

Abstracts

Abstracts 1-15 are oral presentations. Abstracts 16-47 and the student abstracts numbered 85-99 are presented on Monday, April 11, 2011 during the Poster Session. Abstracts 48-84 are presented on Tuesday, April 12, 2011 during the Poster Session. Please note: If presenters have withdrawn prior to printing, their abstract will not be listed. If presenter's intent to participate was not received prior to printing, it is possible that some abstracts listed will not be presented.

Abstract: #1

STATEWIDE TRAINING OF ORAL HEALTHCARE WORKERS TO PROVIDE EFFECTIVE ORAL CARE FOR INDIVIDUALS WITH INTELLECTUAL AND DEVELOPMENTAL DISABILITIES

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Objective: To develop a training opportunity that community health centers can use to prepare the oral healthcare teams to successfully treat these special needs patients through didactic and patient care experiences using a variety of behavior guidance techniques.

Methods: As part of a System Transformation Grant award from the U.S. Centers for Medicaid and Medicare Services, the Missouri Department of Mental Health, Division of Developmental Disabilities decided to focus on oral health. A state-wide partnership was developed to bring improved access to care for individuals with intellectual and developmental disabilities. Coordinated through the Missouri Oral Health Network, training opportunities to increase practitioners' confidence in treating special needs individuals were developed. Training involved didactic and patient treatment sessions at various locations throughout the state. Caregiver training was also part of the program.

Results: Dentists, dental hygienists and dental assistants worked as teams to provide needed treatment while learning to appreciate the value of caring for this underserved group of patients. Numerous treatment procedures were rendered and the clinician comments were highly favorable. Videos taken of the patient care sessions illustrated the outcomes of clinical training.

Conclusions: This program identified potential partnership opportunities to enhance oral health access to care for an underserved population. In addition, dental personnel learned the importance of developing a leadership role in caring for people with intellectual and developmental disabilities.

Funding: U.S. Centers for Medicaid and Medicare Services, and the Missouri Department of Mental Health, Division of Developmental Disabilities

Abstract: #2

FEASIBILITY OF ORAL CANCER SCREENING AMONG ELDERLY NURSING HOME RESIDENTS

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Objectives. There is lack of evidence to support population screening of asymptomatic adults for oral cancer. While some research has been conducted using visual tactile examination (VTE) screenings, data regarding the nature and severity of suspicious lesions are lacking. When suspicious lesions are found early, the oral cancer survival rate is twice that of the late-stage lesions. The purpose of our study is to assess the feasibility of VTEs among elders at their residences and appropriate follow-up arrangements including biopsies. Concurrently,

we will be examining high-risk health behaviors associated with oral cancer.

Method. The Oral Cancer Screening Study (OCS) core team and an NIDCR-CS Oversight Committee developed the manual of procedures, which includes provider training (VTE and Oral Cancer Risk Questionnaire) and calibration protocols, and supervisory standards. From nearly 500 nursing homes accepting Medicare and/or MassHealth we randomly chose 72 sites in Massachusetts.

Results. To date, we have contacted 40 sites of which 12% were not eligible, 40% have not responded, and 48% are being screened. We have determined that an effective and self-sustained OCS site visit team includes a Dentist (Punch Biopsy Expertise), 2-3 RDHs and a Site Supervisor using web-based data collection laptops with mobile WiFi. Majority of the eligible residents have consented to study participation. Ten percent of the participants have suspicious lesions of which 4% have been biopsied.

Conclusions. Early experience and data support the feasibility of oral cancer screening in the long-term care facilities. Related implementation fidelity and sustainability issues need further evaluation.

Funding: NIDCR (RCDE020759 Kinnunen)

Abstract: #3

TRENDS AND CHARACTERISTICS IN NON-TRAUMATIC DENTAL CONDITIONS VISITS TO EMERGENCY DEPARTMENTS IN THE UNITED STATES

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Objective: We examined trends and patient characteristics in non-traumatic dental conditions (NTDC) visits to emergency departments (ED) in the United States, and compared them to other ED visit types, specifically non-dental ambulatory care sensitive conditions (non-dental ACSCs) and non-ambulatory care sensitive conditions (non-ACSCs).

Methods: We analyzed data from the National Hospital Ambulatory Medical Care Survey (NHAMCS) for 1997 to 2007. We performed descriptive statistics and used a multivariate multinomial logistic regression to examine the odds of an ED visit belonging to one of the three considered visit types. All analyses were adjusted for the survey design.

Result: NTDC visits accounted for 0.7% of all ED visits with a 3% annual rate of increase (from 0.6% in 1997 to 0.9% in 2007, $p < 0.0001$ for trend). Self-pay patients (30.3%) and Medicaid enrollees (26.2%) were over-represented among NTDC visits compared to non-dental ACSC and non-ACSC visits ($p < 0.0001$). Females consistently accounted for over 50% of types of ED visits examined. Compared to non-ACSC and non-dental ACSC visits, patients aged 19-52 years old had 2-3 times the odds of an NTDC visit. Compared to non-ACSC and non dental ACSC

visits, Hispanics had significantly lower odds of an NDTC visit, but Blacks had higher odds when compared to non-ACSC visits only.

Conclusion: Nationally, NDTC visits have increased substantially over time and adults covered by Medicaid and self-pay patients had significantly higher odds of NDTC visits. Different intervention strategies are required to reduce the different ED visit types given the population mix that make the ED visits.

Funding: The project was supported by grant #1R15 DE021196-01 from the National Institute of Dental & Craniofacial Research part of the National Institutes of Health.

Abstract: #4

EMERGENCY DEPARTMENT VISITS FOR NON-TRAUMATIC DENTAL CONDITIONS, NEW HAMPSHIRE, 2001-2008

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Objectives: Hospital Emergency Departments (ED) provide a variety of medical care, some of which is for non-urgent, chronic illnesses including dental conditions. Studies suggest that individuals with limited access to primary care may use the ED for the treatment of conditions more appropriately managed in the primary care setting. To assess ED use for non-traumatic dental care in New Hampshire (NH), we analyzed selected diagnostic codes for ED visits from 2001 through 2007, and provisional data for 2008.

Methods: We calculated age-specific rates and age-adjusted rates per 10,000 population with 95% confidence intervals by year, gender, and county. To determine the trend over time, we estimated Spearman correlation coefficients and *p*-values.

Results: The number of ED visits for non-traumatic dental conditions increased significantly from 11,067 (age-adjusted rate 89.5/10,000) in 2001 to 16,238 visits (129.3/10,000) in 2007 (*p* = 0.007). There were persistent differences by age, county of residence and payor. Those 15-44 years old and self-paying individuals were the most frequent ED dental care users. Coos and Belknap counties experienced the most marked increases.

Conclusions: ED dental visits represent a failure of timely primary dental care and are increasing in NH. Future studies need to determine the specific barriers to timely and effective treatment in dental offices.

Funding: None

Abstract: #5

ATTITUDE, CONFIDENCE AND KNOWLEDGE OF GRADUATE DENTAL STUDENTS IN BIOSTATISTICS AND EVALUATION OF A SURVEY INSTRUMENT

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Objectives: To assess attitude, confidence and knowledge of biostatistics methods of a group of post-doctoral dental students enrolled in a biostatistics course. Also, to evaluate agreement between biostatistical methods used in the survey instrument and a summarization of commonly used statistical methods selected from dental literature articles.

Methods: Group administration of a validated survey of a covenant sample of post-doctoral Boston University School of Dental Medicine students. Forty-three students enrolled in a Biostatistics

course participated (100% response rate). For comparison purposes of common published statistical methods, six journals were selected: Journal of American Dental Association, American Journal of Public Health, Journal of Dental Research, Journal of Dental Education, Journal of Public Health Dentistry and Community Dentistry and Oral Epidemiology. Five-hundred and forty published articles were reviewed. The statistical methods reported in the articles were counted and categorized. Univariate, bivariate and multivariate analyses were performed.

Results: Majority of the students had a positive attitude toward biostatistics. Yet, they reported little self-confidence in interpreting literature results. The mean knowledge score was 6.7 out of 20. The univariate analysis indicated that students with previous biostatistical training, with higher self-perceived confidence in biostatistics and knowledge in excel programming had significantly higher scores in knowledge questions. The biostatistical concepts incorporated in the used questionnaire were commonly used in the selected dental literature except for Cox-proportional hazard and Kaplan-Meier analysis.

Conclusion: The study showed less than adequate understanding of commonly used biostatistical methods. This would lead to partial ability to interpret literature results correctly.

