT CHILDREN'S ORAL HEALTH**

*Kathleen Harper (1) MA; Leslie Zeldin (1) MPH, MSUP; Gary Rozier (1) DDS, MPH*

University of North Carolina, Chapel Hill, NC, USA (1)

OBJECTIVE: To determine training needed by North Carolina (NC) Early Head Start staff to become competent in Brief Motivational Interviewing (MI).

METHODS: All NC Early Head Start programs participating in a prospective cohort study of early childhood caries (ZOE) were invited to attend day-long Introductory and Advanced MI training sessions. Pre and post tests assessed knowledge of MI (0 to 10 scale) and written application of skills as measured by the Helpful Response Questionnaire (HRQ) (1 to 5 scale, MI adherent is  $\geq 3$ ). Another day-long, intensive skill-building session was offered for staff in selected programs who volunteered to participate in further training and evaluation.

RESULTS: Staff ( $n=176$ ) from 25 programs participated in one or more sessions. Baseline assessments for knowledge improved after introductory training (6.9 to 7.8,  $N=176$ ,  $p<0.001$ ). Baseline HRQ scores also improved after introductory training (1.2 to 2.5,  $N=162$ ,  $p<0.001$ ) and after advanced training (1.7 to 2.7,  $N=47$ ,  $p<0.001$ ), but on average were not MI adherent. HRQ scores in the third training improved significantly (2.3 to 3.4,  $N=11$ ,  $p=0.002$ ) and the average HRQ post-test scores were MI adherent.

CONCLUSIONS: Early Head Start staff are receptive to communication trainings that focus on oral health. Staff demonstrated a high level of communication knowledge before training, but a low level of written application of skills. Knowledge scores and application scores improved as a result of the training, but the application scores on average did not reach acceptable levels of "MI adherence" until the third, intensive skill building training.

Source of Funding: This research was supported by Grant No. R01 DE018236 from NIDCR

Poster Number: 42

Serial/Abstract Number: 54

### **GOVERNMENTAL ACCOUNTABILITY OFFICE REPORTS ON CHILDREN'S ORAL HEALTH, 1990-2011**

*Tener Huang (1) BS; Burton Edelstein (1) DDS, MPH*

Columbia University College of Dental Medicine, New York, NY, USA (1)

OBJECTIVE: To assess trends in Government Accountability Office (GAO) reports to Congress between 1990 and 2011 on children's oral health.

METHODS: Using the GAO's on-line search engine, queries on "dental" and "oral health" were performed and resulting reports sorted by relevance. The top 150 for each query term were reviewed and categorized by topic.

RESULTS: Of the 1075 reports that cite "dental" and 2081 that cite "oral health" (with duplication) a total of 22 were ultimately selected for detailed review. Of these, 8 reported on oral health surveillance, 10 on public insurance coverage, 13 on access, 6 on Governmental programs, and 5 on workforce. None was issued prior to 1994; 10 between 1994 and 2001; none between 2002 and 2006, and 13 during the years 2006 through 2011. Prior to the 2002-2006 hiatus, Congress charged GAO to investigate access and coverage while after the hiatus GAO was focused on oral health surveillance, governmental remedies of access disparities, and workforce. Over time oral health was increasingly addressed in its own right rather than as a component of a broader healthcare report. Greater numbers of reports were commissioned when the Democratic Party held majorities.

CONCLUSIONS: Congress has intermittently called upon GAO to produce reports that include or are focused on children's oral health. Between 1990 and 2011, three distinct periods of GAO activity are evident: early work on problem definition within larger healthcare contexts; middle period with no activity; and late period with focused attention on programmatic reforms and surveillance for accountability.

Source of Funding: None

# Abstracts for Poster & Student Presentations

Poster Number: 43

Serial/Abstract Number: 14

## **MAKING MILWAUKEE SMILE**

*Matt Crespin (1) MPH, RDH; Earnestine Willis (2) MD, MPH; Danielle Cooling (2) MD; Alecia Huettl (2) MD; Caleb Rodgers (2) MD; Lisa Olson (2); Elizabeth Nelson (3) MA, BSSW; M. Kathleen Murphy (4) DNP, RN, FNP-BC*

Children's Health Alliance of Wisconsin, Milwaukee, WI, USA (1), Medical College of Wisconsin, Milwaukee, WI, USA (2), Columbia St. Mary's, Milwaukee, WI, USA (3), Milwaukee Public Schools, Milwaukee, WI, USA (4), Marquette University School of Dentistry, Milwaukee, WI, USA (5), Milwaukee Health Services, Inc., Milwaukee, WI, USA (6), Children's Hospital of Wisconsin, Inc, Milwaukee, WI, USA (7), Southeast Dental Associates, S.C., Milwaukee, WI, USA (8)

**OBJECTIVE:** To reduce untreated tooth decay among school-aged children as recommended by the Healthy Teeth = Healthy Kids action plan utilizing a school-based oral health care model.

**METHODS:** An oral health care coordinator (OHCC) was hired and placed in two Milwaukee schools to increase participation in an existing school-based oral health program. The OHCC assisted families in finding follow-up restorative dental appointments. Additionally, partners trained local medical providers on performing oral health risk assessments, anticipatory guidance and applying fluoride varnish at well-child checks.

**RESULTS:** All three Making Milwaukee Smile objectives were met and exceeded. More children at the targeted school participated in the school-based oral health program and a reduction in the number of children with untreated disease was observed over time. Medical providers when properly trained and given resources for referrals were more likely to perform oral health risk assessments and apply fluoride varnish at well-child exams.

**CONCLUSIONS:** Utilization of an OHCC increased participation for children who consistently participated in the program resulting in the reduction of dental disease in two local school-based oral health programs. Replication of these methods can improve the oral health status for school-aged children. Medical providers can play a vital role if educated to address oral health disease disparities.

Source of Funding: Healthier Wisconsin Partnership Program

Poster Number: 44

Serial/Abstract Number: 78

## **PARTNERING TO PROVIDE QUALITY DENTAL HOMES FOR HEAD START CHILDREN WITHIN OREGON**

*Mike Shirtcliff (1) DMD; Karen Ayers (2); Kevin Boie (3) CFO*

Advantage Dental, Remond, Oregon, USA (1), Oregon Child Development Coalition, Wilsonville, Oregon, USA (2), Access Dental Plan, LLC, Vancouver, WA, USA (3)

**Objectives:** To create partnerships between the dental community and Head Start to ensure dental homes for Head Start children throughout Oregon.

**Methods:** Oregon's Dental Home Initiative leadership team and mentor work groups agreed upon a set of action items, developed plans to address the identified gaps of services and work collaboratively to create sustainable outcomes.

**Results:** Based on local/regional priorities and needs, the DHI leadership team and mentor work groups developed action plans and created in the following solutions: recruitment of additional dental providers, partnering with OHSU Dental School, access to state Medicaid insurance system to identify dental care organization for children, developed a brochure for parents on the current Medicaid services, developing a guide to improving oral health services for Oregon's children and creating a systematic approach to oral health practices, and new techniques for assess children within head start programs.

**Conclusions:** Build collaborative relationships with multiple community partners to enhance services in Oral Health to focus in on establishing new practice methods within the Head Start programs and influenced policy change within the Division of Medical Assistance Program.

Source of Funding: Head Start Dental Home Initiative Grant

Poster Number: 45

Serial/Abstract Number: 119

## **MAPPING HEALTHY SMILES IN URBAN CLEVELAND**

*Catherine Demko (1) PhD; Kristin Williams (1) DDS, MPH; James Lalumandier (1) DDS, MPH*

Case Western Reserve University School of Dental Medicine, Cleveland, Ohio, USA (1)

**OBJECTIVE:** To examine geographical patterns in caries distribution and referral care sources among sealant participants by school location and community health clinics.

**METHODS:** Data from 2008 was available from the school-based Healthy Smiles Sealant Program. Children were associated with their elementary school building in the Cleveland Metropolitan School District and mapped within urban Cleveland neighborhoods. Percent of children with untreated decay, restorations, and urgent referral needs were determined for each school building and mapped. Distances between school building and sources of referral care, such as community dental clinics or private offices was determined.

**RESULTS:** Cleveland has 28 neighborhoods; dental safety net clinics are located in ten. Patterns of untreated decay and urgently needed care were apparent by neighborhood. Several contiguous neighborhoods without clinics included schools with the highest percent of urgent referrals. Referral care sources were community dental clinics, corporate dental offices, and private dental offices generally located in neighboring suburbs. Few private dentists practice within urban Cleveland and ten were visited by Sealant patients for follow-up care. Eleven schools are located more than 3 miles from a safety-net dental clinic. A low proportion of parents comply with providing information about referral care back to Healthy Smiles.

**CONCLUSIONS:** Neighborhood level data can reveal areas of greatest unmet need for oral health care. Although this current data is summarized by school location rather than individual child, areas that deserve increased efforts for access and follow-up care were identified. Specific local barriers to access within these neighborhoods need to be identified.

Source of Funding: Saint Luke's Foundation of Cleveland

Poster Number: 47

Serial/Abstract Number: 10

## **PEDIATRIC ORAL HEALTH RESOURCES ON THE UNIVERSITY OF IOWA COLLEGE OF DENTISTRY'S WEBSITE**

*Cathy Skotowski (1) RDH, MS*

The University of Iowa College of Dentistry, Iowa City, IA, USA (1)

**Objective:** To create an awareness of the pediatric oral health resources available on the University of Iowa College of Dentistry's website.

**Method:** Faculty members and residents from the University of Iowa's Department of Pediatric Dentistry have developed educational videotapes and fact sheets on various pediatric oral health topics and have made them accessible on their department website.

**Results:** The educational videotapes are entitled: Infant Oral Exam, Toddler Oral Exam, Caries Risk Assessment for the Young Child, Modified Toothbrushing Protocol, Oral Health for the Young Child, and Your Oral Health is Your Baby's. The fact sheets include information on the topics of dietary and oral hygiene messages pertaining to infants



## Abstracts for Poster & Student Presentations

and toddlers, dealing with dental emergencies, and additional oral health resources for children. Some of the educational videos and the fact sheets designed for parents and caregivers of young children are also available in Spanish.

Conclusions: By placing the pediatric oral health resources on the internet, they are accessible to a much larger audience of health professionals and parents/caregivers.

Source of Funding: Delta Dental Public Benefit Fund and the University of Iowa.

Poster Number: 48

Serial/Abstract Number: 84

### **PARENTAL INVOLVEMENT: PROJECT SAVING SMILES**

*Sohini Dhar (2) BDS, MPH; Teresita Ladrillo (1) DMD, MPH; Katrima Matthews (1) MS, CHES; Johanna DeYoung (1) BSN, DDS, MPH*

Houston Department of Health and Human Services, Houston, TX, USA (1), School of Public Health, University of Texas, Houston, TX, USA (2)

Objective: Project Saving Smiles (PSS) developed by the Houston Department of Health and Human Services is a collaborative community-based public health endeavor that utilizes preventative methods to decrease the rate of dental caries, and to decrease school absences due to dental problems among at-risk 2<sup>nd</sup> graders. Since its first mission in November 2008, PSS has screened 9,499 children, and sealed 29,217 teeth. To improve the participation rate and to decrease the number of caries in the target population, parent involvement in the program was identified as a critical component.

Method: To engage parents in maintaining the oral health of their children and to motivate them to consent for their child to participate in PSS, several strategies were used. "Listening Sessions" were conducted in collaboration with Texas Oral Health Coalition -Houston Region, where parents expressed their views regarding their children's oral health. A survey was developed and administered to parents of PSS participants. Other strategies included sending newsletters home to reinforce the oral health message and advertising the program to reach parents.

Result: The data from the listening sessions and the surveys will be analyzed and used to further engage parents and improve the response rate to accessing preventive interventions such as PSS.

Conclusion: Parents are critical partners in improving oral health since they greatly influence their children's eating habits, oral health practices, and their access to preventive care. The results from the analyzed data will show the degree of effectiveness of the identified strategies.

Source of Funding: None

Poster Number: 49

Serial/Abstract Number: 109

### **DEVELOPMENT, IMPLEMENTATION AND EVALUATION OF A DENTAL CAREER PROGRAM FOR GRADES 6-8 TO ADDRESS ORAL HEALTH DISPARITIES IN WEST VIRGINIA**

*Shelia Price (1); Richard Crout (1); Leigha Crout (2); Gerry Hobbs (1)*

West Virginia University School of Dentistry, Morgantown West Virginia, USA (1), University of Charleston, Charleston West Virginia, USA (2)

Objectives: Access to care is a major problem in rural areas exhibiting oral health disparities such as West Virginia (WV), compounded by a lagging dental career pipeline. The aim of this project is the development, implementation, and evaluation of a dental career program designed to encourage 6<sup>th</sup>-8<sup>th</sup> grade students to pursue careers in dentistry.

Methods: Focusing on rural WV communities, 25 families were recruited. The two-day program included development and

implementation of ten modules designed to increase: 1) dental career interest among middle-school students, 2) knowledge about the importance of oral health, and 3) knowledge of the skills needed to become dentists. Program evaluations included pre- and post-tests coded for purposes of individual comparisons. Primarily Likert style questions evaluated information transfer. Statistical significance was assessed utilizing the Contingency Chi Square test and Analyses of Variance.

Results: Of those families recruited, 80% participated. There was a statistically significant increase in dental career interest, knowledge about the importance of oral health, and knowledge of skills needed to become dentists ( $p < 0.05$ ).

Conclusion: With high rates of oral disease within WV and a lagging dental career pipeline, strategies that engage and encourage middle school students to consider dentistry will be necessary. The development, implementation, and evaluation of this dental career exploration program designed to encourage six-eighth grade students to pursue a career in dentistry was successful. Other schools in states that exhibit similar oral health disparities in their rural populations might find it useful.

Source of Funding: Benedum Foundation

Poster Number: 50

Serial/Abstract Number: 73

### **GIVE KIDS A SMILE**

*Nicole Stoufflet (1) RDH, MHS; Tina Montgomery (1) MBA; Rebecca Starkel (1) MS; Matthew Warren (1)*

American Dental Association, Chicago, IL, USA (1)

Objective: Present highlights from the 2011 Give Kids A Smile program and a survey of dentist volunteers.

Background and Methods: Since its launch in 2002, the GKAS program has grown substantially. An updated GKAS Enrollment Application was implemented in 2010 to retain program planning and actual event data, and a datamart was designed to store program data over time.

With 2012 marking its ten-year anniversary, the ADA would like to share recent event data and key findings from a survey of dentist volunteers. Data was collected from 215 volunteers via a web-based survey. Respondents answered questions about strengths and challenges of volunteering and described other aspects of participation.

Highlighted Results:

2011 GKAS Event Data:

- 64% of programs reported actual event data; this is a 10% increase compared to 2010.
- Participation of up to 50 children was reported for about half of 925 events (49%), consistent with previous years.
- The majority of programs (65.5%) planned to offer clinical services and provided clinical services.

Survey of Dentist Volunteers:

When asked to indicate why they decided to volunteer at a GKAS event in the past, the most popular reasons selected were to:

- engage in community service (92%).
- treat patients' current oral health problems (78%)
- educate about oral health maintenance (65%)

Conclusions: The GKAS program has made significant progress since its inception. With the aid of a growing event database and insight from dentist volunteers, further improvements can be made.

Source of Funding: None

# Abstracts for Poster & Student Presentations

Poster Number: 51

Serial/Abstract Number: 115

## **AN EVALUATION OF ORAL HEALTH STATUS OF CHILDREN IN THE UNIVERSITY OF PENNSYLVANIA, SCHOOL OF DENTAL MEDICINE SCREENING PROGRAM**

*Olubunmi Adekugbe (1) BDS, MPH; Andres Pinto (1) DMD, MPH; Joan Gluch (1) RDH, Ph.D.; Jill Klischies (1) RDH, BSDH; Ellen Witsch (1) RDH; Kathy Kim (1) BS; Robert Collins (1) DMD, MPH; Scott Kim (1) BS*

University of Pennsylvania, Philadelphia, USA (1)

**Objectives:** The Commonwealth of Pennsylvania mandates all children in Grades K, 1, 3 and 7 to have an oral health screening. Since 2000, Penn Dental Medicine has implemented a screening program in select Philadelphia schools. Epidemiologic data documenting oral health status of school-aged children in Philadelphia are scant. The objective of this evaluation is to assess trends in the oral health status of children screened from 2006 - 2011.

**Methods:** Children aged 5 - 17 enrolled in 35 schools in West/South-West Philadelphia were screened by third and fourth year dental students from 2006 -2011. Examiners were trained to assess for carious lesions, restored teeth and sealants by visual assessment under faculty supervision. The prevalence of tooth decay and untreated tooth decay, the number of decayed and filled primary teeth (dft) and the number of decayed, missing, and filled permanent teeth (DMFT) and presence of dental sealant on permanent teeth were determined annually.

**Results:** A total of 7031 screenings were done. In 2006 decay experience was 54.43% (primary) and 32.96% (permanent) teeth, untreated decay was 40.32% (primary) and 27.65% (permanent) teeth. In 2011 decay experience was 48.5% (primary) and 23.17% (permanent) teeth, untreated decay was 27.69% (primary) and 16.74% (permanent) teeth. Mean dft and DMFT was 1.51 and 1.02 in 2006 and 1.78 and 0.83 respectively in 2011. Sealant prevalence was 17.79% in 2006 and 18.20% in 2011.

**Conclusions:** To reduce disparities, more efficient use of resources should be allocated to link screening programs with preventive services and dental care.

Source of Funding: None

## **Student Abstracts (Poster 52 - 63)**

Student Poster: 52

### **HIGH COSTS AND FEWER HEALTHY DAYS GAINED IN USING AN ORAL CANCER ADJUNCT COMPARED TO CONVENTIONAL ORAL EXAMINATION**

*Vinodh Bhoopathi, BDS, MPH, DScD (1); James F Burgess, MA, PhD (1); Ana Karina Mascarenhas, BDS, MPH, DrPH (1)*

Boston University Goldman School of Dental Medicine (1); Nova Southeastern University College of Dental Medicine (2)

**OBJECTIVE:** To determine the cost effectiveness of using OralCDx brush biopsy as a routine oral cancer (OC) screening instrument compared to conventional oral examination (COE).

**BACKGROUND:** Though it is important that new oral cancer diagnostics are made available for public's use, it is even more imperative to question if they are effective in truly detecting oral cancer, and if the money spent on them is justifiable for the health outcomes achieved.

**METHODS:** For this cost effectiveness analysis (CEA) study we compared two decision analysis arms: brush biopsy and COE, from an insurance company perspective, including the direct costs only. Costs and healthy days gained over a period of 5-years were discounted at rate of 3% per year. One-way, two-way, and probabilistic sensitivity analyses were performed.

**RESULTS:** The additional cost of \$167 for brush biopsy yielded only an additional 0.0535 healthy days compared to COE, over a period of 5 years. Cost effectiveness acceptability curve derived a threshold ICER of \$3290 for every healthy day gain over a period of 5 years.

**CONCLUSIONS:** Brush biopsy can be considered cost effective only at a willingness to pay threshold of \$3290 or more for every healthy day gained over a 5-year period in the target population. We believe this relatively low incremental value is not a good use of public dollars or resources. However, insurance companies should use these estimates to make logical policy decisions about reimbursing this screening instrument.

Student Poster: 53

### **DOES FLUORIDE IN DRINKING WATER DELAY TOOTH ERUPTION?**

*I. Adeyemi Jolaoso, BDS, MPH (1); Jayanth V. Kumar, DDS, MPH (1); Mark E. Moss, DDS, MS, PHD (1); Mona A. Haleem, DDS, MPA (1)*

Bureau of Dental Health, New York State Department of Health, Albany, NY (1)

**OBJECTIVE:** To determine the effect of fluoride exposure on permanent tooth eruption pattern as well as to understand its effect on caries attack rate by accounting for the number of erupted tooth surfaces.

**METHODS:** We analyzed the 1986-87 National Survey of Oral Health of U.S School Children to determine the mean number of erupted permanent teeth according to fluoride level in drinking water. The analysis included 13,348 school children aged 5 - 17 years with a history of single residence. Children who had received fluoride drops or tablets were excluded. We also estimated the attack rate (DMFS/surfaces at risk) for fluoride deficient, suboptimal and optimally fluoridated areas adjusting for covariates. Statistical analyses were performed using the GLM procedure to control for potential confounders.

**RESULTS:** By age 7, almost all permanent first molars had erupted. The adjusted mean number of erupted first permanent molars were 3.81, 3.67, and 3.92 in schools with <0.3ppm, 0.3 - <0.7ppm, and 0.7 - 1.2ppm of fluoride respectively. The adjusted caries attack rate in the first permanent molars among 5 - 17 years old children was 93, 81 and 78 per 1000 surfaces in fluoride deficient, suboptimal and optimally fluoridated areas respectively. Children in the fluoride deficient communities had substantially higher caries attack rate (p-value <.05).

**CONCLUSION:** Exposure to fluoride in drinking water did not delay the eruption of permanent teeth. The observed difference in dental caries experience among children exposed to different fluoride levels cannot be explained by the timing of eruption of permanent teeth.

Source of Funding: HRSA Maternal and Child Health Services Block Grant

Student Poster: 54

### **IMPACTS OF ENAMEL FLUOROSIS AND DENTAL CARIES ON THE ORAL HEALTH-RELATED QUALITY OF LIFE OF CHILDREN AND FAMILIES IN NORTH CAROLINA**

*Uvoh Onoribe, BDS, MPH (1)*

Dental Public Health Resident, NC Oral Health Section (1)

**Objectives:** To determine the impacts of dental caries and enamel fluorosis on oral health-related quality of life (OHRQoL) in North Carolina Schoolchildren and their families.

**Methods:** All students (n=7,686) enrolled in a probability sample of 398 classrooms in grades K-12 in North Carolina public schools and their parents were recruited for a one-time survey in 2003-04. Parents of children in grades K-3 and 4-12 completed the Early Childhood Oral Health Impact Scale (ECOHIS) and the Family Impact Scale (FIS), respectively. Students in grades 4-5 (CPQ8-10) and 6-12 (CPQ11-14) completed a Child Perception Questionnaire. All students received

## Abstracts for Poster & Student Presentations

a clinical examination for enamel fluorosis in anterior teeth (Dean's Index) and caries experience (d2-3fs, D2-3MFS) by one of 9 trained dentists. OHRQoL (sum of impact frequency Likert scores) were analyzed by fluorosis categories (unaffected; questionable-very mild; mild-moderate-severe) and caries scores (sum of d2-3fs, D2-3MFS) descriptively and using OLS regression, while controlling for covariates (child ever had dental injury, treatment needed, unmet demand, dental home, race-ethnicity, percent poverty level, county urbanicity and parental education).

Results: Clinical or OHRQoL information was available for 6,088 children (Response Rate=79.2%). 72.4% of children were unaffected by fluorosis, 24.0% had questionable or very mild fluorosis, and 3.4% had mild, moderate or severe fluorosis. Mean d2-3fs and D2-3MFS scores per child were 2.1 and 1.7, respectively. CPQ8-10, CPQ11-14, ECOHIS and FIS mean scores were 13.3, 21.4, 4.9 and 2.4, respectively. No associations were found between fluorosis categories and any OHRQoL scales in the multivariate analysis (all P-values > 0.1). The sum of d2-3fs and D2-3MFS scores was positively and strongly associated with ECOHIS (B=0.220; P<.001), FIS (B=0.063; P=.001), and CPQ11-14 (B=0.239; P<.001) scores.

Conclusion: The child's caries experience had a negative impact on OHRQoL of the child and parent, while fluorosis prevalence or severity had no impact.

Source of Funding: Funded through a dental public health training grant from the Health Services and Resources Administration. Original data collection and parent study funded by the Centers for Disease Control and Prevention

Student Poster: 55 (A)

### ORAL HEALTH LITERACY AND KNOWLEDGE AMONG FIRST-TIME PREGNANT WOMEN

*Jacqueline M. Hom DMD (1); Jessica Y. Lee DDS, MPH, PhD (2); Kimon Divaris DDS (3); A. Diane Baker MBA (4); William F. Vann Jr. DMD, PhD (5)*

Department of Pediatric Dentistry, and PhD Student, Department of Health Policy and Management, University of North Carolina at Chapel Hill (1); Departments of Pediatric Dentistry and Health Policy and Management, University of North Carolina at Chapel Hill (2); Department of Epidemiology, University of North Carolina at Chapel Hill (3); Department of Pediatric Dentistry, University of North Carolina at Chapel Hill (4); Department of Pediatric Dentistry, University of North Carolina at Chapel Hill (5)

Background. The purpose of this study is to determine the level of oral health literacy (OHL) and dental knowledge and to examine their association in low-income first-time pregnant women.

Methods. In this observational cohort study, our analytic sample of 119 first-time low-income pregnant women completed a structured 30-minute, in-person interview conducted by two trained interviewers in seven counties in North Carolina. We measured OHL with dental word recognition test (REALD-30) and assessed dental knowledge using six dental knowledge items.

Results. OHL scores were distributed normally with a mean of 16.4(SD=5.0). The proportion of correct responses for dental knowledge items varied from 45-98 percent. According to bivariate methods, there was a positive correlation between OHL and dental knowledge (P<.01). Higher OHL was associated with correct responses to two knowledge items (P<.01).

Conclusions. OHL was low in this sample of low-income first-time pregnant women. There was a significant association between OHL and dental knowledge.

Clinical Implications. Low OHL, and thereby low dental knowledge, has potential effects on health outcomes for both the woman and the child. Tailoring messages to appropriate OHL may improve knowledge.

Source of Funding: Research supported by grants from the National Institute of Dental and Craniofacial Research NIDCR Grants # RO1DE018045 and #T32DE017245

Student Poster: 55 (B)

### SCHOOL LUNCH PROGRAM STATUS A MARKER FOR HIGH RISK CARIES?

*Mohamed Bamashmous (1)*

Boston University Goldman School of Dental Medicine (1)

Background: Dental caries is concentrated in a small proportion of children in the United States. Previous studies evaluating dental caries distribution in the U.S school children reported that 75% of the caries is in 25% of the children. However, markers to easily identify these children have not been identified.

Objectives: To analyze the distribution of dental caries among school children in the Commonwealth of Massachusetts, and find markers for policy makers to identify these children and target them with prevention.

Methods: Data from the Massachusetts Oral Health Survey funded by DentaQuest Institute was used. The study sample was 5547 school children from kindergarten, grades 3 and 6, and selected using a complex survey sampling method. The sample was selected independently from each stratum, as defined by county and clustering was done based on schools and classrooms. We used Cumulative Percent Distribution Curves to examine dental caries distribution and using GIS mapping, we examined and evaluated sociodemographic and geographic variables, which are easily available to identify children at high risk for dental caries.

Results: We found that 75 percent of the dental caries experience is found in 15 percent of the 6th grade children, 19 percent of the 3rd grade children and 13 percent of kindergarten children. Mapping dental caries and sociodemographic variables, we found that National School Lunch Program status of the child was the best identifier of high caries risk and closely mirrored the cumulative distribution of dental caries in the Commonwealth of Massachusetts.

Conclusion: Dental caries in Massachusetts is concentrated in fewer children than nationally. Using the National School Lunch Status, policy makers can identify children at high risk for caries, and target children and distribute prevention program where needed more efficiently.

Student Poster: 56

### COMPARATIVE STUDY OF ORAL HEALTH OF RURAL CHILDREN IN THE KHUMBU VALLEY, NEPAL

*Tesha Grangaard, BA, (1); Noor Khaki, BSc, (1); Megan Willis, BSc, (1); Eli Schwarz, DDS, MPH, PhD (1)*

Oregon Health & Science University, School of Dentistry, Portland Oregon.

OBJECTIVES: To investigate the prevalence of dental caries in children in two rural tourist towns along the route to Mount Everest in Nepal and in two non-tourist rural towns off the tourist track; to analyze the caries severity in relation to selected variables; and to compare the oral health situation with data from a study conducted in the same locations 25 years earlier.

METHODS: This study surveyed 136 students in the Khumbu valley in four different towns. Two of the towns chosen were along the Mt. Everest trekking route, and two of the towns chosen were not along the route. The study participants were divided into two groups: Five and six year-olds and eleven and twelve year-olds. Each child was surveyed using the World Health Organization's DMFT criteria, the Visible Plaque Index (VPI), and a short questionnaire about their dental hygiene and eating habits.

RESULTS: There was a significant difference between the four towns with the rate of decay being higher in the towns close to the

## Abstracts for Poster & Student Presentations

tourist routes. Compared with earlier data dental caries had increased in the five-six year-old group but decreased in the 11-12-year-old group. A correlation was found between those children with a high plaque index and the rate of decay.

**CONCLUSIONS:** The findings of the study identified a need for more access to dental care in this region of Nepal. Public health measures such as fluoridating the water would also help prevent the severity of the decay.

**SOURCE of FUNDING:** OHSU Global Health Center, OHSU School of Dentistry, World Medical

Student Poster: 57

### ENHANCING THE DENTAL SAFETY NET

*Colleen Greene (1)*

Harvard School of Dental Medicine (1)

**Background:** Dental departments within community health centers are often loss leaders for the organization. Without long-term financial solvency, these clinics are in jeopardy of closing. This would increase the many barriers to oral health care that already exist for low-income Massachusetts residents.

**Aim:** The purpose of a dental billing survey of community health centers in Massachusetts was to determine variations in billed codes between the 33 CHC dental clinics in Massachusetts and the adequacy of dental reimbursements. In particular, we were interested in capturing the number of times each code was billed during a billing period after adult MassHealth dental budget was considerably cut on July 1, 2010. This information will shed light on the operational issues these centers might be facing due to cut services as well as create a better understanding of the scope of services provided at community health centers statewide.

**Method:** The Massachusetts League of Community Health Centers initiated a survey in November 2010. A blank Microsoft Excel spreadsheet template with all available dental billing codes was sent electronically to the dental directors and executive directors of 33 community health centers with 48 dental sites throughout the state.

By January 2011, responses were obtained from 16 of the 33 community health centers with dental clinics (48%), representing a total of 21 dental sites. Of the 21 reporting sites, 8 sites reported full quarter data (July – September 2010) and the rest reported an individual month, usually October 2010. Benchmarks and trends were compiled into various graphics.

**Results:** A comprehensive and individualized report was provided to every dental director highlighting areas for improvement in billing operations. Several billing trends were seen. For example, it was discovered that 15% of sites are frequently billing codes that have been defunded ("cut") for adult MassHealth patients. These centers will be accountable for paying back any reimbursements received for these cut codes, which jeopardizes the solvency of the entire clinic and threatens long-term access to care for their patients.

**Discussion:** Dental sites will be able to improve their productivity and better serve the oral health needs of their communities by learning from the operational strengths and weaknesses of similar clinics. This novel knowledge base is practical and patient-centered. My analysis uncovered several alarming billing patterns and individual clinic practices that indicate room for improvement in the scope of services provided to CHC dental patients. My contribution to the work of the Mass League and the performance of individual community health center dental clinics will lead to higher quality patient services through sustainable operational improvements.

Student Poster: 58

### DENTAL PUBLIC HEALTH EDUCATION IN THE US AND UK: A COMPARATIVE ANALYSIS OF THE WAYS IN WHICH DENTAL PUBLIC HEALTH IS BEING INCORPORATED INTO THE CURRICULUM AT TWO DENTAL SCHOOLS

*Jennifer Logigian*

A.T. Still University, Arizona School of Dentistry & Oral Health

**Background:** Many dental schools in the United States (US) and the United Kingdom (UK) are actively implementing DPH courses and educational concepts into their curriculum with the intention of producing dentists who are aware of the challenges facing the dental profession and who are adequately prepared to deal with those challenges. The purpose of this project is to compare the public health curriculum in a traditional UK-based and untraditional US-based dental school to understand how dental public health (DPH) is being incorporated into dental school curriculum within different academic contexts.

**Methods:** The author spent two weeks on rotations in three London hospitals (King's College Hospital, Guy's Hospital and St. Thomas' Hospital) as well as visited an outreach site, Portsmouth University Dental Academy in Southern England. She also participated in school-based programs run by current dental schools, which provided oral hygiene information for elementary-aged children in underserved London schools. In addition, current research related to dental public health education was reviewed and interviews were conducted with dental academic administrators were conducted in both the US and UK.

**Results:** KCLDI appears to face many of the same struggles that US dental schools face when trying to incorporate dental public health into an existing curriculum. The concept of community dentistry, however, is different in the US than it is in the UK. A further challenge to DPH curriculum implementation at both KCLDI and ASDOH is how to present it in a way that will both educate and interest the students. Another challenge among both US- and UK-based dental schools is the contrast between emerging curriculum and ideologies and traditional educational and clinical structure. A main difference is that students will be entering different environments based upon the different health care systems currently in place in the two countries and the career paths and opportunities that are available.

**Conclusions:** Finally, it is important to note that students will be entering different environments based upon the different health care systems currently in place in the two countries and the career paths and opportunities that are available. Because the definition of dental community and public health varies between the US and the UK, the DPH education that students receive could never – even in the most ideal circumstances – follow exactly the same format. Graduates will be somewhat unique from school to school based not just upon their formal education but also upon their patient population, which is influenced by factors such as demographics, socioeconomic status, and cultural beliefs as well as external issues like water fluoridation. Likewise, even the dental education and experience of students at different schools within the US and the UK will vary based on the types of cases and patients that the students are more likely to encounter.

Student Poster: 59 (A)

### WAITING FOR ORAL HEALTH: ORAL HEALTH EDUCATION IN THE SETTING OF PEDIATRIC PRIMARY CARE WAITING AREAS

*Patricia McClory (1)*

Harvard School of Dental Medicine (1)

Early childhood caries is the most prevalent chronic illness in the pediatric population of the United States. Preventive measures and oral health education in the pediatric primary care setting is currently not widely practiced. This project seeks to increase awareness of the



# Abstracts for Poster & Student Presentations

importance of early oral health education programs in routine pediatric primary care visits. Oral health education will be provided to pediatric populations in Children's Hospital Boston primary care clinic. Primary methods of education will include oral hygiene instruction, nutritional counseling, and age appropriate activity sheets and demonstrations. It is our goal that the impact of this education will be shown to improve early childhood caries rates in this population. The value of these results can be used to affect healthcare policy in the incorporation of oral health education in routine pediatric primary care visits at a national level.

Background: Dental caries, or tooth decay, is the most prevalent chronic illness amongst children in the U.S.<sup>1</sup> A survey taken between 1999-2002 found that 41% of U.S. children ages 2-11 suffer from carious primary teeth.<sup>2</sup> Early childhood decay in the primary teeth is a strong predictor of decay in the permanent teeth, as poor oral health often continues into adulthood.<sup>3</sup> The impact of tooth decay, oral pain and infection extends beyond general health and results in social consequences for children, inhibiting their ability to eat, speak, and learn during crucial years of development.<sup>1</sup> The loss of more than 51 million school hours each year can be attributed to dental-related illness.<sup>1</sup> Furthermore, the appearance of decayed or missing teeth can lead to weakened self-esteem and embarrassment.