Funding: None

Abstract: #6

CLINICAL FINDINGS AND TREATMENT NEEDS FROM THE 2008 DOD RECRUIT ORAL HEALTH SURVEY

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Objectives: Determine the oral health status and treatment needs of Department of Defense (DoD) Recruits who entered military service in 2008.

Methods: Data from in-processing dental examinations, including radiographs, were electronically collected from 5,835 recruits who were randomly selected from over 300,000 recruits at all nine military recruit training centers by calibrated dental examiners. Each participating recruit also completed a paper survey inquiring about their dental utilization, perceived need for dental care, nutrition habits, and tobacco use prior to entering the military. These data were later linked to the recruits' respective clinical data during the analysis of this stratified, cross-sectional study.

Results: Over 50 percent (52.4%) of DoD Recruits were classified as not worldwide deployable (Class 3). Among the DoD Recruits, the top three dental treatment needs were oral prophylaxis (81%), operative care (72%), and dental extractions (55%). Approximately 41 percent received dental care within the last 12 months prior to reporting to their respective training site and nearly half (46.6%) reported they had some type of dental insurance before reporting to the recruit training centers. From the survey, the percentage of DoD Recruits who felt they needed dental care was 61 percent, while 30 percent responded that they needed dental care "right away". The most common reason for those who felt they needed dental care, but did not receive dental care was that it was too expensive.

Conclusions: Regardless of previously received dental care, a significant number of DoD Recruits report for initial training with oral disease that requires treatment.

Funding: TRICARE Management Activity

Abstract: #7

THE STATUS OF ORAL DISEASE AMONG MASSACHUSETTS SENIORS: A GREAT UNMET NEED

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Objective: Describe the findings of Massachusetts' statewide oral health assessment of seniors.

Background: Oral health is not just essential for general health, but quality of life.

Methods: In 2009, the Massachusetts Department of Public Health conducted a statewide oral health assessment of seniors in long-term care facilities (LTCF) and state subsidized meal programs (SSMP) to determine their oral health status.

Results: Of the seniors in the sample (n=1,046), 32% were edentulous (no natural teeth) and 68% were dentate (having natural teeth). Of those dentate seniors (65%) in LTCF, 59% had untreated decay with 34% having major to urgent treatment needs. Of the dentate seniors (81%) at SSMP, 35% had untreated decay. Of all seniors at SSMP, 20% reported not visiting a dentist in at least five years. Discussion: Throughout their lifespan, seniors have had the benefit of an available oral care system, as well as water fluoridation and fluoride toothpaste to prevent tooth loss and decay. Today that is changing with seniors making up an increasingly larger portion of the population who are experiencing disparities in oral/dental diseases due to co-morbidities, medication use, economic status and barriers to accessing dental care.

Conclusion: Public health polices supporting seniors need to be revised to mandate comprehensive dental care as part of Medicare/Medicaid, the promotion of oral health programs in non-traditional settings, and the inclusion of oral health indicators as part of LTCF licensure to eliminate oral health disparities among this at-risk population.

Funding: Funding for the 2009 statewide oral health assessment of two high-risk senior populations and the development, printing and mailing of the subsequent report was made possible with funds from the Commonwealth of Massachusetts and HRSA's Grants to States to Support Oral Health Workforce Activities, (T12HP07701).

Abstract: #8

THE EFFECTIVENESS OF SCHOOL-COMMUNITY PARTNERSHIPS WITH MULTIPLE AGENCY COLLABORATION IN WEST VIRGINIA: SUCCESSES, CHALLENGES, WEB BASED MODEL OF CDC/ASTDD TOOL EPI-INFO.

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Objectives: 1. Understand the importance of community and school collaboration when addressing the oral health needs of school aged children. 2. Leave with the ability to return to their area and replicate models as discussed, including surveillance and data collection using a web based model of the CDC EPI-Info tool. 3. Gain insight for funding and non-traditional partnerships for improving access and establishment to a dental home, Identify partners in their areas. 4. Learn details of the WV School-Community Oral Health Program and data collected thus far.

Method: The Appalachian Regional Commission and the Claude Worthington Benedum Foundation pooled funds together to support the WV School and Community Partnerships for Children's Oral Health

Program. This program is managed by the Marshall University SOM, School Health and Technical Assistance Center. The goal of the project was to mobilize community resources to create sustainable preventative programs within the school setting, all while focusing on obtaining a dental home for all students.

Results: All program have successfully accomplished The WV School-Community Program Objectives are: 1) Eliminate health barriers by assuring early access to high quality preventive services 2) Sealant programs 3) Establishment of dental home 5) Collaboration among community partners and elementary schools

Conclusions: The Session will provide an overview of the unique collaboration, successes of the projects and grantees that resulted from the collaboration, a description of the history/genesis of the project, required data collection/surveillance, identifying non-traditional partners and conclude with description of how the web based model of the CDC/ASTDD Epi-Info was made into a live web based data entry program.

Funding: Project funded by the Appalachian Regional Commission and the Claude Worthington Benedum Foundation

Abstract: #9

WEST VIRGINIA'S ORAL HEALTH; WORST IN THE NATION? MAYBE.. BUT NOT FOR LONG

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Objectives: The West Virginia Oral Health Advisory and collaborating partners were charged by the WV Legislative Health Committee to improve the oral health status of West Virginia Residents. The objectives of the group; develop collaboration among key stakeholders and address oral health disparities among WV citizens. This presentation will give a comprehensive overview of all the efforts and advancements made when a true collaboration of efforts is made.

Method: In 2008, the WVDHHR-OMCFH Oral Health Program assembled an OHAB comprised of key stakeholders and experts from around the state. This group was challenged to collaborate and support efforts aimed to improve the overall oral health of West Virginia's population. This attention on oral health provided much needed momentum to make great advancement and change in the oral health environment of the state.

Results: In the past five years through efforts orchestrated by the OHAB and key stakeholders, West Virginia has accomplished the following; 1. Produced the first ever WV Oral Health Plan; 2. For the first time ever a Children's Oral Health Surveillance. 3. The Dental Practice Act was opened and restructured to improve oral health access; 4. Establishment of Multiple Oral Health Programs and Projects; 5. Over 5 million public and private dollars put into oral health efforts; 6. Medicaid increased dental services reimbursement.

Conclusions: A collaborative approach from public and private agencies results in massive advancements and efforts to begin; addressing barriers to oral health services, tackle oral health issues, and improve awareness of dental health needs in all of West Virginia's population.

Funding: None

Abstract: #10

SMILES FOR LIFE - A NATIONAL ORAL HEALTH CURRICULUM FOR MEDICAL PROFESSIONALS

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Objectives: By the end of this session participants will:

1. Recognize the importance of oral health education for medical professionals.
2. Describe the content of the Smiles of Life (SFL) 3rd Edition materials.
3. Provide feedback on the SFL materials.
4. Identify strategies for integrating the SFL curriculum into health professional programs/practices you are affiliated with.

Methods: Oral health significantly impacts overall health. However, not all medical schools/residencies have an oral health curriculum and there are few CME offerings for clinicians. To address this need and assist with Residency and Medical School education requirements, the Society of Teachers in Family Medicine's (STFM) Group on Oral Health created the award winning SFL curriculum. It includes interactive online courses, downloadable PowerPoint modules, videos, test questions, PDA applications and patient education materials. It addresses oral-systemic health, infant and adult oral health, prenatal oral health, dental emergencies, fluoride varnish and the oral examination. All materials are available free at www.smilesforlifeoralhealth.org.

Results: This dynamic oral health curriculum for medical professionals is being used in over 65% of family medicine residencies and 45% of medical schools are aware of the curriculum with 17.5% of those using it. SFL is the basis for the new National Inter-professional Oral Health Initiative.

Conclusions: This comprehensive oral health curriculum is truly a national inter-professional tool; it is easy to use for teaching and has many patient resources. This presentation will highlight key elements of curricular materials. Participants will discuss implementation strategies in their own settings.

Funding: DentaQuest Foundation

Abstract: #11

A MORE PRACTICAL APPROACH TO FACILITATING INTEGRATION OF ORAL HEALTH CARE INTO PRIMARY HEALTH CARE SERVICES IN THE REGION OF AMERICAS

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Objectives: 1) To "integrate oral health care into existing primary care services, as a critical point for early disease diagnosis and prevention;" PAHO- Oral Health Strategy and Plan of Action (2005-2015)-CD47/14. 2) To develop a practical oral health promotion and education program within the human rights framework. 3) To propose the implementation of fluoride varnish application within the current WHO's vaccine schedule.

Methods: The PAHO's Oral Health Program is developing the Oral Health Module (OHM) abide by the Integrated Management of Childhood Illness (IMCI) framework which includes both preventive and curative elements. Initially, three modules will be developed targeting risk age populations: 0-5 years old, 6-12 years, and adolescents. The OHM would be used as a triage and decision tree tool for health care providers and lay health workers in communities where access to quality dental care is limited. The OHM would provide guidelines on urgent referral; prevention, parental counseling, and

treatment of common orofacial conditions at the community level. The OHM content and design will be tested by focus groups in two LAC countries in 2011. The OHM will be introduced to the community by using the train-the-trainer approach. The effectiveness of the OHM will be tested after 1, 2 years of its release.

Results: The successful of this strategy is back it up for year of experience and evaluation of IMCI strategy. The IMCI strategy has been shown to improve care for ill children in outpatient settings in developing countries.

Funding: Pan American Health Organization - Oral Health Program

Abstract: #12

THE PROPOSED ADA CARIES CLASSIFICATION SYSTEM DEVELOPED BY CARIES STAKEHOLDER CONFERENCE

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The 2001 NIH Consensus Development Conference statement on the Diagnosis and Management of Dental Caries Throughout Life stated that "the identification and clinical staging of the presence, activity and severity of dental caries is of paramount importance in the deployment of treatment strategies that employ increasingly important nonsurgical modalities such as fluoride, antimicrobials, sealants and no treatment."

Objective: The objective of this project was: 1) to develop a clinically relevant Caries Classification System (CCS) to more effectively document, monitor and manage Caries as a disease; and 2) to develop consensus across the profession for adoption as an international CCS. An ideal system should provide the clinician with the capability to document and communicate specific information relating to morphology (site), severity (disease stage), and ultimately activity, along the full continuum of the extent of the disease process.

Method: A two-day, multi-stakeholder, international conference was held in 2008 at ADA Headquarters to consider the need for and clinical practicality for a new dynamic system to better document and monitor the disease process in patients, with the goal of improved patient outcomes. There was overwhelming agreement for a clinically practical and relevant model approved by the stakeholders and subsequently pilot tested in a Practice Based Research Network (PEARL PBRN).

Results of pilot-testing and stakeholder feedback has been very encouraging and will be discussed.

Conclusion: A practice-friendly, clinically relevant model Caries Classification System has been developed and will be presented for consideration for adoption and implementation by the ADA in 2011.

Funding: None

Abstract: #13

CONTRASTING COVERAGE OF ORAL HEALTH AND NUTRITION IN REGULATIONS FOR CHILD CARE CENTERS AMONG US STATES AND WASHINGTON DC

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Objectives: To contrast US state/DC child care center regulations on oral health (OH) and nutrition topics related to early childhood caries (ECC).

Methods: Child care center regulations for 50 states and DC, as of April 2010, were audited for 8 OH and 11 nutrition topics. The topics were based on recommended standards from "Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Out-of-Home Child Care Programs, 2nd Ed. (2002)." Several methods assessed contrasts regarding OH and nutrition. *Intensity* was derived from adding the covered percentages for OH and Nutrition standards. *Similarity* was derived by subtracting the percentage of Nutrition standards for each state from the percentage of OH standards. The ratio of meeting the standards was OH coverage percentage/Nutrition coverage percentage. Pearson Correlation Coefficient was calculated between percentages of coverage of OH and Nutrition.

Results: The average coverage for OH was 32.6% (7 states had zero OH regulations) whereas the average for Nutrition was 53.5%. The average *Intensity* score was 86.1% (SD=33.6) and *Similarity* averaged at -20.9% (SD=27.4). The majority (41 states/DC) had better Nutrition coverage than OH. The average ratio of OH versus Nutrition coverage was 0.74 (SD=0.66). OH and Nutrition coverage appeared independent (0.2025, p=0.15).

Conclusions: While generally neither these OH nor nutrition topics are strongly covered, most states and DC show better coverage of nutrition than oral health regulations that could impact rates of dental caries for children attending child care centers. This potential point of intervention for ECC prevention merits further focus.

Funding: None

Abstract: #14

EVALUATION OF COLORADO'S CAVITY FREE AT THREE PROGRAM—A PREVENTIVE ORAL HEALTH TRAINING

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Background: Colorado's Cavity Free at Three (CF3) program trains medical, dental, and public health providers on preventive dental care (caries risk assessment, screening, fluoride varnish (FV) application, anticipatory guidance (AG), caregiver goal setting and referral to children 0-36 months).

Objectives: To evaluate CF3's first year by measuring the trainee confidence in, adoption of, and perceived barriers to the provision of services.

Methods: Retrospective cohort study. We conducted an online survey of CF3 trainees 12 months after their training.

Results: We surveyed 118 trainees (70% response rate) who reported they were medical providers (24%), dental providers (16%), public health nurses (17%), RNs/medical assistants (21%), or other (22%). *Prior* to the training, dental providers were more confident than non-dental providers in examining teeth, demonstrating brushing, assessing caries risk, applying FV, providing AG and caregiver goal setting (all >0.005). *After* training, non-dental providers were equally confident in all areas (p=ns) except FV application (p=0.01). Of those trainees in a position to provide these services (N=104), 72% report providing services to e"50% of children seen in the past two weeks with the following care components provided e"75% of the time: examining teeth (80%), assessing risk (69%), applying FV (70%) and caregiver goal setting (58%). Dental providers reported lack of adequate reimbursement as the only barrier to providing care. Non-dental providers reported lack of time (22%), adequate reimbursement (10%), and difficulty obtaining FV (10%) as barriers.

Conclusions: The CF3 program successfully trained providers on the provision of basic preventive dental care to young children. Adoption of care has been high. Few barriers are reported by either dental or non-dental providers.

Funding: Rose Foundation of Colorado

Abstract: #15

HEALTHY TEETH HAPPY BABIES: AN INFANT AND PRENATAL ORAL HEALTH PUBLIC EDUCATION CAMPAIGN

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Objectives: Educate new and expecting mothers in the Denver metro area about the connection between parent / baby oral health and motivate positive behavior change, especially in high-risk (low-income and Hispanic) populations.

Methods: Over the past four years, the Campaign has used a dynamic combination of Community-Based Social Marketing principles:

- Annual research to establish a baseline, identify obstacles, and measure progress
- Partnerships with community and state organizations, clinics, dental, and other healthcare providers
- Print, broadcast, and transit advertising
- Patient education
- Community outreach
- Media and Social-Media relations

Results: In 2009, 612 new or expecting mothers in Metro Denver were surveyed. The results show significant progress:

- From 2006 to 2009, respondents' awareness that tooth decay can be passed from mother to infant increased from 26% to 78%.
- From 2007 to 2009, message exposure increased from 24% to 54% among respondents.
- The biggest increases in behavior change and awareness have been made among younger, Hispanic, lower-income, less-educated respondents.
- Among Hispanic mothers who heard the messaging in 2009, 58% of those surveyed reported stopping sharing utensils and 43% reported taking their child to a dentist.

Conclusions: The gains in awareness (from 26% to 78%) have been remarkable. The challenge now is maintaining awareness while continuing to implement preventive behavior change in high-risk populations. In 2010, the Campaign addressed this by revising brand image with special focus on Spanish translation to ensure all messages and strategies were culturally relevant and appropriate for the target audience.

Funding: The Healthy Teeth Happy Babies Campaign is a grantee of the Delta Dental of Colorado Foundation.

Abstract: #16

PLAN OF ACTION TO PROMOTE MESSAGING STRATEGIES TO IMPROVE ORAL HEALTH AND BUILD COALITION ACTIVITIES IN FLORIDA

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Objective: The oral health messaging campaign, Healthy Mouth, Healthy Body, is a plan of action to improve communication strategies to increase public understanding and increase awareness of oral health issues throughout Florida. It is an invitation to increase public support for programs and policies that aim to improve children's oral health in our communities. This campaign promotes and inspires the expansion of other coalitions to join the effort and share expertise and experience.

Methods: The Healthy Mouth, Healthy Body campaign:

1. Developed a series of oral health advocacy messaging trainings for local coalitions.
2. Conducted statewide conference calls and webinars that promote oral health as a valued part of general health.

3. Raised awareness for the need to increase the number of dentists who accept Medicaid.
4. Introduced basic principles of social marketing and communications strategies.
5. Raised awareness for the use of other trained workforce to increase oral health access.
6. Increased the general public understands of oral diseases.
7. Promoted opportunities that offer interdisciplinary care between dental and medical team.
8. Worked to strengthen and standardize the oral health surveillance system.

Results: The campaign developed multiple media and marketing resources that have been duplicated, as a way to increase awareness, knowledge, and encourage communities to improve oral health across the State of Florida.