It may be that primary care settings can serve as an effective means to reach out to many children who may not have easy access to dental care. It has been found that 89% of infants and 1-year-olds had office-based physician visits annually, compared to 1.5% who had seen a dentist.<sup>5</sup> The overwhelming influence of primary care pediatricians in the healthcare of infants and young children allows for an excellent opportunity to spread awareness about important issues such as dental caries, and prevention of oral disease for both young patients and their parents.

This community service project serves Children's Hospital Boston's Primary Care Clinic (CHPCC). Annually, this clinic serves 12,500 children. The majority of these patients live in surrounding neighborhoods with 24.5% of children living in poverty. Nearly 66% of the clinic's patients are on Medicaid. This diverse population is 45% African-American, 35% Latino and 20% Caucasian. Fifteen percent of patients speak only Spanish and 10% speak neither English nor Spanish.

Data has shown that this target population suffers from Early Childhood Caries (ECC), limited dental access, and inadequate knowledge of preventive dental and dietary practices.<sup>6</sup> They would benefit greatly from oral hygiene, fluoride, improvements in nutrition, and access to affordable dental services. ECC is the most common chronic illness amongst U.S. children and merits attention in high-risk populations. By promoting good oral hygiene and dietary practices, this project gives families the chance to prevent oral disease, even without regular dental care. By providing resources for affordable dental clinics, these patients may finally obtain critical dental care for their families.

Through this project, I have been working with the Child Life Services Department of Children's Hospital Boston. This program helps patients and parents adjust to the hospital environment by providing a wide range of services including safety and prevention programs to pain management and surgery preparation. I hope that this dental health and nutrition project will benefit their department, complementing the more traditional services expected of a hospital.

I have coordinated and trained dental student volunteers to provide children and parents with education sessions in the waiting room of Children's Hospital Boston's Primary Care Clinic. Education sessions include oral hygiene instruction, demonstrations in flossing and brushing (with brushing aid puppets), handouts and discussion on the importance of oral health, fluoride, and nutrition. Children are given toothbrushes, toothpaste, floss, and handouts as well as prizes

for participation. Education sessions primarily target children as their parents complete forms for the clinic and typically allow for 10-15 minutes of personal attention directed towards each child. Parents are welcome to participate in the discussion and ask questions.

Project Objectives:

- 1) To increase oral health and nutrition knowledge of children and parents after each primary care appointment at CHPCC.
- 2) To encourage children and parents to improve oral hygiene after each appointment.
- 3) To provide toothbrushes, toothpastes, and resources for finding affordable dental care for children after each appointment.
- 4) To train dental students in preventive oral health and nutrition education and encourage the use of this information in their own future volunteer activities.

Procedures

- 1) Recruited 6 dedicated dental student volunteers, who have continued with the project throughout the year, and who were authorized to have access to Children's Hospital Boston. Potential volunteers were asked to write a short statement, describing their interest and motivation for participating and were chosen according to past experiences in service and interest in preventive oral health.
- 2) Developed an oral health and nutrition curriculum that could be slightly modified according to the child's age and included components for the parent. Identified age-appropriate handouts for parents and children, as well as activity sheets and coloring sheets for children. Organized a list of affordable pediatric dental clinics in the Boston area to distribute to parents. Presented curriculum to representatives of Children's Hospital Boston to obtain their approval.
- 3) Collected toothbrushes, toothpaste, and floss to distribute to children and parents through Harvard School of Dental Medicine and Children's Hospital Boston's donations.
- 4) Trained volunteers to give age-appropriate oral health and nutrition education sessions and provided volunteers access to curriculum, donations, handouts.
- 5) Worked with CHB Childlife services and volunteers to determine schedule for sessions.
- 6) Provide 1-2 two-hour education sessions per week from September 2011 – May 2012. Attended dates for influenza vaccination clinics to reach out to a larger amount of patients in a shorter period of time.

Summary of Results and Conclusions: The project has only been in effect since September 2012, but in that short time it has received much positive feedback from pediatricians, pediatric residents, parents and patients. I have evaluated the project by recording the number of patients and parents served by the project. Additionally, volunteers ask participants to provide verbal feedback, regarding practices they learned or changes in their beliefs after session. Volunteers then take written notes after each session, listing participant responses. In the first 3 months of the project, we were able to reach out to 405 different children, who participated in waiting room education sessions.

Future methods of evaluation may include measuring plaque index scores prior to CHPCC appointments and following up one month later to determine improvement in oral health care after participation in education sessions.

## Abstracts for Poster & Student Presentations

Student Poster: 59 (B)

### **PAN AMERICAN HEALTH ORGANIZATION SUMMER 2011 INTERNSHIP: INTEGRATED ORAL DISEASE PREVENTION AND MANAGEMENT MODULES**

*Elif Aksoylu (1)*

A.T. Still University, Arizona School of Dentistry & Oral Health (1)

Background: Outside of the professional dental community, the understanding that oral health is indistinct from the general well-being and happiness of an individual is an emerging concept. In developing markets, oral health care is palliative in nature. Children visit primary care workers (doctors, nurses) more often than the dentist. There is an absence of sustainable mechanisms to ensure long term oral health and disease prevention. The Integrated Management of Childhood Illness (IMCI) framework, developed by the World Health Organization and UNICEF, is used in more than 75 countries around the world. The Integrated Oral Disease and Prevention (IODPM) modules developed for this project use the IMCI format to address oral disease in children at the community level. Implemented by local primary care workers trained by local dentists in the Region of the Americas, the modules empower communities to improve the oral health of children through disease prevention and management. An oral health grant provided by Colgate Palmolive Inc. for approximately \$2,000,000 provides the funding for this ongoing project.

Method: IODPM modular materials were developed addressing common pediatric oral diseases. A training course was developed to teach local dentists, referred to as Facilitators in Training (FITs), in teaching the IODPM modules to primary health care workers (PCWs). The course developed for FITs to train PCWs was organized so that after a two day training session, FITs would be competent in teaching module material to PCWs using the Learning Model.

Results: Diseases in IODPM modules were color coded to distinguish severity: Mild, Moderate, or Severe. Modular material was developed for three age groups of children and includes procedural charts in oral disease areas, oral health promotion and prevention guidelines, treatment guidelines, and illustrations. A Learning Model was developed for use by FITs when training PCWs, consisting of a pre-assessment, a tutorial, a lecture, a tutorial review, and a post-assessment. In PCW training sessions, emphasis was placed on moving through the Learning Model for each topic and working collaboratively to develop competency in diagnosis, treatment, and prevention of oral disease based on the modular material.

Conclusions: Training materials and IODPM modules were implemented in a pilot program in Kingston, Jamaica in November 2011. With an integrated approach, it is possible to train individuals with little dental background to recognize and refer pediatric oral disease, and to provide first aid in emergencies. The aim of addressing oral disease in children is to establish sustainable, positive oral health practices early in life that can lead to improved quality of life in the future.

Student Poster: 60

### **ORAL HEALTH PROMOTION PROGRAM FOR ALZHEIMER'S CARE FACILITY**

*Jennifer Cullen, RDH (1)*

Dental Hygiene Degree Completion Student; University of Michigan School of Dentistry (1)

Background: Alzheimer's disease (AD) affects an estimated 5.4 million Americans and ranks sixth among the nation's leading causes of death. Seventy-five percent of individuals with Alzheimer's disease will require high level nursing care by the age of 80, as opposed to 4% of the general population. Individuals with cognitive impairments like dementia suffer from an increased risk for developing oral diseases, more so than their non-dementia suffering counterparts. Functional

decline and care resistant behaviors associated with Alzheimer's disease contribute to the challenges professional caregivers face in providing assistance with oral care practices.

Objectives: Develop 6 in-service presentations for the direct care staff of a dedicated dementia, including Alzheimer's disease, residential care facility providing oral care that provided awareness of oral health/general health connection and demonstrate assessment and functional skills in providing oral care to residents.

Procedures: Over the course of 6 weeks, oral health education sessions and practical guidance were delivered. The program covered five oral health related topics that addressed the specific needs identified by the facility during the assessment phase. Two 30 minute classroom sessions were given one day each week. The sessions were scheduled during the overlap time between the work shifts, one at 8 a.m. and one at 2:30 p.m. In addition, hands-on, practical support was available to the care providers as they performed oral care services for the residents. No external funding was provided for this program.

Results: As a result of the program, 46% of the direct care staff (55 individuals) attended at least one classroom session, with 3 staff members attending all 6 sessions. Eighty percent or more of attendees correctly answered all questions in each of the post session surveys. One hundred percent of participants who were observed practicing oral health assessments successfully completed the checklist evaluation.

Conclusions: The program outcomes indicate an increase in awareness and functional oral health care skill sets of direct care staff. In addition, new strategies were learned for limiting and managing care resistant behaviors among the residents. This program supports the Healthy People 2020 objective to reduce the morbidity and costs associated with, and maintain or enhance the quality of life for, persons with dementia, including Alzheimer's disease.

Student Poster: 61

### **DIABETES AND PERIODONTAL DISEASE EDUCATION AT THE FEDERAL CORRECTIONAL INSTITUTION IN MILAN, MI**

*Ashley Copus (1); Julia Johnson (1)*

Dental Hygiene Program; University of Michigan School of Dentistry (1)

Background: Diabetes Mellitus (DM) affects an estimated 23.6 million people in the United States and is the 7th leading cause of death. Individuals with diabetes have a decrease in life expectancy by up to 15 years and are 2-4 times more likely to experience heart disease. In addition, periodontal disease is more common and more severe among individuals with diabetes. Minority populations are more likely to develop diabetes. African American and Hispanic/Latino groups in the U.S. are twice as likely to develop diabetes. Over sixty percent of the inmates in the United States prisons are minorities. The incidence of diabetes among federal inmates is 11.1 % placing them at a higher risk, for periodontal disease. Current research supports a need to provide education and prevention regarding diabetes and oral health in prison populations.

Objectives: This program aimed to increase the knowledge and understanding of the relationship between oral health and diabetes, periodontal disease and recommended oral hygiene practices in inmates at a Federal Correctional Institution (FCI).

Procedures: In an effort to improve the overall quality of life for diabetic inmates at a Federal Correctional Institution an oral health promotion program was developed and implemented based upon needs identified during the assessment phase. During the initial visit to the FCI periodontal charting and disease status of inmates with diabetes were recorded. At this time, the written pre-test was administered and participants received oral hygiene instruction. At the second visit inmates were provided with the educational seminar addressing three topics: diabetes management; the link between

## Abstracts for Poster & Student Presentations

diabetes and oral health; and appropriate oral hygiene care. Time was allotted to address any questions or concerns from the inmates regarding diabetes or oral health care practices. In addition, inmates were given an oral hygiene demonstration which included individual instruction. A post-test survey was administered and compared to the pre-test as a measure of knowledge achieved by the inmates regarding diabetes management and oral health care.

Results: One hundred percent of the diabetic inmates (16 individuals) attended the first session and 63% of the group completed the program. Ninety percent of attendees correctly answered all questions in the post session survey. During hands on instruction with inmates 100% of participants correctly identified the concerns regarding the link between diabetes and oral health and successfully demonstrated oral hygiene skills. One hundred percent of participants that finished the program agreed to schedule appointments with the FCI staff hygienist and dentist.

Conclusions: The program results indicate that when provided with educational information and personal instruction diabetic inmates increased their knowledge and understanding of the link between diabetes and oral health, proper oral health care and learned new skills for oral hygiene. The outcome of this project supported the research identifying the need to provide education and prevention regarding diabetes and oral health in prison populations.

Source of Funding: No external funding was provided to support this program.

Student Poster: 62

### **PUBLIC HEALTH PROJECT: PREVENTION AND EDUCATION OF EARLY CHILDHOOD CARIES USING TELEDENTISTRY**

*Kayla Collins (1); Nicole Fisher (1); Kimberly Newman, (1); Deanna Peterson (1); Christine Rosenkranz (1)*

Northern Arizona University (1)

A teledentistry public health project will be implemented in Coconino County. The goal of this project is to provide dental screenings, referrals, education, and preventative services to lower income families with children ages six and under. The screenings will be implemented through the use of intraoral cameras, radiographs, and the Spectra. Partners in this project will be Northern Arizona University (NAU) dental hygiene students, NAU dental hygiene faculty and the First Things First program.

Student Poster: 63

### **FIGHTING ORAL DISEASE IN SIX WEEKS**

*Amanda Kimball (1); Alison Van Vleck (1)*

Old Dominion University School of Dental Hygiene (1)

Oral health care for young adults with disabilities is an area of healthcare that receives little attention. According to the 2010 census, there are over 7 million people with cognitive disabilities between the ages of 18-64 living in the United States (U.S. Census Bureau, 2010). Those with intellectual and developmental disabilities are more likely to have oral malformations such as delayed tooth eruption, periodontal infections, bruxing and grinding, and dental caries (Wilkins, 2009). Many adults with those with disabilities live below the poverty level, and community dental programs are essential to increase knowledge, awareness, and access to care for this disparaged population. Old Dominion University's Gene W. Hirschfeld School of Dental Hygiene partners with Princess Anne High School's West Building to provide dental hygiene students the opportunity to create a six week program for high school students with special needs. The dental hygiene students assessed, developed, and implemented an oral health program for students with intellectual and physical disabilities. Data was collected and an evaluation was made to determine the success of the program. Results determined that there was little improvement

of the students' brushing and flossing techniques. The progress of the students' plaque control was minimal, but the dental hygiene students, high school students, and educators at Princess Anne high school gained valuable information. Faculty on site increased their awareness of oral health and can continue educating the students on oral health throughout the school year.

## Tuesday Poster Presentations (Posters 64-113)

Poster Number: 64

Serial/Abstract Number: 21

### **THE CHOOSY ORAL HEALTH PILOT PROJECT IN WEST VIRGINIA AND MARYLAND**

*Amy Requa (1) MSN, CRNP, CPNP; Harold Goodman (2) DDS, MPH; Richard Meckstroth (3) DDS*

Amy Requa Health Consulting, Inc., Lansdowne, PA, USA (1), Maryland Office of Dental Health, Baltimore, MD, USA (2), West Virginia University School of Dentistry, Morgantown, WV, USA (3)

OBJECTIVES: To promote optimal oral health practices for Head Start children and families with innovative educational materials featuring the children's character named "Choosy", previously used in an effective and successful campaign to address childhood obesity, in classrooms, at home, and in Dentist offices.

METHOD: Educational materials, lively music, resources, and various toothbrushes were field-tested with Head Start staff and parents of children in 9 WV classrooms, 7 MD classrooms and 25 Dentist offices in each state. Feedback about quality of the materials, level of family engagement, change in oral health knowledge and behaviors, and receptivity of staff to using the materials was collected through pre-post surveys and structured focus groups. Input was collected from participating Dentist offices. Data evaluation was conducted independently.

RESULTS: Head Start staff behaviors to promote oral health and parent knowledge about oral health significantly improved as a result of using "Choosy", a health hero designed for young children. Staff and parents perceived "Choosy" to be an influencer of children's healthy habits and behaviors in the classroom and at home for both childhood obesity and oral health. Innovative toothbrushes increased brushing cooperation and positively impacted brushing habits.

CONCLUSIONS: The impact of using the "Choosy" character, previously effective in targeting childhood obesity, was significant in promoting optimal oral health behaviors for children in Head Start.

Source of Funding: The Office of Head Start Dental Home Initiative

Poster Number: 65

Serial/Abstract Number: 92

### **PUTTING THE CHILD FIRST: A CHILD CENTERED APPROACH TO SCREENING**

*Merry Jo Thoele (1) RDH, MPH; Barbara Hann (1) BA; Ayo Adeniyi (1) MBBS, MPH; Jon Roesler (1) PhD*

Minnesota Department of Health, St. Paul, MN, USA (1)

Objectives: To develop a child centered approach to collecting height and weight data, to develop a data collection protocol that includes height and weight measures as well as Basic Screening Survey (BSS) data, and to collaborate with other CDC funded programs.

Methods: An oral health screening along with height and weight measures was conducted to assess oral health and to calculate growth percentiles of children in grade 3 in elementary public schools. Active consent from parents for measuring height and weight was required

## Abstracts for Poster & Student Presentations

by the state. All students with active consent were measured for their height/weight. Survey staff was trained in measuring height and weight. The survey was conducted between February and May, 2010. A simple random sample of 40 was selected from a sampling frame of 950 elementary public schools. Two additional staff members were required for the collection of height and weight data.

Results: A two part, combination data collection and consent form was developed. The form individually included consent for height/weight and oral health screening. A protocol was developed to capture data without using words such as obesity, BMI, or overweight. Interestingly, more consents were given for height and weight than for the oral health portion of the screening.

Conclusions: Assuring privacy and being sensitive to using stigmatizing words when conducting screenings with children is important. Conducting height and weight measures at the same time as BSS is feasible with modifications.

Source of Funding: Centers for Disease Control and Prevention Physical Activity and Nutrition, Maternal and Child Health, Health Resources and Services Administration Planning Grant

Poster Number: 66

Serial/Abstract Number: 3

### ASSESSMENT OF DENTAL CARIES AND DENTAL HYGIENE AMONG PRIMARY SCHOOL CHILDREN

Maryam Alfarhan (1)

National Guard Health Affaires, Riyadh, Saudi Arabia (1)

Objective: Is to determine the prevalence of caries, mean dmft, DMFT and assessment oral hygiene level of the 1st grade and 2nd grade of primary school children.

Method: 3400 students were selected randomly from primary schools for boys and girls. During the data collection only two thousand eight hundred eighty two students were screened. The drop out were due absence or transfer to other school. The following screening tests were performed on children dmft, DMFT, and OHI-S for oral hygiene. A consent form signed by parent, and an approval were obtained from the research ethical committee of research Center. All the procedures of this study will be conducted according to Helsinki declaration. Chi-squared test used to analyses the data.