Conclusions: The oral health messaging campaign increased public awareness and support for oral health disparities, improved media coverage, increased coalition cohesiveness and activities as well as increased oral health awareness of local and state policymakers.

Funding: Florida Public Health Institute

Abstract: #17

EFFECTS OF AN INTERVENTION TO IMPROVE PEDIATRICIANS' DENTAL REFERRALS OF YOUNG CHILDREN ENROLLED IN MEDICAID

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Objective: To evaluate the effectiveness of an intervention to increase physicians' dental referrals of children less than 3 1/2 years of age.

Methods: An intervention in three contiguous North Carolina counties: (1) developed the Priority Oral Health Risk Assessment and Referral Tool (PORRT) and trained physicians in its use; (2) trained general dentists in infant care using the Baby Oral Health Program (BoHP); (3) held physician-dentist learning collaboratives to discuss referral guidelines; and (4) used case workers to assist with dentist visits. A one-group pretest-posttest design analyzed change in referrals, documented with PORRT forms. Linear probability regression models analyzed referral versus non-referrals with interaction terms for post intervention and risk status (low[LR], moderate [MR], high [HR]). Dental use was analyzed with a univariate logistic regression model among children referred for a dentist visit.

Results: Pediatricians (n=13) completed 5,832 PORRT forms. The baseline referral rate was 8%. The percent of PORRT forms with referral increased from 35% to 50% for HR; 11% to 25% for MR; and 3% to 7% for LR. Only the change for MR was significant (p=.006), primarily because of the large increase (20% to 58%) in referral for incipient caries. Referral rate (63%) did not change for children with cavitated lesions. Dentist visits among those referred was 60% and did not differ by risk status.

Conclusions: The intervention increased referrals for children with incipient disease. Although physicians used structured referral guidelines based on caries risk, further efforts are need to ensure optimal guideline adherence and effectiveness.

Funding: Funding was provided by the Health Resources and Services Administration for Grants to States to Support Oral Health Workforce Activities (Grant No. T12HP07711).

Abstract: #19

METROPOLITAN STATE AND NORMANDALE COMMUNITY COLLEGE MODEL'S FOR ORAL WORKFORCE DEVELOPMENT: COMBINED DENTAL THERAPY AND ADVANCED DENTAL THERAPY

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In 2005, Metropolitan State University and Normandale Community College agreed to develop a master's level oral health practitioner program. During the process of completing a new program application, an advisory committee of dentists and other health professionals was assembled to oversee the process. In 2008, the Minnesota legislature, amid controversy, passed legislation establishing a new oral health practitioner discipline and appointing a work group to convene between legislative sessions and develop recommendations and draft legislation. During the 2009 legislation session discussion continued on approaches to improve access for underserved patients, control the cost of education and dental services, preserve quality of care, and protect patients from harm.

Results: A compromise was reached and on May 16, 2009, and Dental Therapy and Advanced Dental Therapy were signed into law. Until accreditation for the program is secured, the Minnesota Board of Dentistry will approve the program. The first cohort of pioneers will meet the dental therapy licensure requirements by 2011 and the advanced dental therapy certification by 2012.

Specific outcomes:

At the end of this poster session, participants' will be able to:

- Explain the difference between the dental therapist (DT) and the advanced dental therapist (ADT)
- Know the admission and graduation requirements for the Masters of Science Oral Health Practitioner program at Metropolitan State.
- Discuss the scope of practice for both the DT and ADT
- Explain the benefit of DT and Dental Hygiene dual licensure

Funding: None

Abstract: #20

TEACHING ORAL HEALTH IN US MEDICAL SCHOOLS: RESULTS OF A NATIONAL SURVEY

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Objective: The authors developed a national survey to determine the extent to which U.S. allopathic and osteopathic schools have an OH curriculum.

Methods: A 22-question online survey was sent to the Deans of Education of 126 allopathic and 28 osteopathic schools.

Results: The response rate was 57.1%. 59.3% of schools reported offering less than 5 hours of OH curriculum; 10.2% offer no curriculum at all. Schools with greater than 150 students per class were more likely to offer 5 or more hours of OH curriculum compared to small or mid-size schools (p=.022). School location and having a dental school and/or residency were not significantly related to the number of hours of OH curriculum (p=.728 and p=.271, respectively). Awareness of oral

questions on the USMLE board exams and/or the AAMC Report on Oral Health Education was also not associated with curriculum volume. In schools with an OH curriculum, topics being covered ranged from 10.0% teaching hands-on skills training to 81.7% covering oral cancers. Only 29.9% reported evaluating students around OH topics.

Conclusions: Small/medium-sized medical schools need targeting for OH curriculum development and implementation. We need to investigate why schools aware of guidelines and available educational materials are not implementing a more robust OH curriculum to enhance medical student education and, ultimately, the community's overall health. Schools report increased interest in implementing established OH curriculum rather than designing their own; thus, promotion of existing educational curricula needs improvement.

Funding: None

Abstract: #21

USING GIS TO INFORM ACCESS AND DENTAL WORKFORCE POLICY

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Objective: To use geographic information systems (GIS) to establish dental service areas using population density and built environment access assessment (travel corridors) in order to identify barriers and inform workforce improvement strategies in rural communities.

Methods: A partnership between the Kansas Department of Health and Environment Bureau of Oral Health and faculty from the University of Kansas and Florida State University was formed to collaboratively develop a detailed profile of Kansas primary care dentists. Using population census data and the Kansas state licensure database, primary care dentists' office locations and population information were analyzed with respect to population density and distribution, micropolitan areas and built environment (roads / travel corridors) factors.

Results: Maps were generated to illustrate unique features of rural communities that must be taken into account when planning workforce policies, including issues such as areas suitable for dental therapist and other new workforce provider types and strategies to place/replace primary care dentists in rural communities.

Conclusions: GIS yielded innovative solutions to identified issues of inadequate workforce in rural communities.

Funding: Health Resources and Services Administration T12HP10691-01-00

Abstract: #23

IDENTIFYING GEOGRAPHIC VARIATION IN DENTIST WORKFORCE AND SUPPLY MEASURES - IOWA, 2009

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Objectives: 1) Compare supply measures (headcounts and FTEs) for primary care dentists. 2) Identify factors that modify the correlation between measures.

Methods: Full-time equivalencies (FTEs) for primary care dentists in private practice (n=1140) were calculated based on reported average hours worked per week. FTEs and dentist headcounts were aggregated to the city, county, and state level. State maps were generated to display geographic variation of workforce measures.

In order to analyze characteristics that were associated with dentists working less than full-time (d³² hours/week), dentist FTEs were categorized as either full-time or part-time. T-test, Chi-square statistics, and logistic regression models were used to analyze the relationships between dentist characteristics and full-time/part-time status.

Results: In 2009, primary care dentists worked a mean of 35.0 hours/week (SD 6.0). Hours/week ranged from 4 to 40. As dentist supply was aggregated to larger geographic levels, headcounts significantly overestimated the available FTE workforce by approximately 12.5%. Female gender and greater age were significantly associated with part-time status (p<.05). Females worked approximately 2 hours less per week than males (p<.0001). Practice arrangement and practicing in a metropolitan county were not associated with part-time status. However, females were more likely than males to work in a metropolitan county (OR 1.5, p=.008).

Conclusions: FTEs provide more accurate measures of area dentist supply than headcounts. Dentist gender and age are important factors to consider in workforce planning when more detailed information about hours worked per week are not available.

Funding: This project was partially supported by NIH/NIDCR T32 grant DE014678 and HRSA grant T12HP14992.

Abstract: #24

PRACTICE LOCATIONS FOR IOWA GENERAL DENTISTS AND PROXIMITY TO DENTAL SPECIALISTS

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Objective: To determine the practice location distances between Iowa general dentists and the nearest orthodontist, oral and maxillofacial surgeon, and pediatric dentist.

Methods: Information was obtained from the Iowa Dentist Tracking System for active private practitioners (in calendar year 2000). Dental specialists included orthodontists, oral and maxillofacial surgeons, and pediatric dentists. The primary practice location for each dentist was geo-coded using ArcInfo[®]. Nearest Neighbor Analyst Extension, using road network analysis, determined miles from the nearest dental specialists from each general dentist.

Results: 1081 of 1084 general dentists were successfully geo-coded, along with 87 orthodontists, 59 oral surgeons, and 24 pediatric dentists. Each of Iowa's 99 counties had at least one general dentist; however, the primary offices for orthodontists, oral surgeons, and pediatric dentists were located in 23, 17, and 9 counties, respectively. While the mean distance between general dentists and the nearest specialist was 11.8 miles for orthodontists, 15.8 miles for oral surgeons, and 33.2 miles for pediatric dentists, approximately one-half of Iowa's general dentists are less than 3 miles from an orthodontist and less than 6 miles from an oral surgeon.