Results: The boys represent 58.8% and girls 41.2%. The mean dmft of boys and girls for deciduous teeth were  $3.69 \pm 2.94$  and  $4.42 \pm 3.39$ , respectively. The difference was statistically significant  $p < 0.0001$ . The mean DMFT for permanent teeth for boys and girls were  $0.19 \pm 1.17$  and  $0.15 \pm 0.86$ , respectively. The difference was not significant  $P = 0.368$ . However, the prevalence of positive caries among boys and girls were almost the same with percentage values of 86.4 and 86.5 respectively. The mean plaque indexes of boys and girls were  $5.51 \pm 1.99$  and  $5.96 \pm 2.52$ , respectively. The difference was statistically significant  $p < 0.0001$ .

Conclusion: This study shows that the prevalence of caries was very high among boys and girls, and the oral hygiene was poor.

Source of Funding: National Guard Health Affaires, King Abdulaziz Medical City, School Dental Preventive Program, Riyadh City, KSA.

Poster Number: 67

Serial/Abstract Number: 35

### KIDS SMILES APPROACH TO A COMBINED ORAL HEALTH EDUCATION AND CLINICAL CARE MODEL

John Kwon (1); Joan Gluch (1) RDH, PhD; Stacey Benner (2) Education Director of Kids Smiles; Cheryl Janssen (2) BHS, CNP, CEO of Kids Smiles University of Pennsylvania School of Dental Medicine, Philadelphia, PA, USA (1), Kids Smiles, Philadelphia, PA, USA (2)

OBJECTIVE: To develop and evaluate the Kids Smiles Dental Detective Academy (KSDDA) which combines oral health education with dental care for at risk children at Kids Smiles non-profit childrens'

dental centers in Philadelphia and Washington, DC.

METHODS: KSDDA is a ten-lesson oral health program designed for children, teens and parents completed in an office alcove prior to receiving dental care. KSDDA graduates, who complete at least three educational lessons, were tracked through completion of initial dental visit and two recall visits. The following oral health outcomes were assessed: oral hygiene status, caries status and periodontal disease status.

RESULTS: The KSDDA program was developed and implemented successfully over a two year period. 47 KSDDA graduates (ages 7 - 17) were tracked and evaluated over an average of 18.7 months. Eighteen (38.3%) children maintained or improved at each visit. Four (8.5%) children declined at first visit and then improved at next visit. Thirteen (27.7%) children maintained or improved at first visit and declined at second visit. Twelve (25.5%) children declined at each visit. Graduates who declined in their oral hygiene had two recall visits within an average of 20.3 months, while graduates who improved averaged 13.9 months.

CONCLUSIONS: Pilot test assessment revealed trends among oral health outcomes and timing of recall appointments, with better oral health status associated with more frequent recall interval.

Source of Funding: Kids Smiles (501c3)

Poster Number: 68

Serial/Abstract Number: 120

### PRESENTERS' EVALUATION OF A DENTAL CAREER PROGRAM FOR MIDDLE SCHOOL STUDENTS GRADES 6TH-8TH FROM RURAL COUNTIES IN WEST VIRGINIA

Richard Crout (1); Shelia Price (1); Leigha Crout (2); Gerry Hobbs (1)

West Virginia University School of Dentistry, Morgantown West Virginia, USA (1), University of Charleston, Charleston West Virginia, USA (2)

Objective: To address a lagging dental career pipeline, a two day program was developed, implemented and evaluated to engage and encourage middle school students from rural communities in grades 6-8 to consider dentistry as a career. Evaluation revealed that the program was successful. No evaluation however, was performed after the program to evaluate the presenters' perception of the program. The purpose of this project was to evaluate the presenters' perspective of their presentation as well as the overall program.

Methods: Fifteen presenters including 10 faculty members and 4 students volunteered to give presentations over a 2 day program to 6th-8th grade students. After the program, an anonymous presenter evaluation was developed and administered that included 15 questions, 11 of which were Likert style. Questions included receptivity to their presentation; enjoyment as a program participant; rating of the program's overall content and length; interest in recommending the program to other faculty members and willingness to participate again.

Results: Fourteen of the 15 (90%) returned the questionnaire. 90% felt that their presentation was well received; 85% agreed that the length and content were just right and 93% agreed that they would participate again and recommend it.

Conclusion: Evaluation of the presenters of this program to engage and encourage middle school students from rural communities revealed that over 80% felt that their presentations were well received, were the right length in time and content and would participate again and recommend it to their colleagues. Other schools may find programs like this beneficial.

Source of Funding: Benedum Foundation



# Abstracts for Poster & Student Presentations

Poster Number: 69

Serial/Abstract Number: 51

## **TITLE: ACCESSING DENTAL HYGIENE SERVICES IN PRICE COUNTY, WI: AN ONGOING INVESTIGATION OF QUALITY OF LIFE AND QUALITY OF CARE**

*Jodi Olmsted (1) RDH, Ph.D; Nancy Rublee (2) RDH, CDHC; Andrew DeLeeuw (1); Talia Margarella (1); Aubrey Erkander (1); Robert Hansen (1)*

University of Wisconsin-Stevens Point, Stevens Point, WI, USA (1), Price County Public Health, Price County, WI, USA (2)

**OBJECTIVE:** The overarching goal of the project is improving oral health for families with economic disparities & cultural differences.

**METHODS:** A longitudinal, descriptive analysis was conducted. Data existed for analyzing how the Quality of Care (QoC) provided by the dental hygienist offering preventive services through the local public health department impacted/improved the Quality of Life (QoL) for individuals served. A consultative and referral model is used, working with dental providers. Evidence based practices and descriptive, statistical evidence gathered allowed for conducting a descriptive, longitudinal analysis of these programs.

**RESULTS:** Twenty six hundred and sixty six (2666) screenings were conducted between 2002~2010. Data documenting Quality of Care (QoC) and Quality of Life (QoL) was analyzed for described communities. Quality of Life (QoL) measures are re-normed annually statewide, requiring further study. Declining funding, access to care, and workforce development are ongoing issues impacting improving oral health for families with economic disparities and cultural differences. Using a consultative/referral model is one strategy being employed for addressing access issues. Statewide, workforce development is being addressed. Funding is an ongoing issue.

**CONCLUSIONS:** Data describes how Quality of Care and Quality of Life measures for individuals with economic disparities & cultural differences are affected in the service communities studied. This analysis describes positive impacts made, and efficacy of using a consultative/referral model when care required is outside the scope of dental hygiene practice.

Source of Funding: Northern Area Health and Education Center (NAHEC).

Poster Number: 70

Serial/Abstract Number: 55

## **EFFECTIVENESS OF COMMUNITY WATER FLUORIDATION ON UNTREATED CARIES IN NEVADA ADOLESCENTS: A COHORT STUDY**

*Marcia Ditmyer (1) PhD, MCHES; Christina Demopoulos (1) DDS; Mildred McClain (1) PhD; Connie Mobley (1) PhD, RD*

UNLV School of Dental Medicine, Las Vegas, NV, USA (1)

**Objectives:** The American Dental Association has continued to affirm community water fluoridation as the most effective public health measure for the prevention of caries. The purpose of this study was to assess effectiveness of community water fluoridation by comparing untreated tooth decay among 3 cohorts of Nevada adolescents.

**Methods:** Calibrated licensed oral healthcare professionals conducted cross-sectional oral screenings of >77,000 adolescents, ages 13-18 across 8 academic years(2002-2010) in three cohorts: Clark County (CC) representing the largest population in Southern Nevada participating in community water fluoridation, Washoe County (WC) representing the largest population in Northern Nevada with no community water fluoridation, and all other counties combined (OCC) with no fluoridation program. Mean screening of oral health scores by county were compared.

**Results:** Mean score differences in WC from year to year were insignificant( $p=0.75$ ). In all years, except year 1, WC had significantly higher scores than other cohorts. Scores in OCC were significantly lower in year 1 than the other 2 cohorts( $p<0.01$ ) but continued to

increase until years 7/8 when rates were similar to WC. CC scores were significantly lower after year 1( $p<0.01$ ) and remained significantly lower than all other counties years 4-8( $p<0.05$ ;  $p<0.05$ ;  $p<0.01$ ;  $p<0.01$ ;  $p<0.01$  respectfully).

**Conclusions:** Findings from this study can assist legislatures and oral healthcare professionals identify increased public health services and support for effective efforts for improving oral health of Nevada adolescents. While Nevada has taken steps to add community water fluoridation in CC where natural fluoride was below 0.7mg/L, de-fluoridation efforts to remove excessive fluoride have not been initiated.

Source of Funding: Crackdown on Cancer Oral Health Surveillance Screening Program receives funding through the Trust Fund for Public Health and The Fund for Healthy Nevada, both beneficiaries of the Master Tobacco Settlement.

Poster Number: 71

Serial/Abstract Number: 38

## **IMPROVING ORAL HEALTH LITERACY IN THE GERIATRIC POPULATION**

*Jadwiga Hjertstedt (1) DDS MS; Stacy Barnes (2) MGS, Director; Jennifer Sjostedt (3) GNP-BC, RN*

Marquette University School of Dentistry, Milwaukee, USA (1), Marquette University, College of Nursing, Wisconsin Geriatric Education Center, Milwaukee, USA (2), Marquette University, College of Nursing, Milwaukee, USA (3)

**OBJECTIVE:** This intervention study evaluated the impact of a community-based geriatric dentistry rotation on older adults' oral health literacy and oral hygiene.

**METHOD:** This geriatric rotation for dental students was developed modeled after the Senior Mentor Program currently utilized in medical education. A pre-post study design was used to assess the impact of the educational intervention. The sample consisted of 85 older adults residing in independent or assisted living apartments who were each paired with two second-year dental students. The two year study included a total of five visits per student (10 hours in total) at the older adult's residence. Oral health literacy was estimated using the Rapid Estimation of Adult Literacy in Dentistry (REALD-30) test and oral hygiene was measured using a Plaque Index (PI).

**RESULTS:** Oral health literacy scores significantly increased and plaque index scores significantly decreased for all study participants ( $p<0.01$ , and  $p<0.01$  respectively). Hierarchical multiple regression demonstrated that neither study subjects' individual characteristics (i.e., age, gender, race/ethnicity, education level, care level, cognitive status) nor their health literacy significantly predicted the change in oral hygiene.

**CONCLUSIONS:** The results of the study suggest that the community-based geriatric rotation had a significant and positive impact on older adults' oral health literacy and oral hygiene.

Source of Funding: This project was made possible by a grant from the U.S. Department of Health and Human Services, Health Resources and Services Administration [grant # D31HP08836].

Poster Number: 72

Serial/Abstract Number: 89

## **ILLINOIS SMILES OVER TIME AND CHICAGO SENIOR SMILES: A COLLABORATION TO ASSESS ORAL HEALTH IN SENIORS**

*Sherri Lukes (1) RDH, MS; Anne Clancy, RDH, MBA; Mona Van Kanegan, DDS, MS; Julie Janssen, RDH, MA; Sangeeta Wadhawan, BDS, MPH; Kathy Thacker, RDH, MS; Alejandra Valencia, DDS, MS, MPH*

Southern Illinois University Carbondale, Carbondale, IL, USA (1), Chicago Community Oral Health Forum, Chicago, IL, USA (2), Illinois Department of Public Health, Springfield, IL, USA (3)

## Abstracts for Poster & Student Presentations

**Objectives:** Identify the oral health status and needs of the Senior (>60y/o) population in Illinois, for policy decisions and oral health interventions.

**Method:** A public/private collaboration including Illinois Department of Public Health, dental and dental hygiene schools and the Chicago Community Oral Health Forum was utilized to obtain data collection. The screening tool was developed based on methods outlined by ASTDD for BSS's. Questionnaires and in mouth screenings were conducted at selected sites statewide including the city of Chicago. Statewide data was collected by trained dental/dental hygiene students and faculty in onsite clinics and community outreach sites.

**Results:** 437 seniors were screened statewide(excluding Chicago). 81% had no dental insurance. 13% were edentulous and 40% claimed they had received an oral cancer screening in the last 12 months. 26% rated their oral health as fair or poor and 15% reported pain. 20% reported problems eating and 24% noted xerostomia. Twenty nine percent had untreated decay, 19% needed immediate dental care and 41% required referral.

**Chicago-** 125 seniors were screened. 84% reported no dental insurance. 51% rated their oral health as fair or poor, 16% reported pain. 12% claimed having an oral cancer screening in the last year. 33% reported problems eating, 20% noted xerostomia. 41% had untreated decay, 17% needed immediate dental care and 55% required referral.

**Conclusions:** Project was a solid first step in identifying oral health issues and needs for IL seniors. Data sets will be combined/analyzed by conference date and compared/contrasted.

**Source of Funding:** The Chicago Community Oral Health Forum received funding from the Retirement Research Foundation for the Chicago portion of the project. There was no funding for the statewide portion of the project, other than IDPH contracted with an epidemiologist to analyze the data.

Poster Number: 73

Serial/Abstract Number: 65

### **ORAL HEALTH KNOWLEDGE AMONG ELDERLY DENTAL PATIENTS**

*Chong Shao (1); Michelle McQuistan (1) DDS, MS; Cheryl Straub-Morarend (1) DDS; Mark Macek (2) DDS, DrPH*

University of Iowa College of Dentistry, Iowa City, IA, USA (1), University of Maryland Dental School, Baltimore, MD, USA (2)

**Objective:** To assess the oral health knowledge of an elderly population.

**Methods:** Patients 65+ years of age in the fourth year dental clinics were recruited via fliers to participate in the study. Participants completed an oral and written survey based on the Comprehensive Measure of Oral Health Knowledge (CMOHK), which was developed at the University of Maryland. Knowledge scores were summed and then dichotomized into poor/fair (0-14 points) vs. good (15-23 points). Data were entered into Excel. Descriptive and bivariate analyses were conducted utilizing SAS 9.3.

**Results:** 40 subjects completed surveys. The median knowledge score was 17 points. Subjects were least likely to understand concepts related to children's dentition, periodontal disease and oral cancer. The following subjects were most likely to receive "poor/fair" knowledge scores ( $p < 0.2$ ): subjects with a history of irregular dental attendance (42%); subjects who are somewhat unlikely to ask questions when they do not understand presented dental information (60%); subjects who would like to know some or no detail about their treatment plans (50%); subjects who have never been told or do not recall if they have been told they have tooth decay (no=67%) or periodontal disease (no=21%; unknown=75%); subjects who have lost all of their teeth (50%).

**Conclusion:** Elderly patients may not be familiar with the causes and symptoms of periodontal disease and oral cancer. Dental professionals should assess their patients' knowledge about these diseases, especially if a patient has a history of irregular dental attendance.

**Source of Funding:** Funded, in part, by Delta Dental of Iowa Foundation and Dental Research Grant, University of Iowa, College of Dentistry

Poster Number: 74

Serial/Abstract Number: 11

### **THE HOME HEALTH AIDE'S ROLE AS AN EARLY GATEWAY TO DENTAL CARE**

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University of North Carolina School of Dentistry, Chapel Hill, NC, USA (1), UNC Gillings School of Global Public Health, Chapel Hill, NC, USA (2)

**OBJECTIVES:** The purpose of this pilot study was to examine home health aides' knowledge and comfort in addressing the oral health of their homebound older adult clients before and after implementation of an educational home study course which focused on dental topics pertinent to an older adult population.

**METHODS:** The study population consisted of 15 home health aides. Upon enrollment, study subjects answered a 12-question pre-assessment survey which examined knowledge of general oral health topics, the home health aide's comfort in addressing oral health issues with his or her clients, and how often the home health aide actively assisted clients with a daily oral hygiene routine. Following the pre-assessment, subjects completed a home study course and were given two weeks to implement what they learned. After the two week period, subjects completed a post-assessment with identical questions to the pre-assessment.

**RESULTS:** Pre and post assessment scores were significantly different on the knowledge questions with subjects scoring higher after the educational intervention ( $p=0.02$ ). The three questions addressing comfort level were not significantly different, although 33% of the subjects improved comfort level regarding the discussion of oral health and oral hygiene habits with clients ( $p=0.16$ ). A significant difference was seen in the number of subjects that discussed oral health issues ( $p=0.03$ ) after the educational intervention.

**CONCLUSION:** This study showed that an educational intervention in the format of a home study course can be beneficial in improving the basic oral health knowledge of home health aides who work with homebound older adults.

**Source of Funding:** UNC-Chapel Hill School of Dentistry, Department of Dental Ecology (Provided office supplies)

Poster Number: 75

Serial/Abstract Number: 18

### **ASSOCIATION BETWEEN SELF PERCEPTION AND INDICATORS OF ORAL HEALTH AMONG ELDERLY PATIENTS**

*Maria Betânia Garcia (1) PhD; Maciel AS (1) DDS; Silva RZ (1) DDS; Torres SCM (1) DDS*

Universidade São Francisco, Braganca Paulista, SP, Brazil (1)

**Objective:** The objective of this research is to study the relationships between self perception oral health, the impact of oral health on quality of life and the actual clinical status of elderly patients.

**Methods:** The sample will consist of two hundred patients, aged 60 years or older who attend the School of Dentistry, Bragança Paulista - SP. In the case of elderly patients, for sample selection will be a pre-selection through the questionnaire Mini Mental State Examination.

## Abstracts for Poster & Student Presentations

After this first evaluation and selection questionnaires will be used for self assessment of oral health, adapted from Silva et al., 2001, Questionnaire Psychosocial Impact Of Dental Aesthetics - PIDAQ-BRASIL/UNIFESP and evaluation of oral health status of the CPITN index , DMF.

Results: The data obtained through the survey will provide additional subsidies to professional clinical examination, allowing a complete view of the patient, which will allow proper planning of the changes contributing to health and development of a program that includes: educational activities, aimed at self diagnosis, self-care, preventive and curative actions, improving care, making it possible to approach the individual and rehabilitative measures.