Conclusions: Iowa general dentists have a tendency to locate their primary offices near dental specialists. Differences need to be explored to determine whether age and gender of general dentists affects likelihood to locate near certain dental specialists. If so, then this could have major implications for recruitment efforts in underserved, rural areas.

Funding: HRSA, DHHS T12HP14992

Abstract: #25

ORAL HEALTH LITERACY EDUCATION, EXPERIENCES AND OPINIONS OF NORTH CAROLINA DENTAL HYGIENE STUDENTS: IMPLICATIONS FOR DENTAL HYGIENE EDUCATION

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Objective: Dental hygienists play an important role in conveying preventive information to dental patients. Yet their patient communication skills might not match the ability of their patients to understand and use oral health information provided in clinical settings. A major strategy to address the potential gap is to design professional education so that it ensures the communication competencies of graduates. Research is needed to evaluate dental hygiene (DH) curricula for oral health literacy (OHL) content to determine if graduating dental hygienists are equipped to properly assess the OHL of their patients and convey information in a way that patients understand.

Methods: This descriptive study uses a cross-sectional survey design to assess OHL knowledge and experiences of approximately 249 senior DH students enrolled at 13 North Carolina DH Programs. We will display frequency distributions for individual test items or summary scores for the different domains (Education, Practices, Opinions and Confidence). We also plan to test differences in practices (e.g., use of communication techniques with patients) according to other survey domains (educational experiences, opinions about OHL, confidence in using techniques with limited literacy patients, sociodemographic characteristics of the study subject, and characteristics of the school using statistical tests appropriate for the type of data being analyzed.

Results: Data collection is currently being conducted with 11 of 13 programs responding and an individual student response rate of 94%.

Conclusions: Results could generate ideas to aid in developing DH curricula and identify competencies to help DH graduates gain knowledge and skills in OHL.

Funding: NONE

Abstract: #26

MONITORING FLUORIDE USE TO IMPROVE CARIES PREVENTION IN HIGH CARIES RISK VETERANS

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Objectives: The most predictive factor for future dental caries is recent history of disease. VA data show that from 2005-2008, there were over 16,640 persons at high risk for caries annually (2+ restorations/year). A recent systematic review suggests that a quarter of new dental caries in adults can be prevented using high-strength fluorides. This poster presents results of a quality initiative designed to increase the use of fluoride in veterans at high risk.

Methods: The Development Phase included a systematic review and education for VA providers. The Implementation Phase included deployment of the fluoride Monitor and updating the national formulary, giving all VA Dental Clinics access to the most current, effective fluoride products. The Evaluation Phase monitored fluoride

use for veterans with 2+ restorations in twelve months through electronic databases.

Results: The percent of facilities that met the goal increased from 35% to 91% across the 2 years studied. Follow-up led to publication of a Fact Sheet discussing the goals and best practices for meeting them; a website that allows VA sites to view and evaluate their data in comparison with others; a medical record "flag" that identifies eligible patients; and incorporation of Monitor results into evaluation programs.

Conclusions: Monitoring fluoride use in high risk veterans increases its use, improving quality of preventive care. Additionally, updating the national formulary improved access to the most current, effective fluorides for all VA dental clinics. Substantially more veterans now receive beneficial preventive treatments. Future work will assess the effectiveness of this quality monitor.

Funding: Supported by Department of Veterans Affairs, Boston University, and R21 HS019527-01.

Abstract: #27

KNOWLEDGE AND USE OF SEALANTS AND PREVENTIVE RESIN RESTORATIONS IN A LARGE MANAGED CARE DENTAL GROUP

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Objectives: To test the following hypotheses: 1. Willamette Dental (WD) dentists have discrepancies in their knowledge and beliefs regarding use of preventive resin restorations (PRN) and sealants, regardless of the company philosophy or available evidence. E.g., some feel tooth surface preparations are necessary for teeth with suspected caries lesions. 2. After participating in a multi-task educational intervention program aimed at reviewing and applying best-practice recommendations for management of early lesions in occlusal surfaces, WD dentists will choose treatment options based on best supporting evidence.

Method: All doctors with a WD hire date of 1/1/2009 or before that practiced General, Emergency, and/or Pediatric dentistry were invited to participate (n= 156 for pre-survey, and 132 for post-survey). A pre-training online survey was completed (n=96; 61.5%) to determine knowledge/beliefs and current practices. Dentists then participated in a multi-task educational intervention program aimed to inform and update current practices. A post-training survey was completed (n=75; 56.5%) to determine if changes in beliefs and knowledge had occurred.

Results: Nine survey questions were used to create the educational intervention. Four questions saw a complete shift to the desired response from pre- to post-survey (e.g., age is a factor in the decision to apply sealants). Two questions improved, and three questions did not shift at all (e.g., cavitated occlusal caries lesions should receive a preventive resin restoration).

Conclusions: Doctors had specific beliefs regardless of company philosophy. Most discrepancies between beliefs and evidence were remedied after this multi-task education program, especially when there was strong supporting evidence.

Funding: Willamette Dental Group

Abstract: #28

CONTRIBUTION OF DENTAL CARE IN THE RESOLUTION OF PEOPLE'S HEALTH PROBLEMS: THE VIEWPOINT OF DENTISTRY STUDENTS

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Objectives:The aim of this study was to analyze and discuss the comprehension of Dentistry students from Dentistry School in Bragança Paulista - S.P. - Brasil, regarding the contribution of dental care in the resolution of people's health problems.

Methods:The methodological approach was a qualitative research based on the Coletive Subject Discourse Technique (CSD), applied to 35 interviews. Based on the results, seven CSD's were developed.

Results: The students' viewpoints showed that: the contribution of dental care comprises the dissemination of oral health from the dentist to the population as a way for prevention; clinical dental care requires proper technical skills of the dentist, involving proper materials, instruments, and equipments associated to attendance of ethical concepts and satisfaction with the accomplished task; the resolution of dental problems is a way to promote people's self-esteem, resulting in social inclusion; Dentistry is not limited to specific questions, and issues from other professions should be considered; and finally, there is a need to improve the infrastructure and access to public health services.

Conclusions:The results suggest the need of carrying out discussions among dental students and academic staff, in order to produce critical reflections on the conceptual field of oral health.

Funding: None

Abstract: #29

ORAL HEALTH SURVEY OF THE HOMELESS IN MONROE COUNTY, NY

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Objectives: To assess the oral health status and to determine factors affecting dental care utilization among homeless adults in Monroe County, NY.

Method: Subjects were recruited from among adult homeless population who attended the First Project Homeless Connect Rochester Day of Services event in Rochester, NY. Clinical examination was conducted and prevalence of dental caries and presence of oral soft tissue and mucosal lesions were recorded. A questionnaire was administered that included information on demographics, dental insurance and barriers to dental care. Descriptive statistics and Pearson's correlation were used to analyze the data.

Results: Of the 130 subjects who consented, 60% were males and 39.2% females with a mean age of 41.1 (SD= 13.70) years. About 81% had an income below \$10,000 and 50% had Medicaid. Addictive behaviors reported were 35.4% for substance abuse, 71.5% for tobacco and 42.3% for alcohol use. Prevalence of untreated tooth decay was found to be 77% and overall caries experience (treated and untreated caries) was 92%. Mean DMFS= 31.91 (SD= 32.43). DMFS scores were significantly higher in males (mean DMFS= 35.3) than females (mean DMFS= 26.0) (p<0.05). Although 55% of subjects reported that they were not anxious to see a dentist and only 16% reported that they had no access to dentists, only 12.3% had regular dental check-ups.

Conclusion:The high level of untreated caries and high unmet dental needs reveals that this population is not accessing dental care. More studies are needed to better understand factors affecting dental care utilization.

Funding: None

Abstract: #30

RELATIONSHIPS BETWEEN SYSTEMIC HEALTH CLAIMS FOUND ON FOOD LABELS AND ORAL HEALTH RISKS

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Food label claims are found on packages of countless foods and beverages. Claims are based on the food or beverage's effects on systemic health, but raise the question, "do these claims also relate to oral health?" We hypothesized that systemic health label claims are not associated with oral health, specifically caries risk.

Objective: Our objective was to identify associations between label claims and caries risk.

Methods: We surveyed foods and beverages at a traditional grocery, health food co-operative and super-store; duplicate products were eliminated. Label claims and nutrient contents were recorded for products with prominent package claims. Foods and beverages were assigned a cariogenicity score based on composition and role in the diet. Claims were separated by FDA claim categories: health, nutrient content and structure function.