Conclusions: The aging world population is growing, not that often there are improvements to the living conditions of the population. For health professionals, it is important to know the oral condition of the elderly, as well as their own perception about the health of your mouth.

Source of Funding: None

Poster Number: 76

Serial/Abstract Number: 27

### **TITLE: A QUALITATIVE STUDY OF BARRIERS TO DENTAL CARE AMONG OLDER MINORITY ADULTS RESIDING IN LOWER INCOME COMMUNITIES**

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University of Connecticut School of Dental Medicine, Farmington, CT, USA (1), Institute for Community Research, Hartford, CT, USA (2)

OBJECTIVES: To explore factors that motivate and/or discourage use of dental care among low income minority older adults

METHODS: Participants were recruited from low-income senior housing in Hartford, CT. In-depth semi-structured interviews were conducted to obtain data on demographics, oral health status, oral health knowledge and factors that affect use of dental care including finances, perceived oral symptoms, cultural factors, and beliefs about dental care. A total of 15-20 interviews will be conducted.

RESULTS: Preliminary data from 2 interviews indicate that participants believe their oral health is relatively good but they have few remaining natural teeth. Participants have dentures and partial dentures but do not always have them or use them. Major perceived barriers are ability to pay, transportation and fear of the dentist. Participants may have poor oral health as they associate seeking care with having pain or other symptoms. The main concerns of the participants are losing remaining teeth, appearance, ability to eat, and obtaining dental insurance. Early life experiences of the participants regarding dental care and self-care were household remedies taught by family members. Participants recommended better access to dental care through on-site dental care and more convenient transportation to dental facilities. Participants may have low literacy levels, which could affect their understanding about maintaining their oral health.

CONCLUSIONS: Community dwelling older adults experience barriers similar to other low-income adults. However, older adults experience other barriers specific to their age group including physical disabilities, complex medical conditions and difficulty benefiting from information about their oral health.

Source of Funding: American Association of Endodontics

Poster Number: 77

Serial/Abstract Number: 43

### **DENTAL PUBLIC HEALTH COMPETENCIES AND A CURRICULUM FOR PRE-DOCTORAL DENTAL AND DENTAL HYGIENE PROGRAMS**

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Nova Southeastern University College of Dental Medicine, Fort Lauderdale, FL, USA (1), University of Michigan, Ann Arbor, MI, USA (2), University of California at Los Angeles, Los Angeles, LA, USA (3)

OBJECTIVES: To develop dental public health (DPH) competencies and a prepared curriculum for pre-doctoral dental and dental hygiene programs

METHODS: The approved project has proceeded through the following steps: 1) A 7-member expert panel was established to review CODA and ADEA's competencies for dental and dental hygiene students, ABDPH competencies for DPH specialists, competencies for public health professionals, and ASTDD's competencies for state oral health programs, in order to develop a set of core pre-doctoral competencies 2) The process and proposed competencies were then reviewed by a broad group of DPH experts. 3) An internet review of existing curriculum topics and formats was completed and requests for syllabi of DPH courses taught in schools were circulated. 4) Collected syllabi were reviewed for contents/topics complementing proposed competencies 5) Faculty whose syllabi complemented the competencies were asked to share course materials (modules/presentations, and guidelines for student projects/activities) 6) A curriculum sub-committee (CS) of 6 experts was established 7) CS members performed a course content analysis and identified 5 major curriculum topics for module development.

RESULTS: Eight core pre-doctoral DPH competencies focusing on 18 different topics were developed. The 5 major curriculum core areas identified for the pre-doctoral DPH curriculum were: 1) Evidence based dentistry 2) Principles of DPH 3) Ethics and professionalism 4) Advocacy, communication, policy development, and inter-professional care, and 5) Prevention, health promotion, and control of oral diseases.

CONCLUSIONS: DPH competencies have been developed, and DPH curriculum development is underway for pre-doctoral dental and dental hygiene programs.

Source of Funding: This program was supported by Health Resources and Service Administration grant, D83HP19949.

Poster Number: 78

Serial/Abstract Number: 41

### **INVOLVEMENT OF AYURVEDIC PRACTITIONERS IN ORAL HEALTH CARE IN THE UNITED STATES**

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New York University College of Dentistry, New York, NY, USA (1)

Objectives: The objective of this study was to explore the involvement of the United States based Ayurvedic practitioners in treating oral diseases by assessing whether they treat oral diseases and to identify which Ayurvedic procedures are used to treat oral diseases.

Method: Ayurveda, an ancient Medical science originated in India, is also practiced in the United States. Eighty five U.S. based practitioners participated in this cross-sectional survey. Self-reported data on demographics of the practitioners, the general and oral health conditions they treat, and the treatment modalities used were obtained. Descriptive statistics and logistic regression analysis were performed using SPSS.

Results: Participants were predominantly female, white or non-Hispanic, and were part-time practitioners. Their educational background ranged from 5.5-year degrees to short-term training. Over

## Abstracts for Poster & Student Presentations

forty percent reported that they treat oral diseases. Conditions treated were related to oral malodor, gum or periodontal disease, and tooth ache. Ayurvedic treatments given for these conditions were primarily preventive in nature.

Conclusions: Ayurvedic practitioners in the U.S. treat a variety of oral diseases using predominantly preventive traditional care. Asians and those who practiced for a longer duration were more likely to treat oral diseases. Larger population based studies are needed to further understand the current role of Ayurvedic practitioners in oral health care. Ayurvedic treatment modalities aimed at oral diseases need to be evaluated through rigorous randomized controlled trials for safety and efficacy/effectiveness. Ayurvedic preventive treatments, mostly based on natural products, can be incorporated in to overall preventive care regimes, if proven safe and effective.

Source of Funding: This study was supported by New York University College of Dentistry as Dean's award.

Poster Number: 79

Serial/Abstract Number: 13

### **PILOT GLOBAL AND COMMUNITY HEALTH TRACK: PRINCIPLES, PARTNERSHIPS, AND INTERDISCIPLINARY APPROACHES**

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Objectives: Harvard School of Dental Medicine recognizes that oral health is an underrepresented global and public health priority. In response to the growing burden of oral diseases, HSDM aims to attract and graduate 10% of students in each class who are dedicated to a career in global and community health.

Methods: A combination of literature reviews and current university program assessments was performed to create a pioneering systems based curriculum in global and community health. Contributory field work for the curriculum development included oral health screenings in Brazil and India and a health diplomacy exchange in China. Interdisciplinary academic partnerships and collaborations included exploratory work in Rwanda and medical curriculum consultations in Nigeria respectively.

Results: A Global and Community Health Track was developed for DMD students by the Offices of Global and Community Health, Dental Education, and Research Affairs. The track provides a multi-year empirical leaning concentration that combines didactic and experiential opportunities to promote the development of the skills and knowledge required of leaders in global and community health. Track components include required and elective courses, community service projects and research exchanges, and a culminating thesis. Exceptional theses can be selected for honors.

Conclusions: The Global and Community Health Track aims to provide students with the skills necessary to carry out ethical, sustainable, long-term solutions which will empower communities worldwide to meet the growing oral health needs of the global population. Mixed methods for monitoring and evaluation will take place throughout the implementation phase of the track.

Source of Funding: Departmental funding: Harvard School of Dental Medicine Department of Oral Health Policy and Epidemiology.

Poster Number: 80

Serial/Abstract Number: 28

### **INCREASING ACCESS TO ORAL HEALTH CARE FOR PERSONS LIVING WITH HIV/AIDS: RESULT OF A 5-YEAR MULTI-SITE STUDY**

*Jane Fox (1) MPH; Carol Tobias (1) MMHS*

Boston University School of Public Health, Boston, MA, USA (1)

Objective: To increase access to oral health care for persons living with HIV/AIDS at 15 HRSA funded sites while implementing a longitudinal multi-site evaluation of 2,469 patients

Methods: A longitudinal multi-site evaluation was conducted with patients enrolled at 15 HRSA funded sites to determine the impact increasing access to and engaging in comprehensive oral health care services on HIV+ adults out of oral health care for 12 + months. Baseline data was collected on 2,469 patients and follow-up surveys administered at 6, 12, 18 and 24 months. Patient data included patient demographics, unmet dental care needs, patient oral health symptoms, oral health QOL, overall QOL and oral health habits. All patient utilization data was capture using CDT codes.

Results: At baseline, 53% of patients reported not receiving oral health care in the past 2 or more years and 48% reported an unmet need for dental care since testing HIV+ At 12 months significant changes in oral health QOL, mental health status, reduction of oral health symptoms, and changes in oral health habits were found in multivariate analysis controlling for site differences. Patients received over 37,000 services in over 15,000 oral health visits. 42% of patients completed their phase one treatment plan.

Conclusion: This initiative was successful in engaging patients in oral health care, providing comprehensive patient care and impacting patients' oral health and overall quality of life. Many of the models developed are replicable and sustainable beyond the life of the funding which ended in August 2011.

Source of Funding: HRSA, HIV/AIDS Bureau

Poster Number: 81

Serial/Abstract Number: 36

### **SPNS ORAL HEALTH INITIATIVE: STANDARDS OF CARE FOR PLWHA, A BASELINE ASSESSMENT.**

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Boston Public Health Commission, Boston, MA, USA (1), Boston University School of Public Health, Boston, MA, USA (2)

OBJECTIVE: To review standards of care developed for the SPNS Oral Health Initiative relative to answering the evaluation question: "Were oral health services performed in accordance with professional practice guidelines?"

METHODS: A consensus of dental consultants on the evaluation team resulted in the selection of 12 variables relative to diagnostic and preventive services. These data were collected from the funded sites and entered into a web-based data entry system. Analysis consisted of determining the presence of standards of care among patients as well as evidence of a recall visit.

RESULTS: The sample size was 1,718 patients across all sites and of these, 73.8% received the standards of care selected by the evaluation team. Phase 1 treatment and recall were also analysed for those who did or did not receive the standards of care.

CONCLUSION: Receipt of the standards of care was associated with better overall health of teeth and gingiva and greater improvement in the overall health of the teeth and gingiva at 12 month follow-up. In addition, those receiving the standards of care were more likely to have completed Phase 1 treatment and be retained in care. Factors associate with those more likely to have received the standards of care will be presented.

Source of Funding: HRSA/HIV/AIDS Bureau

Poster Number: 82

Serial/Abstract Number: 76

### **DOWRY DENTURES: AN ODDITY OR A WIDESPREAD TRADITION?**

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## Abstracts for Poster & Student Presentations

**OBJECTIVE:** Prenuptial Extractions are performed to achieve complete edentulism before marriage, with Dowry Dentures as the resultant therapy. Until recently, references to such practices have been anecdotal and not scientifically documented. The objective of this paper is to share reports of Prenuptial Extractions and Dowry Dentures from various cultures.

**METHOD:** A recent survey (Prenuptial Tooth Extractions in Acadian Women: First Report of a Cultural Tradition. Gordon SC, et al. J Womens Health (Larchmt) 2011 Nov 11 [Epub ahead of print]) documents this practice among Canadian Acadian women. Since then, dentists and other interested people from additional locations have contacted the authors to communicate their experiences.

**RESULTS:** These practices have been reported among women in Maine, several areas of England, Hutterite women in Manitoba (Canada), as well as the previously-reported Acadian population. Non-medical literature alludes to this practice among women in Guatemala, Quebec (Canada), and Great Britain. Motivation for Prenuptial Extractions and Dowry Dentures appears to include limited access to dental care, improved esthetics, and resignation to the inevitability of toothaches and edentulism, hence cost saving. Anthropologic data suggest that women began to experience disproportionate dental caries at the dawn of agriculture because of increased carbohydrate intake, and that tooth loss may correlate with increased parity.

**CONCLUSIONS:** Prenuptial Extraction practices have been found among diverse cultures including Canada, USA, England, and Guatemala. Further studies of this and corresponding Dowry Dentures are required to establish current prevalence, geographic distribution, underlying motivation, and whether economic downswing may encourage its resurgence.

Source of Funding: None

Poster Number: 83

Serial/Abstract Number: 69

### **TRENDS IN DENTAL VISITS AMONG THE US NON-INSTITUTIONALIZED CIVILIAN POPULATION - 1995-2008**

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Office of Science, Policy and Analysis, National Institute of Dental and Craniofacial Research, Bethesda, MD, USA (1)

**OBJECTIVE:** To examine the 13-year trends in annual dental care utilization among US non-institutionalized civilian population.

**METHODS:** BRFSS (1995-2008) data for adults were analyzed. Point-estimates, confidence-intervals, trends and differences in trends for self-reported annual dental visits by socio-demographic factors and smoking status were tested with Chi-sq tests using Stata® (v11).

**RESULTS:** Overall, the median percent of dental visits increased marginally (1.3%;  $p=0.99$ ) from 68.6% (66.2, 70.9) in 1995 to 69.9% (69.1, 71.7) in 2008. Trend lines remained flat for most age groups except for those 80+ years, which showed a steady increase from 50.6% (40.3, 60.9) in 1995 to 65.6% (59.2, 72.1) in 2008. Disparities in median annual dental visits between non-Hispanic whites and other racial/ethnic groups increased from a range of 2-7% point difference (1995) to a 7-11% point difference (2008). A greater percent of women than men visited a dentist 70.1% (66.9, 73.2) vs. 66.6% (63.8, 69.3) in 1995 and 71.2% (69.2, 73.2) vs. 67.4% (65.0, 69.7) in 2008; trends for both groups and differences between the groups remained similar over time (4-5%). No significant change by race/ethnicity, income, education or smoking was seen. Disparities in dental visits by income, education, and smoking remained same from 1995-2008. For example, the disparity between former smokers and current smokers stayed approximately 10%, with "never smokers" consistently having a higher proportion of visits.

**CONCLUSION:** Over 13 years, the proportion of persons visiting a dentist has remained relatively constant. Of note, disparities in dental

visits by socio-demographic factors also remained the same over time.

Source of Funding: National Institute of Dental and Craniofacial Research

Poster Number: 84

Serial/Abstract Number: 19

### **DENTAL CARE NEEDS AMONG UNDERSERVED OREGONIANS - THE OREGON MISSION OF MERCY**

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Oregon Health & Science University, Portland, Oregon, USA (1)

**Objectives:** (1) Describe the oral health problems and demographic characteristics of a population rarely presenting in the organized dental care system; (2) describe the dental care provided to them; and (3) analyze selected barriers for their dental care access.

**Methods.** The Mission of Mercy is a project organized by the Oregon Dental Association. Free dental care by hundreds of dental care providers supported by around 1,000 students and community volunteers is offered in portable dental stations in a large public arena. People in need presenting for treatment completed a health information form and were triaged to various dental service stations according to the character and acuity of their dental problem. The session included oral hygiene education and an exit interview.

**Results.** 2,023 individuals were seen. Almost 10,000 dental services were provided, predominantly x-rays (30%), extractions (20%), and restorations (16%). 1,903 (94%) completed an interview. 80% came from within 20 miles; only 27% had seen dentist within 1 year due to lack of insurance (75%) and affordability (70%). 53% had been in pain, half for 6 months, half for a year or more. 75% of respondents had nowhere to continue dental care. Detailed analysis is planned concerning further explanatory relationships.

**Conclusions.** This charitable project revealed immense oral care needs among mostly uninsured adults. Although the population is self selected it represents a cross section of the most vulnerable and underserved individuals in the society. To approach a solution will require innovative long term strategies engaging both public and private resources.

Source of Funding: Kaiser Family Foundation Community Benefit.

Poster Number: 85

Serial/Abstract Number: 30

### **MOVING TO THE HEAD OF THE CLAS: USING THE NATIONAL CLAS STANDARDS FROM THE HHS OFFICE OF MINORITY HEALTH TO PROMOTE CULTURAL AND LINGUISTIC COMPETENCY SKILLS AMONG ORAL HEALTH PROFESSIONALS**

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HHS Office of Minority Health, Rockville, Maryland, USA (1), SRA International, Inc., Rockville, Maryland, USA (2)

**Objectives:** To help address oral health inequities, the Department of Health and Human Services' Office of Minority Health (OMH) is developing an e-learning program based on the Enhanced National Standards for Culturally and Linguistically Appropriate Services in Health and Health Care of 2012 (known as the National CLAS Standards).

**Methods:** Cultural and linguistic competency helps ensure that all individuals entering the health care system receive equitable and effective treatment. The Enhanced National CLAS Standards provide health organizations and professionals with a framework to improve quality of care for all individuals, regardless of cultural or linguistic background. The Enhanced National CLAS Standards provide the

## Abstracts for Poster & Student Presentations

foundation for OMH's upcoming e-learning program for oral health professionals, which will help meet the health needs of everyone served by oral health professionals.

OMH's e-learning program development process includes a literature review, focus groups, and an expert advisory panel.

Results: OMH's e-learning program for oral health professionals will launch in late 2012. The e-learning program will equip oral health professionals with the knowledge and skills to provide quality services to diverse communities.

Conclusions: By providing guidelines on the provision of culturally and linguistically appropriate services, the Enhanced National CLAS Standards help improve care and advance health equity across all health disciplines. The Enhanced National CLAS Standards are an important step toward eliminating health and health care disparities. This presentation will demonstrate the importance of the Enhanced National CLAS Standards and OMH's e-learning program for oral health professionals as vital tools for those seeking to advance equity in oral health.

Source of Funding: U.S. Department of Health and Human Services' Office of Minority Health

Poster Number: 86

Serial/Abstract Number: 114

### **A NATIONAL PLATFORM ON WHICH TO BUILD TRUST AND FORGE COMMON GROUND TO ACHIEVE OPTIMAL ORAL HEALTH FOR ALL: THE U.S. NATIONAL ORAL HEALTH ALLIANCE**

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U.S. National Oral Health Alliance, Boston, MA, USA (1), DentaQuest Foundation, Boston, MA, USA (2), American Dental Association, Chicago, IL, USA (3)

**OBJECTIVES:** To provide a national platform for a diverse network of stakeholders to forge common ground in order to harness opportunities and create viable solutions for improved oral health through prevention and treatment for vulnerable populations across our country.