Results: Most claims (n=349) were nutrient content (80%) followed by health (17%), and structure function (3%). A pattern of cariogenicity was not apparent among claim categories or individual claims. Within nutrient content claims, 26% of foods/beverages were considered minimal, 27% low and 47% high caries risk. Of health claims, 47% of foods/beverages were considered minimal, 18% low and 35% high caries risk. Within structure function claims, 44% of foods/beverages were considered minimal and 55% high caries risk.

Conclusion: Systemic label claims do not correspond to oral health. Consumer perceptions of relationships between systemic label claims and oral health risks have not been investigated, and consumers could be at risk if they assume products with label claims are good for oral health.

Funding: College of Dentistry Student Research Program

Abstract: #32

IMPLEMENTING DISEASE MANAGEMENT OF ECC INTO CLINICAL PRACTICE

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Objectives: Preventing and managing the disease of caries, including routinely using risk assessment tools, is supported by the dental literature (e.g. CAMBRA). Disease management of caries is modeled on the medical management of chronic conditions in which the patient (or caregiver) is engaged in day-to-day health behavior modifications that address disease etiology. The caries balance described by Featherstone points to the possible alteration of the balance of pathologic factors in favor of protective factors to arrest or slow down the caries process. Despite our awareness that caries is a chronic disease that can be prevented and managed, disease management of caries has not been widely implemented in clinical dental practice. We explored and tested the feasibility and effectiveness of a disease management approach for children with ECC.

Method: A demonstration project was implemented at two safety-net hospital-based dental programs. The main outcomes of interests of the project were: 1) new cavitation; 2) incidence of pain related to untreated caries; and 3) referral to the OR.

Results: After 30 months, ECC patient outcomes compared to those of a historical control group were very encouraging. At Children's Hospital Boston (CHB), significantly fewer ECC patients developed new cavitation. Fewer ECC patients developed pain or were referred to the OR at both CHB and St. Joseph's Hospital (SJH). Interviewed parents expressed appreciation of given the option of partnering with their dental care provider to manage the underlying cause of their child's ECC.

Conclusions: Disease management of ECC has promising potential to improve clinical outcomes.

Funding: DentaQuest Institute, Program for Patient Safety and Quality, Children's Hospital Boston

Abstract: #33

HOME BY ONE PROGRAM BUILDING INTEGRATED PARTNERSHIPS WITH CONNECTICUT AGENCIES, PARENTS & PROVIDERS

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Objectives: In order to reduce the burden of oral disease in CT's children, Office of Oral Health has developed an initiative, Home By One, funded by a 4-yr TOHSS grant. The program seeks to establish a dental home for all CT children through an integrated partnership connecting parents, WIC nutritionists, pediatricians, dentists, and advocates.

Method: Home By One successfully implemented oral health education programs for WIC staff, who in turn educate WIC parents. WIC parents receive advocacy training from CT's Oral Health Initiative, so they can advocate for oral health issues in CT. Pediatricians have been trained in fluoride varnish application, caries risk assessment, and referral guidelines. CT pediatric and general Dentists have been trained in age one dental visit technique, caries risk assessment and fluoride varnish application. Home By One establishes partnerships between pediatric practices, dental homes, WIC offices, and HUSKY (SCHIP) case managers to increase the number of providers accepting HUSKY, providing a safety net referral system to ensure delivery of consistent messages to parents across a variety of existing contact opportunities, and to decrease the number of missed appointments.

Results: The number of HUSKY dental providers has increased >200%, reports from individual dental homes have indicated >10% of practice patients are now age one, and a high percentage of patients returning at 18 months remain caries free.

Conclusions: The Home By One model of systemic integration of services, recognized as an emerging best practice by AMCHP, can be applied to a variety of services targeting young children.

Funding: Home By One is funded by a 4-year Maternal Child Health Bureau Targeted Oral Health Service Systems Grant. (HRSA #H47MC08648)

Abstract: #35

CO-LOCATING DENTAL HYGIENISTS IN MEDICAL PRACTICES: THE ATTITUDES OF HYGIENISTS, STAFF AND PARENTS

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Background: Co-locating registered dental hygienists (RDHs) in medical practices can improve access to preventive dental care

(PDC) for low-income children and reduce disparities around caries prevalence. Little is known about how hygienists, staff and parents view this approach.

Objective: To determine 1) factors which facilitate and create barriers to co-locating RDHs in medical practices; and 2) parent attitudes regarding satisfaction with co-location.

Methods: Five RDHs were co-located into Colorado medical practices. Attitudes were measured using mixed methods. Elicitation interviews were conducted with medical providers, RDHs and office managers who had knowledge of system changes within the practices then recorded, transcribed, and analyzed using Atlas.ti. Parent attitudes were measured with a survey constructed using the Health Belief Model, administered 12 months after the parents' first RDH encounter.

Results: Co-located preventive dental care was provided to 1945 children. Factors which facilitated RDH co-location included: recognition of unmet dental need, desire to build a "medical home" that included dental services, and funding support. Barriers included: finding office space for and scheduling RDH time, obtaining "buy-in" from the medical staff, and establishing effective referral systems. Parents reported (n = 119) they really liked (71%) or liked (27%) having their child see the co-located RDH; would recommend the practice to others because of the co-located RDH (91%); and planned to take their child to the co-located RDH in the future (89%).

Conclusions: Co-locating RDHs is a novel way to improve access to PDC for underserved children. Identified barriers must be overcome to facilitate future co-location projects. Parents favored co-location.

Funding: Delta Dental Foundation of Colorado

Abstract: #37

IMPROVING THE ORAL HEALTH STATUS OF YOUNG CHILDREN IN PUBLICALLY FUNDED INSURANCE PROGRAMS: OPPORTUNITIES FOR COMMUNITY STAKEHOLDERS AND MANAGED CARE ORGANIZATIONS

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Objective: Improve oral health outcomes for low-income children through clinical quality improvements and strategic policy activities designed to leverage improvements and generate value for government funded oral health care.

Methods: The Center for Health Care Strategies (CHCS) convened multi-stakeholder collaborative workgroups that included state health care purchasers (Medicaid and Children's Health Insurance Program), managed care organizations (MCOs), academic partners, key community child advocates and educators, and national and local oral health advisors. Improvements included: 1) promotion of risk assessment, preventive care, and the establishment of dental homes; 2) medical and dental health care integration; 3) broad collaboration with child serving systems; 4) family education; and 5) purchasing strategies to promote children's oral health.

Results: Multiple MCOs collaborated to develop and disseminate tools to promote early intervention, oral health assessment, dental referrals, and performance measurement strategies. Young children were significantly more likely to have an annual dental visit at follow-up. Partnerships between MCOs and Head Start ensured the establishment of dental homes.

Conclusions: The model yielded significant oral health improvements for young children and offers an approach for states interested in strategies to maximize resources for improving dental care for low-income children.

Funding: The Robert Wood Johnson Foundation, the California HealthCare Foundation, and the California Managed Risk Medical Insurance Board

Abstract: #38

KIDS ORAL HEALTH PARTNERSHIP: INTEGRATING EARLY ORAL HEALTH INTERVENTIONS AND PRACTICES INTO PRIMARY CARE, PEDIATRIC CARE, AND EARLY CHILDHOOD SERVICES

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Objectives:

1. Update results of Maine's early intervention program to reduce ECC through training of social and medical providers to recognize oral diseases and conditions.

2. Discuss the systems support needed to sustain an oral health component within existing child wellness programs

Methods: The Kids Oral Health Partnership (KOHP) recruits providers state-wide to participate in trainings on oral health assessment, anticipatory guidance, appropriate referrals, and for medical providers, preventive interventions. Pre- and post-surveys and follow-up surveys assess provider knowledge and behavior changes. Follow-up also includes website and e-news bulletins, on-line surveys and key informant surveys. Data from existing service and claims data bases are used to document long-term impacts of service utilization and medical outcomes.

Results: In 2009 we reported preliminary results that demonstrated the validity of the curriculum and the effectiveness of the training. The project has now trained 697 medical providers and 759 social service providers. The longer-term results reinforce our previous conclusions about the effectiveness of the training. Over 80% of participants indicate on the post-test that they plan to implement aspects of the training into their practice. Results from a 6-month follow-up and key informant interviews to determine the extent and nature of actual change will be presented.

Conclusions: Efforts to integrate oral health into existing child care programs, both social and medical, are promising. We propose that an oral health component in these programs can be sustained by integrating oral health into child care education and certification and medical residency trainings.

Funding: HRSA/Maternal & Child Health Bureau, Targeted State Maternal and Child Oral Health Service Systems grant #H47MC08655.

Abstract #39

MAKING IT WORK—MARYLAND'S MOUTHS MATTER: FLUORIDE VARNISH AND ORAL HEALTH SCREENING PROGRAM FOR KIDS—1 YEAR LATER

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Objective: To establish an efficient and seamless fluoride varnish program for infants and children ages 9 to 36 months that attracts and retains EPSDT medical providers.

Methods: Partners from the Maryland Department of Health and Mental Hygiene, academia, professional medical and dental societies, and the state Medicaid administrator collaborated to establish and maintain the *Maryland's Mouths Matter: Fluoride Varnish and Oral Health Screening Program for Kids*. An online training for

EPSDT medical providers was developed to ensure continuously available entry into the program. EPSDT medical providers can seek reimbursement for fluoride varnish application approximately 2 to 3 weeks after successfully completing the training and are reimbursed in a timely manner.

Results: Over 350 EPSDT medical providers received in-person training between July and August 2009, and 72 EPSDT medical providers completed the online training between March and November 2010. As of November 30, 2010, nearly 425 EPSDT medical providers were eligible to bill Medicaid for fluoride varnish applications. Nearly 40 percent of providers eligible to bill have incorporated the prevention program into their practices, and Medicaid has provided reimbursement for nearly 20,000 fluoride varnish applications.

Conclusions: Strong partnerships and close collaboration between multiple stakeholders can result in a successful state-based fluoride varnish program. An online training program ensures easy entry into the program. Continuous effort is required to keep the program operating efficiently and to attract new providers into the program.

Funding: National Maternal and Child Health Bureau (grant number H47MC08649 and H47MC00048), Health Resources and Services Administration, U.S. Department of Health and Human Services; Maryland Department of Health and Mental Hygiene Office of Oral Health; University of Maryland Dental School.

Abstract: #40

PREDICTORS OF EARLY CHILDHOOD CARIES

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Objective: The purpose of this study was to assess the sensitivity and specificity of various caries risk indicators and home behaviors in children under age 3.

Methods: This study was an IRB-approved retrospective chart review of 764 dental records of children who presented to the Baby Clinic at Nationwide Children's Hospital Dental Clinic in Columbus, Ohio from 2004-2009. The variables analyzed included demographics and caries related risk factors.

Results: The presence of white spots demonstrated high levels of sensitivity and specificity, 93% and 94% respectively. This was the only caries related risk factor with a high level of both sensitivity and specificity. Consumption of sugary snacks had a sensitivity of 90% but a low very low specificity, 19%. Parental education level had a sensitivity of 71% and a specificity of 43%. Night-time habits such as taking a bottle or sippy cup with a sugary drink to bed had a sensitivity of 52% and a specificity of 62%.

Conclusion: In children under age 3, presence of white spot lesions is highly associated with development of future dental caries.

Funding: None

Abstract: #41

CARIES MANAGEMENT TECHNIQUES FOR CHILDREN: A PEDIATRIC DENTISTRY RESIDENCY PROGRAM DIRECTORS SURVEY

Elham Kateeb, BDS, MPH, PhD candidate; John Warren, DDS, MS; Elizabeth Momany, PhD; Peter Damiano, DDS, MPH; Michael Kanellis, DDS, MS; Timothy Ansley, PhD; Karin Weber-Gasparoni, DDS, PhD

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Objectives: This study reports the results of a survey of pediatric dentistry residency program directors regarding training provided about different caries management techniques.

Methods: In May 2010, pediatric dentistry residency program directors were invited to participate in a web survey about different caries management techniques they teach to their residents. The survey included questions about program directors, program characteristics and patient populations.

Results: 61 out of 76 directors completed the survey (80% response rate) with no significant response bias. 76% of patients seen by pediatric residency programs, on average, were financed by Medicaid, 74% were high caries risk and 24% of the patients' pool was younger than 3 years. 82% of the programs used risk assessment for every new patient. 45% of the programs placed fissure sealants on incipient carious fissures "often" or "very often". 28% of the programs used amalgam, "often" or "very often" but only 18% used Glass Ionomer "often" or "very often" in posterior primary teeth. In permanent teeth, 82% of the programs use composites for posterior teeth "often" and "very often", 25% use amalgam and only 5% used Glass Ionomer "often" or "very often". In addition, 25% of the programs used "extension for prevention" approach for cavity preparation "often" and "very often" in both dentitions.

Conclusions: Medicaid is the major payer for patients in pediatric dentistry residency programs and those programs play an important role in serving high caries risk children. Programs should be encouraged to use more Glass Ionomer in managing dental caries.

Funding: T32 DEO 14678-06

Abstract: #43

HEALTH EDUCATION VIA THE INTERNET ON ORAL HEALTH FOR PARENTS AND CAREGIVERS

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Objectives: To assess the utility of an oral health website for the education of parents and caregivers on preventing dental caries in children.

Method: An online pre and postsurvey were used to measure the impact of the online educational program on knowledge, attitudes, and behaviors. The website provided information on caries as a transmissible disease and information for parents on how to prevent the transmission of cariogenic bacteria and reduce the risk of dental caries in their children. Study participants were recruited via: 1) links on an oral health information website, 2) email messages, and 3) an online newsletter distributed to participants in a national dental insurance plan.

Results: There were 553 respondents to the initial survey, and 459 completed the follow-up survey. Of those who responded 89.5% were female, 46.6% were 30-39 years of age, and 96.5% had children. The self-reported racial/ethnic composition was: 69.1% White, 12% Hispanic, 10.9% Black, 6.1% Asian or Pacific Islander, 1.5% other, and 0.6% American Indian. Dependent samples t-test of mean knowledge score showed that respondents had significantly higher scores after viewing the educational intervention, $p < .001$. Tests of association showed significant differences in attitudes based on gender, and dental health related behavior based on a number of variables including dental health insurance status, and parity.

Conclusions: Educating parents and caregivers about dental caries is an important aspect of preventive oral health care. Providing tailored oral health information on the Internet can increase knowledge, and result in significant changes in related attitudes and behavior.

Funding: This project was supported by a grant from the New York State Foundation for Science, Technology, and Innovation and Aetna Inc.

Abstract: #44

PARENTAL REPORT OF TOOTHPASTE AMOUNT USED BY YOUNG CHILDREN

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Objectives: To examine the amount of toothpaste reportedly used by young children and personal factors associated with such use.

Methods: We used HealthStyles, an annual panel survey addressing beliefs, attitudes, social norms, and behaviors surrounding public health concerns. The 2009 survey included responses from 4,556 participants. Of these, 320 parents with at least one child aged 2 to 5 years were included in this study. Parents indicated how much of their child's toothbrush (none; 1/4; 1/2; 3/4; full) was covered with toothpaste when brushing.

We explored associations ($\div 2$, $p < 0.05$) between amount of toothpaste used and socio-demographic characteristics and used unweighted data for this small subset of survey participants.

Results: 69.4% of respondents, overall, and 80% of Black, 77% of Hispanic, 63% of White parents ($\div 2 = 13.83$, $df = 6$, $p < 0.032$) reported covering $> 1/4$ of the toothbrush. Sex, age, education, marital status and household income were not associated with amount of toothpaste used.

Conclusions: These findings suggest that most parents covered more than $1/4$ of the brush with toothpaste - an amount that is likely larger than the recommended "pea-size". These children may be at increased risk of enamel fluorosis if the toothpaste is repeatedly swallowed.

Funding: None

Abstract #45

MINIMALLY INVASIVE DENTISTRY APPROACH IN DENTAL PUBLIC HEALTH IN THE UNITED STATES

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Objectives: To assess DPH dentists' knowledge, attitudes and behavior concerning Minimally Invasive Dentistry (MID) because little is known about its use or acceptance in the U.S., particularly in public health settings.

Methods: Cross-sectional study using an online survey instrument (30-item) was conducted among National Network for Oral Health Access (NNOHA) and American Association for Community Dental Programs (AACDP) members to assess DPH dentists' knowledge, attitudes and behavior concerning MID. Specific questions focused on diagnostic, preventive techniques and whether MID was considered to meet the standard of care in the U.S., which was the main outcome of the study. Chi-square, Fisher's exact test, Wilcoxon rank-sum test, two-sample t-test, and logistic regression were used to identify factors associated with beliefs that MID meets the standard of care.

Results: Overall, 86% believed MID met the standard of care for primary teeth, and 77% for permanent teeth. The study found that those with more favorable opinions of fluoride are more likely to believe that MID met the standard of care. According to logistic regression model, dentists who had continuing education courses

in MID were more likely to report use of MID as a standard of care for permanent teeth. Subjects who believe that sandwich technique is effective as caries treatment for permanent teeth were more likely to view MID as a standard of care for primary teeth.