**METHOD:** The U.S. National Oral Health Alliance engages partners in a leadership colloquium model designed to deepen and widen the discourse among diverse stakeholders. Partners enhance their own work by participating in Alliance colloquia in ways that draw on and benefit from the experiences of other partners. Individual work continues to evolve from learning with others, while internalizing their own experiences and reflecting on those experiences with other committed people.

**RESULTS:** The Alliance hosted its First Leadership Colloquium in Washington, DC on November 7-8, 2011. The colloquium focused on medical and dental collaboration, one of the six priority areas of the Alliance. More than 120 participants attended, representing a diverse swath of backgrounds and stakeholder groups. The post-colloquium evaluation stated that 64 percent of respondents rated their experience as "highly favorable" and 32 percent rated their experience as "favorable." A record of the proceedings was compiled and disseminated. A common ground message was developed by participants supporting medical and dental collaboration.

**CONCLUSIONS:** This model of interaction and convening shows promise as a method to align efforts among a diverse network of stakeholders and develop solutions that address oral health. Seventy-three percent of respondents replied that they were highly likely or likely to participate in the second leadership colloquium.

Source of Funding: DentaQuest Foundation

Poster Number: 87

Serial/Abstract Number: 66

### **QUALITATIVE EVALUATION OF FACTORS IMPACTING PROVISION OF DENTAL CARE TO PUBLICLY INSURED CHILDREN LESS THAN THREE YEARS OF AGE**

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Children's Outcomes Research Program, Aurora, CO, USA (1), Colorado School of Public Health, Aurora, CO, USA (2), Caring for Colorado Foundation, Denver, CO, USA (3), Children's Colorado, Aurora, CO, USA (4), University of Colorado AHEC Program, Aurora, CO, USA (5)

**Background:** Access to preventive dental services for young, low-income children is limited.

**Objective:** To investigate the factors that both facilitate and create barriers to the provision of services by dental providers to children < 3 years insured by Medicaid.

**Methods:** We conducted qualitative, semi-structured focus groups (FG) with oral health stakeholders throughout Colorado. Topics discussed included factors that facilitate and create barriers to the provision of dental care to children < 3 years old and insured by Medicaid. FGs were audio-taped, transcribed and thematically categorized.

**Results:** Eleven FGs were conducted with 130 stakeholders: 41 % dental providers, 25% Medicaid case managers, 13% public health professionals, 9% parents, 7% physicians and 5% dental office managers. Major facilitators of provision of care to children < 3 years included ease of and revenue from using dental hygienists/assistants to provide preventive care. Major barriers included lack of skills, inappropriate office space, anxiety, extensive patient dental needs and lack of sense of responsibility to serve children. Major facilitators of provision of care to Medicaid-insured children included ease of on-line billing and rapid reimbursement, lack of treatment negotiation and altruism. Major barriers included lack of adequate reimbursement, difficulty enrolling as Medicaid provider, lack of need, patient high no-show rates, lack of parent accountability, and low oral health literacy.

**Conclusions:** Factors impacting the provision of care to children < 3 years differ from those impacting care to Medicaid children. All factors should be considered when designing innovative interventions to increase dental access for these children.

Source of Funding: Caring for Colorado, Colorado Health, Colorado Trust, Delta Dental of Colorado, Kaiser Permanente, and Rose Foundations

Poster Number: 88

Serial/Abstract Number: 8

### **ILLUSTRATING ACCESS TO CARE IN WISCONSIN THROUGH GIS TECHNOLOGY**

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**Objectives:** One of the most important determinants of oral health is access to care. The goal of this work was to utilize Geographic Information Systems (GIS) software to depict and analyze the geographic distribution of Wisconsin dentists in relation to populations, such as children, in need.

**Methods:** Information sources used in this study were workforce data, Medicaid provider data, and clinic addresses. Workforce data included 3,142 practicing Wisconsin dentists, while the Medicaid provider data included certified Medicaid dentists with billed claims. The addresses of dentists/clinics were geocoded and mapped at the street address level along with county level Medicaid utilization rates.

## Abstracts for Poster & Student Presentations

Results: In Wisconsin, the highest concentration of population and dentists is in the southern and southeastern areas. However, only 25% of dentists in the southeastern region had one paid Medicaid claim compared with 41 to 54% in other regions. In addition, only 15% of dentists had at least \$10,000 in paid claims, ranging from 9% in the southeastern region to 25% in the northern and western regions. Medicaid utilization rates are also higher in the northern and western regions. Factors contributing to the higher Medicaid utilization in the northern and western regions are that Federally Qualified Health Centers are established there.

Conclusion: GIS technology can reveal relationships, patterns and trends related to the provision of oral health services. GIS maps may be used to influence or create policy and to appropriately target limited resources and programs in order to increase access to oral health services and decrease oral disease disparities.

Source of Funding: None

Poster Number: 89

Serial/Abstract Number: 50

### **PASS: A POPULATION BASED APPROACH TO PATIENT SERVICE AND PROFESSIONAL SUCCESS**

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Columbia University College of Dental Medicine, Section of Social and Behavioral Sciences, New York, NY, USA (1)

OBJECTIVE: Dental students often graduate with little "how to" knowledge needed to shape their careers with consideration of the populations in greatest need. With HRSA Title VII training grant support, Columbia University College of Dental Medicine (CDM) is developing a self-paced, web-based, interactive learning module series, titled "A Population Based Approach to Patient Service and Professional Success" (PASS). PASS introduces the dental student to five vulnerable U.S. populations across the lifespan, their oral health needs, and opportunities to address their care.

METHODS: Eighty one third year dental students completed the young child PASS module comprised of a brief national overview of young children and a career planning activity in a fictitious state using actual US county-level demographic data. Students explored, considered the levels of oral disease and available dental workforce at the neighborhood level, and selected a "zip code" to practice in. Exemplar videos of pediatric dentists are available to provide examples of how service to vulnerable pediatric populations is put into practice.

RESULTS: The PASS module was seen as an engaging way to approach dental public health issues. One third of participants selected a zip code in the urban/suburban county with the highest median income in the state. Personal debt and family related obligations were the highest reported justifications for their selection.

CONCLUSIONS: PASS modules can serve as "how to" curriculum integrated into existing pre-doctoral coursework on pediatric, adult, and geriatric dentistry and practice management courses that guide students' understanding of professional opportunities to extend care to the underserved.

Source of Funding: Health Resources and Services Administration Title VII Training Grant D85HP20031

Poster Number: 90

Serial/Abstract Number: 33

### **BUILDING INTRA-AGENCY COLLABORATION OF PUBLIC AND PRIVATE AGENCIES THROUGH THE 'WIC SMILES 4 U' DENTAL PARTNERSHIP PILOT PROGRAM**

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Hillsborough County Health Department, Tampa, FL, USA (1)

Objectives: 1) Develop an online training program to meet the educational needs of WIC staff on the importance of children's dental health and overall health. 2) Establish a partnership with community health centers to provide early preventive dental health services onsite at WIC clinics for vulnerable pregnant women and children. The demonstration project was funded by a grant from the Maternal and Child Health Agency.

Method: A pilot program was developed to improve the dental health education of WIC staff and integrate oral health into total health of WIC clients. WIC staff received online education on the importance of early childhood dental health. Training was provided for mobile dental providers on oral risk assessment and placement of glass ionomer sealants (GIS) on primary teeth.

Results: Dental health education resulted in staff buy-in to help elevate awareness and support for onsite dental services. Dental services included oral health education to caregivers and prenatal preventive dental care, infant oral risk assessment, GIS on primary teeth, fluoride varnish, nutritional counseling, and referrals into a dental home.

Conclusions: This demonstration project yielded a significant new access point for dental services for underserved children and women enrolled in WIC. The 'WIC Smiles 4 U' increased awareness of the importance of oral health to overall health and well-being. The program helped to increase acceptance and adoption of effective early preventive interventions. 'WIC Smiles 4 U' pilot program successfully linked WIC participants and local public health dental resources through referral and networking.

Source of Funding: Maternal and Child Health Agency, Title V grant.

Poster Number: 91

Serial/Abstract Number: 112

### **TREATMENT NEEDS AND COMPLETION OF REFERRALS IN A SCHOOL BASED SCREENING PROGRAM**

*Scott Kim (1) BS; Kathy Kim (1) BS; Olubunmi Adekugbe (1) BDS, MPH; Ellen Witsch (1) RDH; Jill Klischies (1) RDH, BSDH; Joan Gluch (1) RDH, Ph.D.; Robert Collins (1) DMD, MPH; Andres Pinto (1) DMD, MPH*

University of Pennsylvania, Philadelphia, USA (1)

Objectives: Since 1945 the Commonwealth of Pennsylvania has required oral health screening for school children enrolled in Grades K, 1, 3 and 7. The rationale for the exercise is identification of children who need care and referral for follow-up. The objective of this study is to evaluate the program and track completion rates of students who received referrals.

Methods: Screening was performed on children who participated in the program from 2005 - 2010. Third and fourth year dental students under the supervision of clinical faculty conducted the screening examinations. The screening involved child level identification of disease (dft, DMFT, PI, GI) and determination of treatment needs (routine, restorative and urgent care). Referral completion was done on children who needed urgent care by following up on those who still participated in the screening program in subsequent years and determining if treatment needs remained urgent.

Results: A total of 9620 screenings were done from 2005 - 2010. Treatment needs for restorative and urgent care was determined for 48.97% (2005), 55.21% (2006), 52.74% (2007), 52.78% (2008), 47.64%

# Abstracts for Poster & Student Presentations

(2009) and 39.51% (2010) of the children. Subsequent follow-up of children who needed urgent care showed referral completion rates of 70% (2005), 70.6% (2006), 76% (2007), 73% (2008), 100% (2009) and 71.4% (2010)

Conclusion: Follow-up and treatment remain a major challenge of state-mandated screening programs. Data suggest that more emphasis and resources need to be allocated to strengthen and expand existing infrastructure to ensure needed dental care is received.

Source of Funding: None

Poster Number: 92

Serial/Abstract Number: 32

## PREVENTIVE DENTAL CARE VISITS FOR 1-5 YEAR OLD U.S. CHILDREN OF SINGLE MOTHERS

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Objectives: To assess characteristics of children of single mothers and their households by whether the child had one or more preventive dental care visit (PDCV) in the past year or not.

Method: The US nationally representative sample, collected by the 2007 National Survey of Children's Health, was used. The analytical dataset was restricted to 1-5 year old children of single mothers (n=3,173, weighted n=3.3M). Bi- and multi-variate weighted comparisons were made by having PDCV or no such visit (NPDCV) in the past 12 months.

Results: PDCV was had by 56% of the children: with mean age of 3.7 years (SD 1.2) and being 46.3% male, 28.6% White, 36.6% Black, 25.9% Hispanic, 25.2% only child, 43.2% maternal education > high school, 49.8% <100%FPL, 70.5% household employment, 83.3% mother US born, 86.6% English spoken at home, and 68.7% Public Insurance. Those with NPDCV had mean age of 2.3 years (SD 1.3), and were 47.2% male, 34.6% White, 29.1% Black, 27.1% Hispanic, 35.8% only child, 40.0% maternal education >HS, 48.3% <100%FPL, 75.0% household employment, 84.2% mother US born, 84.1% English spoken at home, and 65.0% Public Insurance. Multi-variate logistic regression yielded older child's age, being Black, and having Public Insurance associated with PDCV likelihood.

Conclusion: A high percentage of 1-5 year old children of single mothers are from households with limited resources. Further exploration is merited for the intervention potential of Public Insurance to increase preventive dental care visits and assure optimal oral health.

Source of Funding: Dr. Kim was funded in part by a National Research Foundation of Korea Grant funded by the Korean Government (NRF-2011-330-B00190)

Poster Number: 93

Serial/Abstract Number: 58

## MINNESOTA ADVANCED DENTAL THERAPY STUDENT EXPERIENCES

Elizabeth Branca (1) RDH, BA; Jennifer Berge (1) RDH, BSDH; Tanu Dhoopar (1) RDH, BSDH; Andrea Jordan (1) RDH, BSDH  
Metropolitan State University, St Paul MN, USA (1)

Objective: To educate the dental public health profession on the training of Advanced Dental Therapy.

Method: Poster and oral presentation with question and answer.

Results: Awareness of the Advanced Dental Therapy Program

Conclusions: Advanced Dental Therapy is a new dental field as dual-licensed practitioners, we will be able to work flexibly within the dental clinic. Our training is rigorous, challenging and very exciting. The training for ADT includes rotation with many partners and supporters of the program. At our school clinic we are already serving diverse,

underserved and very appreciative patients. Our philosophies support the need for access to care for all populations. We are looking to work in different aspects of the dental field when we are credentialed as Advanced Dental Therapist.

Source of Funding: None

Poster Number: 94

Serial/Abstract Number: 68

## PARENT/CAREGIVER EXPERIENCES WITH AND ATTITUDES TOWARD FLUORIDE VARNISH APPLICATION BY MEDICAL PROVIDERS AND INTENTIONS TO CHANGE ORAL HEALTH BEHAVIORS AFTER ORAL HEALTH INSTRUCTION

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Children's Outcomes Research Program, University of Colorado School of Medicine, Aurora, CO, USA (1), Colorado School of Public Health, Aurora, CO, USA (2)

Background: Medical providers expand access to basic preventive dental services to young, low-income children by providing fluoride varnish (FV) and oral health instruction (OHI) at medical visits.

Objectives: We examined parent/caregiver experiences with and attitudes toward FV and intention to improve oral health behaviors after receipt of OHI.

Methods: A cross-sectional study. Using administrative data, we identified children, 3-4 year oldS receiving medical care in a large safety net medical system (N=1,646). We administered a written survey (English and Spanish) to a random sample and measured parent/caregiver experiences with and attitudes toward FV and intentions to change oral health behaviors after receipt of OHI.

Results: We surveyed 421 parents/caregivers who identified their children as Hispanic (90%) and receiving Medicaid/CHIP (91%). Forty five percent of caregivers reported their children had received FV from a medical provider (MP)/48% from a dental provider (DP). Caregivers reported that MPs should provide FV (yes: 41%, don't know: 53%), DPs should provide FV (yes: 50%, don't know: 48%), and FV will help prevent cavities (likely: 67%, don't know: 27%). Parents/caregivers reported having received OHI from their MPs and intention to execute the OHI if their MP recommended it: brush child's teeth twice daily (97% received/97% intend to execute), use fluoridated toothpaste (69%, 95%), take child to DP (96%, 97%), and drink tap water (60%, 87%).

Conclusions: Parents/caregivers of young disadvantaged Hispanic children favor their children receiving FV and report that it helps prevent cavities; however, nearly as many are not sure. OHI influences parents'/caregivers' intentions to improve behaviors.

Source of Funding: Caring for Colorado, Colorado Kaiser, Colorado Health, Colorado Trust, Delta Dental of Colorado and Rose Foundations

Poster Number: 95

Serial/Abstract Number: 80

## ORAL HEALTH NEEDS OF SENIORS IN MASSACHUSETTS NURSING HOMES

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Columbia University, New York, NY, USA (1), Harvard University, Boston, MA, USA (2), MA Dept. of Health, Boston, MA, USA (3)

AIM: The aim of this study was to assess the oral health of seniors living in nursing homes in Massachusetts, including rates of oral cancer, suspicious lesions, and general oral health.

METHODS: After obtaining appropriate institutional approvals, we were invited to visit eight facilities in Massachusetts. The research team included a project manager, public health dental hygienists, trained interviewers and dentists. Study participants went through an



## Abstracts for Poster & Student Presentations

active informed consent process, participate in an interview, and have an intra- and extra-oral examination.

**RESULTS:** A total of 104 subjects accepted to participate in the study. The expressed demand for dental services was 28%. Upon examination 64 individuals (61%) were found to have missing unreplaced teeth, with the mean number at 14.6. Pain, signs of inflammation and denture irritation was reported by 14 individuals; of those, 8 reported a recent dentally-related pain. Social support was found associated with pain experience; people who were not visited regularly while at the nursing home (n=52) reported significantly higher frequency of pain (Pearson  $\chi^2 = 114.2961$ ,  $P < 0.001$ )

**CONCLUSION:** A great dental need seems to exist among low income seniors that reside in nursing homes. Urgent measures are needed to ensure that dental disease is appropriately and timely diagnosed, and basic health needs are met.

Source of Funding: National Institute of Dental Craniofacial Research, NIH

Poster Number: 96

Serial/Abstract Number: 61

### **DEMYSTIFYING HEALTH DECISIONS FOR ASPERGER SYNDROME DISORDER PATIENTS: A TOOL FOR PROMOTING HEALTH LITERACY, HEALTH AUTONOMY AND SELF ADVOCACY**

*Carol Nguyen (1) RDH, MS; James Tysinger (1) PhD; Veronica Young (1) Pharm D, MPH; Gino Garza (1) RDH, BS; Carolyn Walden (1) MS; Nita Wallace (1) RDH, PhD; Pam Kelly (1) BS; Paula Winkler (1) MEd*

The University of Texas Health Science Center at San Antonio, San Antonio, TX, USA (1), Reaching Maximum Independence, Inc., San Antonio, TX, USA (2)

**Objective:** To improve communication of health knowledge and behaviors between patients, health providers and employers.

**Methods:** A community partnership with Reaching Maximum Independence Inc. (RMI, Inc), South Texas Area Health Education Center (STAHEC), Texas Department of Assistive and Rehabilitative Services (DARS), and Workforce Solutions Alamo was established to develop a mixed research design. This study was approved by the Institutional Review Board, April 27, 2011 approval number HSC2009033H. Participants of the study were consenting adults diagnosed with Asperger Syndrome Disorder. A snowball sample of N=15 participated in a single forty-five minute structured face to face interview. Using an adaptation of the validated "Health Care Transition Planning Guide for Young Adults 18+" (2005, pp. 4-11), developed by Drs. J. Reiss and R. Gibson at the University of Florida; interviews were conducted for seven weeks, May 2011 through June 2011.

**Results:** Three issues- health autonomy, self advocacy and health literacy-were identified based on patient responses to the assessment instrument. Specific recommendations were developed for each issue.

**Conclusion:** This community partnership offers strategic recommendations to improve communication of health knowledge and behaviors between patients, health providers and employers. All stakeholders have a role in maintaining a safety net that will promote informed health decisions and communication between patients, providers and employers.

Source of Funding: Funding was provided through South Texas Area Health Education Center and The University of Texas Health Science Center at San Antonio, School of Health Professions.

Poster Number: 97

Serial/Abstract Number: 82

### **ACCESS TO PREVENTIVE DENTAL CARE FOR CHILDREN WITH SPECIAL HEALTH CARE NEEDS**

*Myra Rosen-Reynoso (1) EdM, PhD; Ngai Kwan (1) MA*

University of Massachusetts, Boston, MA, USA (1)

**OBJECTIVE:** We sought to understand if there was an association between receiving preventive dental care and race/ethnicity, insurance, poverty status, language spoken at home, disability type, and family structure for children with special health care needs (CSHCN).

**METHODS:** Cross-sectional data from the National Survey of Children with Special Health Care Needs (2009-2010) including 9,874,840 parents of children with special health care needs were analyzed. Crosstabs and multiple logistic regression analysis were used.

**RESULTS:** After controlling for the specified variables, Hispanic CSHCN were more likely to receive none of the preventive dental care services they needed compared to non-Hispanic CSHCN. Further, children with developmental disabilities were less likely than children with physical disabilities to receive preventive dental care. CSHCN residing in households where the income was 50% below the poverty level were more than 4 times more likely to not receive preventive dental care than those residing in households where the income was 400% higher than the poverty level. CSHCN living in single-mom families were less likely to receive preventive dental care when compared to two-parent families. CSHCN without insurance were more than 4 times more likely to not receive any preventive dental care when compared to those with private insurance.

**CONCLUSIONS:** Disparities in access to preventive dental care are evident by race/ethnicity, insurance, family structure, and socioeconomic status. Our study adds new information regarding the access to preventive dental care needs for CSHCN utilizing the most recent data available for this population.

Source of Funding: Maternal and Child Health Bureau

Poster Number: 98

Serial/Abstract Number: 72

### **GAPS IN HEALTH PROFESSIONALS' EDUCATION: CARING FOR PATIENTS WITH DEVELOPMENTAL DISABILITIES**

*Gino Garza (1) RDH, BS; Megan Cunningham (1) PharmD; Katherine Perez (1) PharmD; Vanessa Agado (1) RRT, BS; Chun Yu Yeung (1) DPT; Carol Nguyen (1) RDH, MS*

The University of Texas Health Science Center at San Antonio, San Antonio, TX, USA (1)

**Objectives:** To identify patient satisfaction with quality of health care received from medical and dental professionals.

**Methods:** This pilot study focused on the healthcare transition experience of young adults with developmental disabilities and their family members to gain new insights into their medical and dental needs. A mixed research design was used to identify a convenience sample of 15 in which descriptive and qualitative data were gathered in a structured 45 minute interview. This pilot study was approved by the Institutional Review Board, May 6, 2009, approval number HSC2009033H.

**Results:** The issues - satisfaction with health care, and patient and family members perception of health providers' ability to treat developmentally disabled patients - were identified based on the data collected from the structured interview with the patients and their family members. Recommendations were made to address issues for interprofessional curriculum in health professions programs and licensed professionals to improve communication with special needs populations and their families.

# Abstracts for Poster & Student Presentations

Conclusions: This pilot study presents specific recommendations to identify barriers to care between patients with developmental disabilities and health professionals based on self report from the patient and their family members. Our hope is to help close the gap in communication to facilitate improved health communication between patients and health professionals.

Source of Funding: South Texas Area Health Education Center and The University of Texas Health Science Center at San Antonio, School of Health Professions.

Poster Number: 100

Serial/Abstract Number: 24

## **AN INCREASE OF HPV-ASSOCIATED OROPHARYNGEAL CANCER INCIDENCE IN RHODE ISLAND MALES, 1987-2009**

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Rhode Island Department of Health Oral Health Program, Providence, USA (1)

OBJECTIVE: To summarize the changing landscape of oral cavity and pharyngeal cancers in Rhode Island in recent decades as associated with human papillomavirus (HPV) infection.

METHODS: Rhode Island Cancer Registry data were used for the period 1987-2009. Malignant oral and pharyngeal cancers were classified into two groups: (a) HPV-associated oropharyngeal cancers, and (b) comparison cancers, mostly in the oral cavity, but also including the larynx, in parallel with previous epidemiology reports. SEER-Stat software (version 7.0.5) was used to calculate counts and age-adjusted incidences.

RESULTS: In accordance with national trends, annual incidence of HPV-associated oropharyngeal cancers among Rhode Island men increased from 1987-1991 to 2007-2009, (45% increase from 5.3 per 100,000 to 7.7 per 100,000), whereas the incidence of cancers at comparison sites steadily decreased over the same period (24% decline from 17.9 per 100,000 to 13.6 per 100,000). Compared with cancers of the oral cavity and larynx, HPV-associated oropharyngeal cancers are more likely to be diagnosed in a population that is about 5 years younger, particularly males.

CONCLUSIONS: The recognition that HPV plays a specific and unique role in oropharyngeal cancer development suggests important implications for oropharyngeal cancer prevention and control. Health care professionals are encouraged to communicate with their patients, particularly young adults, about HPV as an etiologic factor of oropharyngeal cancer. Systematic and ongoing cancer surveillance based on new knowledge of the connection between oropharyngeal cancer and HPV is essential to monitor the potential effectiveness of the HPV vaccination in reducing oropharyngeal cancers in the future.

Source of Funding: None

Poster Number: 101

Serial/Abstract Number: 79

## **SCREENING AND COUNSELING FOR TOBACCO USE AND CESSATION BY DENTAL HEALTH CARE PROVIDERS**

*Jennifer L Cleveland DDS, MPH (1); Jon Ruesch, MA (2); Laurie Barker, MSPH (1); Chien-Hsun Li, MS, MA (3); Gina Thornton-Evans, DDS, MPH (1)*

CDC (1), American Dental Association (2), Northrop Grumman (3)

OBJECTIVE: To present baseline data on the percentage of U.S. dental staff that screen and counsel patients on tobacco use and cessation, two new HP2020 developmental objectives.

METHODS: The ADA asked a random sample of 4725 general dentists (GDs) and 9884 specialists, "During the past week, how often did you or your dental team: a) Personally ask patients if they used tobacco? or b) Personally counsel patients who used tobacco products on tobacco cessation?" Responses were dichotomized by always/

usually vs. sometimes/rarely/no and were analyzed by demographic and practice characteristics. All analyses were weighted to account for oversampling of specialists.

RESULTS: We received 4670 completed questionnaires (1495 GDs and 3175 specialists). Overall, 50.8% (SE=1.3) and 34.6% (SE=1.3) of respondents always or usually screened or counseled patients about tobacco use or cessation, respectively. The proportion of periodontists that screened and counseled was 82.4% (SE=2.0) and 58.8% (SE=2.6), respectively; for oral and maxillofacial surgeons 79.5% (SE=2.3) and 46.5% (SE=2.8); and for GDs 52.9% (SE=1.5) and 35.7% (SE=1.5). Overall, screening varied by US census division and number of hygienists; counseling varied by race/ethnicity (32.5% white: 42.3% other), census division, and number of hygienists.

CONCLUSIONS: Tobacco screening and counseling by general dentists must be improved if Healthy People targets of 58.2% and 39.3%, respectively, are to be reached by 2020.

SOURCES OF FUNDING: CDC Contract #00HCUCD1-2011-02927

Poster Number: 102

Serial/Abstract Number: 20

## **THE EFFECT OF ORAL HEALTH QUALITY OF LIFE AND DIABETES ON GENERAL HEALTH PERCEPTION IN THE U.S.**

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New York State Department of Health, Bureau of Dental Health, Albany, NY, USA (1)

OBJECTIVE: The purpose of this study is to determine whether oral health quality of life impacts the general health perception by self-reported diabetic status in U.S. adults age 40 and over.

METHODS: Data from the NHANES 2003-2008 surveys (n= 9120) were analyzed to assess the effect of demographic information, diabetic status, and the number of a respondent's oral health symptoms on the perception of general health. The number of oral health symptoms reported and the responses to general health perception were classified into three and two categories, respectively. Both bivariate and multivariate analyses were performed.

RESULTS: The perception of poor to fair general health varied from a low of 17% among non-diabetics with no oral health symptoms to a high of 68% among diabetics with 5 to 7 oral symptoms. The odds ratio increased from 1.5 (95% CI 1.4-1.7) when there were one to four oral health symptoms to an odds ratio of 3.0 (95% CI 2.6-3.5) when there were five to seven symptoms. This effect was exaggerated among diabetics with a similar number of oral symptoms such that the odds ratio increased from 4.5 (95% CI 3.6-5.7) to 8.8 (95% CI 6.8-11.5).

CONCLUSION: Oral health quality of life impacts an individual's perception of general health. Furthermore this impact is far greater on a diabetic patient's perception of his overall health condition. Given this observed strong effect among diabetics, provisions must be made to better address their oral health needs.

Source of Funding: HRSA Residency Training in Dental Public Health Grant (1D5GHP160760100)

Poster Number: 103

Serial/Abstract Number: 104

## **EFFECTIVENESS OF PERIODONTAL THERAPY ON INCIDENCE OF PRETERM BIRTHS: A META ANALYSIS**

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*University of Medicine and Dentistry of New Jersey, Newark, New Jersey, USA (1)*

OBJECTIVE: To determine during a high risk pregnancy the effectiveness of scaling and root planing on the reduction of incidence of preterm births.

METHODS: The inclusionary criteria was pregnant women,

## Abstracts for Poster & Student Presentations

periodontal diseases, scaling and root planing, preterm birth (<37 weeks of gestation), and meta analysis of a randomized clinical trial. The search strategy was in English between January 1, 1998-October 31, 2011. Electronic databases were Medline, EMBASE, and Cochrane Library. Key terms were periodontal diseases, pregnancy, preterm births, clinical trials, incidence, scaling and root planing, and meta analysis. Data abstraction was ascertained by two independent investigators. Methodological quality of the selected studies was assessed with the Jadad scale. Statistical analysis measured the effect size with the forest plot. Publication bias was determined by the funnel plot. Heterogeneity was assessed with Cochran's Q test and I-squared value.

**RESULTS:** Twelve clinical trials had 7,239 pregnant women. Scaling and root planing had no statistical significant impact on the incidence of preterm births. Cumulative effect size, odds ratio, for periodontal therapy was 0.921 (0.783-1.083) with a p-value of 0.317. Test of heterogeneity had a Q value of 32.805 with 11 df (Q) and p-value of 0.001. The I-squared value was 66.468.

**CONCLUSION:** Periodontal therapy did not reduce the incidence of preterm births among high risk pregnancies with periodontal disease.

Source of Funding: None

Poster Number: 104

Serial/Abstract Number: 17

### **MEDICALLY COMPLEX PATIENTS WITH END STAGE RENAL DISEASE TREATMENT PROTOCOL IN DENTAL SCHOOLS RELATED TO ANTIBIOTIC PROPHYLAXIS, ACCESS TO TREATMENT, AND TREATMENT RESTRICTIONS.**

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A.T. Still University-Arizona School of Dentistry & Oral Health, Mesa, AZ, USA (1)

**Objectives:** The number of patients with kidney failure who require renal dialysis is growing by 10-15% annually. These patients are predisposed for many dental conditions; however, the complexity in managing end stage renal disease (ESRD) patients deters many dentists from treating these patients. The aim of this project is to evaluate the pre-medication and post-operative care provided for these patients at U.S. dental schools. It is hypothesized that there is no protocol for dental treatment of ESRD patients. The authors hope to make recommendations for appropriate pre/post treatment management of ESRD patients.

**Methods:** All accredited U.S. dental schools were surveyed assessing the amount of care provided to special care patients and ESRD patients. The survey addressed the renal disease patient treatment protocol at each school and guidelines for implementing the protocol.

**Results:** The preliminary results indicate that no consistent protocol exists for the pre and post treatment management of ESRD patients. Among the U.S. dental schools surveyed, >70% of programs treat stage 1-5 chronic kidney disease patients. However, >50% of programs do not report an established renal patient treatment protocol. Multiple programs stated that AHA guidelines are used because there are no specific guidelines for premedication dosage for ESRD.

**Conclusion:** This clearly demonstrates the need for an established pre/post treatment protocol for ESRD patients. As the number of renal disease patients that are treated in an outpatient setting increases, it is essential for dental professionals to establish and follow guidelines for the treatment, management, and safety of renal disease patients.

Source of Funding: None

Poster Number: 105

Serial/Abstract Number: 70

### **THE INTENTIONS OF GRADUATING DENTAL STUDENTS TO WORK IN DHPSAs: A CONCEPTUAL FRAMEWORK**

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National Institute of Dental and Craniofacial Research, Bethesda, MD, USA (1)

**BACKGROUND:** Various initiatives have been proposed and implemented to supplement the United States (US) dental workforce in Dental Health Professional Shortage Areas (DHPSAs). Understanding the factors that contribute to a student's intention to work in underserved areas may help develop policy options to increase the dental health workforce.

**OBJECTIVE:** To develop a conceptual framework of determinants influencing US senior dental students' intention to work in DHPSAs by investigating student educational debt and other factors.

**METHODS:** Review of published literature was used to develop a conceptual framework describing the determinants for students' intent to work in DHPSAs. The American Dental Education Association's 2011 Survey of Dental School Seniors (n=4,152) was used to assess arms of the model and to validate the conceptual model using Chi-square tests in IBM®SPSS®19.

**RESULTS:** Mean (±SD) dental educational debt was \$167,790 (±\$107,634) and mean total debt was \$167,790 (± \$107,634). The intention to work in DHPSAs (Yes: 30.8%, Unsure: 37.9%, No: 27.4%) was associated with race (67.3% Blacks vs. 26.7% Whites, p<0.001), gender (36.1% Female vs. 28.4% Male, p<0.001), and perceived importance to serve vulnerable populations (40.7% <i>important</i> vs. 16.4% <i>neutral</i> vs. 10.1% <i>not important</i>, <0.001). The mean total debt did not differ significantly by race, gender, and opportunity to serve vulnerable populations. Preliminary analysis did not find a direct association between student debt and intent to work in DHPSAs.

**CONCLUSIONS:** The conceptual framework offers a preliminary understanding of factors that may predict practice behavior and inform national efforts to enhance the dental health workforce.

Source of Funding: None

Poster Number: 106

Serial/Abstract Number: 26

### **GEOGRAPHIC VARIATION IN PERCEIVED DENTIST BUSYNESS**

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University of Iowa, Iowa City, IA, USA (1)

**OBJECTIVES:** To describe demographic and practice characteristics associated with reported dentist busyness and identify counties with an under-supply of dentists as measured by the proportion of dentists reporting being "too busy".

**METHODS:** A survey of licensed dentists in Iowa in February 2011 evaluated factors related to practice workload. Perceived busyness was assessed, along with practice arrangement, workload, and demographic characteristics. Practice urbanicity was categorized based on county Rural-Urban Commuting Codes (RUCCs). Self-reported busyness was categorized as "too busy", "comfortable patient load", or "not busy enough". Chi-square tests were used to compare respondents categorized by busyness and practice urbanicity. ESRI ArcMap was used to create maps displaying busyness at the county level.

**RESULTS:** 720 of 1,139 general dentists returned surveys, for a response rate of 63%. Dentists reported working a mean of 38.2 hours/week (SD 9.2). Approximately 13% reported working <32 hours/week. There was no statistically significant difference in reported busyness by sex or practice arrangement. Dentists ≥55 years old and those in non-metro counties were more likely to report being "too busy".

## Abstracts for Poster & Student Presentations

Approximately 30% of dentists in non-metro counties reported being "too busy" compared to only 18% of dentists in metro counties.

**CONCLUSIONS:** Dentists practicing in non-metro areas of Iowa are more likely to be older and to feel either over-worked or too busy to treat all patients who requested care. Replacing these dentists as they approach retirement is even more important considering that the existing workforce already perceives itself as insufficient to treat local populations.

Source of Funding: NIH/NIDCR T32 grant DE014678 and HRSA grant T12HP14992

Poster Number: 107

Serial/Abstract Number: 94

### **MINNESOTA DENTAL HYGIENIST SUPPLY AND DENTAL WORKFORCE DEMAND**

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Minnesota Department of Health, St. Paul, MN, USA (1)

**OBJECTIVES:** To describe the dental workforce supply and demand in Minnesota with a specific focus on the dental hygiene employment market.

**METHODS:** Three research methods were used to establish the objectives. A mail survey was sent to a sample of 1,286 Minnesota dental clinics. Data describing the demand for all clinical dental staff was collected for each dental clinic in the sample. In-depth interviews were conducted with 10 dental hygiene educational program directors to determine future plans for class size and program plans. A mail survey of a sample of approximately 500 licensed dental hygienists was conducted to report the percentages of dental hygienists who self-report as being unemployed or underemployed.

**RESULTS:** Results will be reported by region of the state, the number of dental staff employed by type, and whether the dental clinic is recruiting at least one dentist, dental hygienist, or licensed dental assistant. Qualitative analyses of in-depth interviews will be discussed.

**CONCLUSIONS:** Response rates were higher than expected for this type of survey. This may indicate that this is an important topic for dental clinic owners.

Source of Funding: Health Resources and Services Administration T12HP14659

Poster Number: 108

Serial/Abstract Number: 23

### **USE OF TECHNOLOGY BY RURAL AND URBAN DENTISTS: A NEBRASKA PERSPECTIVE**

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University of Nebraska Medical Center, College of Dentistry, Lincoln, Nebraska, USA (1), University of Nebraska at Lincoln (UNL), Statistics Dept., Lincoln, Nebraska, USA (2)

**Abstract:** Rural populations have generally had fewer dentists, lower utilization of dental services, and higher rates of dental disease when compared to urban populations. Previous studies have indicated that the use of technology by dentists will increase productivity and decrease the future demand for additional providers. Approximately 20% of the U.S. population lives in rural areas and 14% of dentists practice in rural areas. The purpose of this study was to determine if rural dentists were in fact utilizing technology in their practice and if so, how did their use of technology compared to that of urban dentists.

**Objective:** The objective was to assess and compare the use of dental technology by rural and urban dentists.

**Methods:** The IRB approved questionnaire was sent to all Nebraska dentists via U.S. mail (n=1026). Quantitative and qualitative analysis was performed as well as odds ratio analyses.

**Results:** Most dentists (96%) utilize computers in their office. Digital radiographs were utilized by 34% of rural and 41% of urban

dentists. Approximately 65% of rural dentists had intra-oral cameras whereas 56% of urban dentists did. CAD/CAM's were in use in 20% of the rural and 15% of urban dentist's offices. Electronic prescription writing was practiced equally (38%) by both rural and urban dentists.

**Conclusion:** Except for digital radiographs, rural dentists in Nebraska are utilizing technology in their offices more so than urban dentists. E-prescription writing is equally utilized by rural and urban dentists.

Source of Funding: HRSA Grant #D85HP20046

Poster Number: 109

Serial/Abstract Number: 6

### **A MULTIDISCIPLINARY SYSTEMS APPROACH TO REDUCING DISEASE BURDEN IN THE HOMELESS POPULATION; AN ACADEMIC, PUBLIC HEALTH AND PRIVATE PRACTICE**

*Sharon Younkin (1) PhD; Lisa Bell (2) RDH MPH*  
University of Wisconsin-Madison, Madison, WI, USA (1), Wisconsin Division of Public Health, Madison, WI, USA (2)

**Objective:** To reduce the disease burden in Dane County WI homeless and enhance the oral health knowledge base of future primary care providers utilizing a multidisciplinary academic, public, and private partnership.

**Methods:** The Madison Dental Initiative, a not for profit volunteer supported organization of dental health professionals established a comprehensive dental clinic on site at the Salvation Army Homeless Shelter in Madison, WI. University of Wisconsin School of Medicine and Public Health students help to coordinate the clinic. Student coordinators are volunteers in the MEDiC free clinic program, a service learning opportunity sponsored by the medical school. Students gain an understanding of dental cariology, risk assessment and interventions, and the important connections between physical and oral health. Volunteer dentists also deliver oral health lectures to all medical students.

**Results:** The clinic has garnered community recognition and support allowing for expansion from providing services in a filing room to a fully operational 4 chair dental clinic. MEDiC students have a formal oral health curriculum. In order to advance the service learning component of the clinic, in Spring 2012 the clinic will become an externship site for Marquette University School of Dentistry students.

**Conclusions:** Anecdotally, based on the nearly 600 patients seen in the clinic we can speculate that there is improvement in oral health status of the homeless population. Medical students report that this unique learning opportunity has changed the way they view the connection between oral and physical health, and is one of their most valuable educational experiences.

Source of Funding: The project is funded through state grants, local and state foundations and individuals.

Poster Number: 110

Serial/Abstract Number: 45

### **MARQUETTE UNIVERSITY SCHOOL OF DENTISTRY RURAL ORAL HEALTH FELLOWSHIP PROGRAM- AN EDUCATIONAL INTERVENTION FOR DENTAL WORKFORCE DISTRIBUTION**

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Marquette University School of Dentistry, Milwaukee, Wisconsin, USA (1)

**Objective:** To develop a training program for new dental school graduates who are interested in practicing in rural, underserved areas that will prepare them for the challenges encountered as an isolated practitioner.

**Method:** The Marquette University School of Dentistry (MUSoD) created a Rural Oral Health Fellowship Program in 2007 as part of a targeted contribution from Delta Dental of Wisconsin. The program



## Abstracts for Poster & Student Presentations

was developed to continue the clinical education of recent dental school graduates by providing clinical experiences in more rural areas of the state of Wisconsin. This program exposes fellows to problems associated with access to oral health care in rural communities. In partnership with the Chippewa Valley Technical College in Eau Claire, Wisconsin, the program was developed to teach advanced dental techniques through a comprehensive care curriculum to the fellowship participants. There is a seminar component that provides a focused discussion on clinically relevant topics and dental public health. All of the patients served were Medicaid recipients, or had incomes within 200% of the poverty level according to federal guidelines.

**Results:** Seven of the eight fellowship participants remain in Wisconsin providing care for rural, and rural underserved populations. The fellows treated 6,707 unique patients in 10,673 total patient visits during a four year period. All of the fellows reported an ongoing development of professional attitudes and service for the underserved.

**Conclusions:** The Marquette University School of Dentistry Rural Oral Health Fellowship Program has expanded the dental workforce by creating practitioners prepared for the challenge of rural practice.

**Source of Funding:** Delta Dental of Wisconsin

Poster Number: 111

Serial/Abstract Number: 74

### **DENTAL THERAPY EMPLOYMENT: SAFETY-NET PERSPECTIVES**

*Karl Self (1) DDS, MBA; David Born (1) Ph.D.*

University of Minnesota, Minneapolis, MN, USA (1)

**OBJECTIVE:** To assess dental safety net clinic directors' prospective views on dental therapist employment-related issues.

**METHODS:** An electronic survey form was distributed to 90 clinic directors with a response rate of 36%. Respondents were equally among from federally-funded, non-profit, and private practice clinics and from urban and rural locations.

**RESULTS:** While low reimbursement rates and a lack of dentists willing to serve public program patients were seen as dominant factors in access to care issues, 50% of respondents felt dental therapists would result in more dentists providing care to this population. Clinic directors were split on whether their dentists would be comfortable delegating to therapists and on the quality of their work, had little doubt that the public would accept therapists as providers, were supportive of therapists, and anticipated hiring them in the future. Barriers to hiring included cost-effectiveness and limited operatories. Cost-effective compensation was estimated to be in the \$20-40 range.

**CONCLUSIONS:** This study, conducted prior to deployment of dental therapy graduates, provides the first insight into the marketplace for therapists in Minnesota. Therapists were created to address access to care issues. Safety net clinics anticipate them having a positive impact. Therapists are generally viewed favorably, but cautiously. Cost effectiveness is linked to reimbursement, and clinic directors have concerns about how practice finances will be impacted by these new providers. Much remains to be learned about how quickly and smoothly they can be integrated into ongoing practice operations.

**Source of Funding:** School of Dentistry, University of Minnesota

Poster Number: 112

Serial/Abstract Number: 25

### **A REVIEW OF THE GLOBAL LITERATURE ON DENTAL THERAPISTS**

*Kavita Mathu-Muju (1) DMD, MPH; David Nash (2) DMD, MS, Ed.D.; Jay Friedman (3) DDS, MPH*

University of British Columbia, Vancouver, BC, Canada (1), University of Kentucky, Lexington, KY, USA (2), Dental Public Health Consultant, Los Angeles, CA, USA (3)

**Objectives:** To document the work of dental therapists with regard to history, education/training, legislation/regulation, scope of practice, practice settings, supervision, quality and improvement of access to care in countries which utilize this dental auxiliary.

**Methods:** Major electronic data bases were searched including, among others: Pub Med, Medline, and the Cochrane Library. Google Scholar and the Google search engine were also utilized. Key words searched were "dental nurse," "school dental nurse," "dental therapist," "school dental service," "school dental therapist," "school-based dental care," "dental auxiliaries," and "dental workforce." Knowledgeable consultants were retained in countries that were known to utilize dental therapists extensively. References found in identified literature were searched to obtain additional documents. A special attempt was made to identify "gray literature," such as government and NGO reports. Websites of professional dental organizations and government regulatory bodies were also searched.

**Results:** Over 800 documents were identified from over 30 of the 51 countries known to utilize therapists. The most significant documents were abstracted and prepared as a monograph for circulation. While the utilization of therapists began in New Zealand as a school-based approach to caring for children, as the movement has spread it has been adapted to the unique circumstances of a country.

**Conclusions:** There is documentation that therapists provide safe, effective, quality care within their scope of practice, with improved oral health outcomes. Some countries are combining the training and scope of practice of therapists and hygienists.

**Source of Funding:** This research was supported through a contract to the University of Kentucky from the Educational Development Center in Boston, with funding from the W. K. Kellogg Foundation.

Poster Number: 113

Serial/Abstract Number: 118

### **ADVANCED DENTAL THERAPY AND DENTAL HYGIENE THE MNSCU MODEL**

*Suzanne Beatty (1) DDS; Colleen Brickle (2) RDH, EdD; Jayne Cernohous (1) DDS*

Metropolitan State University, St. Paul, MN, USA (1), Normandale Community College, Bloomington, MN, USA (2)

**OBJECTIVE:** To address difficulty accessing oral healthcare for the underserved in Minnesota, legislation was enacted to authorize development of the dental therapist and advanced dental therapist.

**METHODS:** Normandale Community College and Metropolitan State University collaborated to develop the Advanced Dental Therapy program where licensed dental hygienists add components of restorative dentistry and oral surgery to their prevention-based scope of practice. The practitioner utilizes risk assessment, evaluation, triage, treatment and referral protocols to address three causes of oral disease, caries, periodontal disease and oral pathology.

**RESULTS:** Minnesota's first class of Advanced Dental Practitioners graduated in 2011. Their education consisted of theory, laboratory and clinical courses on campus and at a variety of external locations. As the advanced dental therapy students gained professional experience, many Minnesotans received needed oral healthcare.

**CONCLUSIONS:** Minnesota developed a unique midlevel dental professional to address the oral health needs of the those struggling to access dental care. Metropolitan State University graduates have entered the workforce to continue caring for the underserved in safety net clinics in both rural and urban locations.

**Source of Funding:** None

Poster Number: 114

Serial/Abstract Number: 107

**DENTAL STUDENT JOB PLACEMENT LOCATION RELATIVE TO STATE/AREA OF ORIGIN**

*William Lobb (1) DDS,MS,MPH; Frederick Sutkiewicz (1) PhD*

Marquette University, Milwaukee, Wisconsin, USA (1)

**OBJECTIVE:** To examine the job placement location of dental students relative to their state and area of origin.

**METHOD:** The practice location of students from graduating classes 2009-2011 who were Wisconsin (WI) residents at time of admission to dental school at Marquette University School of Dentistry (MUSoD) were identified. A Wisconsin Dental Association (WDA) region of origination and WDA region of practice location was determined for all students from graduating classes 2009-2011.

**RESULTS:** The majority (70%) of MUSoD students who were WI residents at time of admission stayed in the state of Wisconsin to practice dentistry.

Students were more likely to migrate to a different WDA region to practice dentistry than to return to their WDA region of origin. Every WDA region had less than half of the students of origin return to their region (Region 1: 47% return rate; Region 2: 31% return rate; Region 3: 14% return rate; Region 4: 17% return rate; Region 5: 40% return rate).

The distribution of students across the WDA regions was fairly balanced (Region 1: 17%; Region 2: 11%; Region 3: 20%; Region 4: 9%; Region 5: 13%).

**CONCLUSIONS:** While the majority of MUSoD students who were WI residents at time of admission remain in the state of Wisconsin to practice dentistry, they were likely to migrate to a different WDA region to practice dentistry than they were to return to their WDA region of origin. The dispersion of students to practice locations within the state of Wisconsin was fairly well balanced.

Source of Funding: None

# AAPHD Student Merit Awards Program

## ***Leverett Graduate Student Merit Award for Outstanding Achievement in Dental Public Health***

### **First Place**

Vinodh Bhoopathi, BDS, MPH, DScD  
Boston University Goldman School of Dental Medicine  
Title: High costs and fewer healthy days gained in using an oral cancer adjunct compared to conventional oral examination  
Sponsor: Dr. Ana Karina Mascarenhas

### **Second Place**

Ismail Jolalso, BDS, MPH  
NYS Dental Public Health Residency Program  
Title: Does Fluoride In Drinking Water Delay Tooth Eruption?  
Sponsor: Dr. Jayanth Kumar

### **Third Place**

Uvoh Onoriobe, BDS, MPH  
University of North Carolina at Chapel Hill  
Title: Impacts of Enamel Fluorosis and Dental Caries on the Oral Health-Related Quality of Life of Children and Families in North Carolina  
Sponsor: Dr. R Gary Rozier

### **Honorable Mention**

Jacqueline Hom, DMD  
University of North Carolina at Chapel Hill  
Title: Oral Health Literacy and Knowledge Among First-time Pregnant Women  
Sponsor: Dr. Jessica Y. Lee

Mohamed Bamashmous, BDS, DScD  
Boston University Goldman School of Dental Medicine  
Title: School Lunch Program Status a Marker for High Risk Caries?  
Sponsor: Dr. Ana Karina Mascarenhas

## ***Predoctoral Dental Student Merit Award for Outstanding Achievement in Community Dentistry***

### **First Place**

Tesha Grangaard, Noor Khaki & Megan Willis  
Oregon Health & Science University School of Dentistry  
Title: Comparative Study of Oral Health of Rural Children in the Khumbu Valley, Nepal  
Sponsor: Dr. Eli Schwarz

### **Second Place**

Colleen Greene  
Harvard School of Dental Medicine  
Title: Enhancing the Dental Safety Net  
Sponsor: Dr. Mary Tavares

### **Third Place**

Jennifer Logigian  
A.T. Still University, Arizona School of Dentistry & Oral Health  
Title: Dental Public Health Education in the US And UK: A Comparative Analysis of the Ways in Which Dental Public Health is Being Incorporated into The Curriculum at Two Dental Schools  
Sponsor: Dr. Jack Dillenberg

### **Honorable Mention**

Patricia McClory  
Harvard School of Dental Medicine  
Title: Waiting for Oral Health: Oral Health Education in the Setting of Pediatric Primary Care Waiting Areas  
Sponsor: Dr. Elsbeth Kalenderian

Elif Aksoylu, A.T. Still University, Arizona School of Dentistry & Oral Health  
Title: Pan American Health Organization Summer 2011 Internship: Integrated Oral Disease Prevention and Management Modules  
Sponsor: Dr. Jack Dillenberg

## ***Dental Hygiene Student Merit Award For Outstanding Achievement in Community Dentistry***

### **First Place**

Jennifer Cullen  
University of Michigan Dental Hygiene Program  
Title: Oral Health Promotion Program for Alzheimer's Care Facility  
Sponsor: Professor Anne Gwozdek

### **Second Place**

Ashley Copus & Julia Johnson,  
University of Michigan Dental Hygiene Program  
Title: Diabetes and Periodontal Disease Education at the Federal Correctional Institution in Milan, MI  
Sponsor: Anne Gwozdek

### **Third Place**

Kimberly Newman  
Northern Arizona University  
Title: Public Health Project: Prevention and Education of Early Childhood Caries Using Teledentistry  
Sponsor: Maxine Janis

### **Honorable Mention**

Amanda Kimball & Alison Van Vleck  
Old Dominion University School of Dental Hygiene  
Title: Fighting Oral Disease in Six Weeks  
Sponsor: Sharon C. Stull

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## **AAPHD Foundation Grant Award 2011 to be presented on Monday, April 30, 2012**

### **MINNESOTA DENTISTS' ATTITUDES TOWARD EXPANDING ROLES OF NON-DENTIST PROVIDERS**

Christine Blue BSDH MS (1); Todd Rockwood PhD (2)

School of Dentistry, University of Minnesota (1), School of Public Health, University of Minnesota (2)

**Objectives:** The purpose of this study was to 1) quantify the current utilization of dental hygienists and dental assistants with expanded functions; 2) determine the experiences of dentists who utilize expanded function hygienists and assistants by querying perceptions of quality and practice efficiency; 3) quantify Minnesota dentists' attitudes toward the utilization of dental therapists.

**Methods:** This study used the Tailored Design Method for mixed mode studies. Of the 982 randomly sampled dentists, 30% responded (n=293). An email invitation (with embedded URL) was sent to these individuals 5 days after a pre-notice letter was mailed. Two additional reminder emails were sent, one 17 days after the initial mailing and another at 25 days. Thirty-five days after the initial mailing, a paper survey was sent to dentists without email addresses and to the dentists who had not responded to the survey sent electronically. A second replacement survey was sent to non-respondents 49 days after the initial mailing.

**Results:** Dentists believe that current allied providers with expanded functions have a positive impact on dentistry (66%), yet underutilize these providers in practice. At this point in time, 81% of dentists in Minnesota do not support dental therapy, do not feel it will impact access to care (72%) and cite space, patient acceptance and cost-effectiveness as major barriers to hiring a dental therapist.

**Conclusion:** Scopes of practice for dental hygienists and assistants has not translated to the maximal delegation allowed by law. This finding may provide insight into dentists' utilization of newer non-dentist providers models.

**Source of Funding:** This study was funded by the American Association of Public Health Dentistry.