Conclusion: There is a paradigm shift towards MID philosophy and most of DPH dentists believed that MID meets the standard of care for primary and permanent teeth.

Funding: None

Abstract #46

ONE YEAR EVALUATION OF A SCHOOL BASED DENTAL SEALANT PROGRAM AS PART OF A SERVICE LEARNING EXPERIENCE FOR DENTAL STUDENTS

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Objective: School based sealant programs administered by dental schools have the potential to help achieve Healthy People objectives, as well as provide dental students with knowledge, skills and experience with sealant programs. The objective of this study is to evaluate the first year of a service learning experience from the dental students' and faculty members' perspective as well as measure sealant retention rates.

Methods: During the 2009-2010 academic year, the University of Pennsylvania School of Dental Medicine (UPSDM) piloted a sealant program with at risk children in four elementary schools. Third year dental students attended a two hour lecture, and completed online training and testing prior to completing faculty supervised community rotations. At the end of the academic year, students and faculty completed evaluations of the experience.

Results: During the 2009-2010 academic year, dental students placed sealants on 160 permanent teeth (56 children). At follow-up, a retention rate of 62.67% was observed on 75 teeth (28 children). Dental students evaluated the course favorably (2.44, on a 0-4 scale). 97% of students (134 of 138) passed the knowledge test at first attempt, and all passed on the second attempt. Students and faculty reported positive comments regarding the school based experience.

Conclusion: School based sealant programs are readily incorporated as part of community service learning. Program evaluation revealed moderate retention rates, and measures to improve retention were identified for the next year. Dental student and faculty evaluation provided recommendations regarding logistics, data collection and collaboration with school nurses, teachers and parents.

Funding: None

Abstract #47

CONTEXT OF CHILDHOOD DENTAL CARIES IN RURAL EL SALVADOR: AN ETHNOGRAPHY OF CHILDREN'S DIETARY HABITS

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Background: Dental caries is a prevalent childhood disease in rural El Salvador, affecting children's health and well-being.

Objectives: This study focuses on Salvadoran families' dietary habits and the factors influencing it, in order to better understand the dental health of their children.

Methods: Ethnography was the chosen methodology, including semi-structured interviews, participant observations, and photographs. Interviews ranged from 30 to 60 minutes in length. Interviews were transcribed and translated, field notes were typed, and photographs were catalogued in preparation for analysis. All data were analyzed using thematic coding and matrices by multiple researchers.

Results: Amidst a backdrop of poverty and food insecurity, rural Salvadoran families with young children acquire food through a variety of sources, including: farming, backyard gardens, livestock, markets, and small shops. In this study, the families' agricultural practices, economic resources, proximity to urban centers, family structure, and the availability of stores played an important role in children's daily diet. The families' views around nutrition were also affected by their involvement in community agriculture and nutrition education programs.

Conclusions: This study investigated several factors contributing to dietary habits in rural El Salvador. The study identified and analyzed the complex web of environmental, cultural, social, economical and structural realities that weave together to influence what they eat and drink. Understanding this interconnectedness sheds light into designing future oral health interventions.

Funding: NONE

Abstract #49

PROJECT C.A.R.E. ; INCREASING ACCESS FOR SPECIAL-NEEDS DENTAL PATIENTS THROUGH SPECIALIZED EDUCATIONAL AND TRAINING SEMINARS

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Objectives: Project C.A.R.E educated dental health care providers regarding Compassion, Accommodation, Respect, and Empathy for patients within the special needs population. The main objective of Project C.A.R.E. was to increase dental provider's knowledge about special needs patients, their disorders, and various ways to provide treatment in hopes of increasing access. A follow-up objective to project C.A.R.E. is to determine whether access was actually increased for special needs patients within the dental providers communities who attended the seminar.

Methods: Through a series of training summits at three unique locations in the state of Arizona, dental healthcare providers were provided with resources in treating patients with special health care needs in the form of lectures, question and answer sessions, and networking opportunities. Paper surveys were used to record the attitudes and beliefs of the dental healthcare providers as well as their current knowledge of special needs disorders. Surveys were distributed before and after the seminar to determine its effect on the healthcare providers.

Results: Using SPSS, the results indicate that the dental healthcare providers' attitudes towards treating patients with special needs had been significantly increased by the seminar ($P < .05$). There was also a significant increase ($P < .05$) in the overall mean score of the educational segment of the seminar from pre to post seminar concerning special needs disorders.

Conclusion: Project C.A.R.E. concluded that it may be possible through training and educational seminars for dental providers to significantly increase their knowledge and comfort levels in treating patients with special needs; thus increasing access.

Funding: Arizona Dental Foundation

Abstract: #50

DISSATISFACTION WITH DENTAL APPEARANCE IN AN HIV+ SAMPLE: LOOKING BEYOND JUST LOOKS

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Objective: To present longitudinal results from an HIV+ sample and qualitative results on: 1. The impact of dissatisfaction with oral appearance and related oral symptoms; 2. Changes in OH QOL, general QOL and reduction of symptoms related to receipt of comprehensive oral care and improved oral appearance; and 3. Patient attitudes of self-confidence related to oral appearance.

Method: A multi-site evaluation was conducted with 15 HRSA demonstration sites collecting baseline, follow-up survey data from 2,469 HIV patients who had been out of oral health care for 12+ months. In-depth interviews were conducted with a subset of 60 patients. At baseline, 49.5% reported dissatisfaction with their oral appearance. Bivariate comparisons were conducted between patients who reported dissatisfaction with their oral appearance and those who did not.

Results: These patients have more co-occurring oral symptoms such as tooth decay, sensitivity, and bleeding gums. They were more likely to avoid going out and had lower mental health scores. Qualitative analysis found patients reported embarrassment and a lack of self-confidence related to oral health appearance. Patients felt judged, unemployable and confined because of oral dissatisfaction.

Conclusion: Dissatisfaction with oral appearance frequently occurs with other oral health symptoms that need to be addressed. The impact on mental health can lead to isolation and a decrease in self-confidence. Patients who complain of dissatisfaction with oral appearance must be assessed for other oral conditions and a treatment plan created to address not only the oral health disease but increasing the patient satisfaction with their oral appearance.

Funding: HRSA, Special Projects of National Significance, Oral Health Initiative

Abstract: #51

TIMING OF FIRST DENTAL RECALL VISITS FOR NEWLY MEDICAID-ENROLLED CHILDREN WITH AN INTELLECTUAL OR DEVELOPMENTAL DISABILITY IN IOWA

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Objective: This study compared the extent to which having an intellectual or developmental disability (IDD) is associated with the rates at which newly Iowa Medicaid-enrolled children ages 3-8 had a first dental recall visit.

Methods: We used survival analytic techniques to test our hypothesis that children with an IDD would have later first dental recall visits than children without an IDD.

Results: Our results suggest no significant difference in the time to first dental recall for children by IDD status ($p=.99$). After adjusting for covariates, the only factor associated with earlier first dental recalls was the length of time from enrollment in Medicaid to the first comprehensive dental visit. Children for whom it took >13 months to see a dentist for their first comprehensive dental visit were 1.68 times as likely to have an earlier first dental recall as children who had their first comprehensive dental visit within 4 months of enrolling in Medicaid ($p<.0001$).

Conclusions: We found that having an IDD was not associated with later first dental recall visits for newly Medicaid-enrolled children

ages 3-8 in Iowa. Future work should identify other factors associated with poor oral health for Medicaid-enrolled children with an IDD.

Funding: This study was supported by NIH/NIDCR Grants K08-DE020856 and T32-DE014678-06, and funding from the Iowa Department of Human Services.

Abstract: #52

CHANGES IN DENTAL STUDENTS' FEELINGS TOWARD TREATING AND WILLINGNESS TO TREAT UNDERSERVED POPULATIONS

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Objective: The purpose of this longitudinal study was to assess changes in dental students' feelings towards treating and willingness to treat underserved populations.

Methods: Surveys were developed to assess first-fourth year (D1-D4) dental students' anticipated attitudes toward treating thirteen underserved populations five years post-graduation. After obtaining IRB approval, the surveys were distributed to all students in 2008, 2009, and 2010. Descriptive statistics were performed. Changes in students' attitudes were assessed at two response times (i.e. D1/D2, D2/D3, and D3/D4) using the nonparametric Wilcoxon signed-rank test. SAS for Windows (v9.2 2, SAS Institute Inc, Cary, NC, USA) was used for the data analysis. Alpha =0.05.

Results: A majority of students completed surveys at two points in time: D1/D2:n=145 (92%); D2/D3:n=145 (94%); D3/D4:n=83 (57%). Students anticipated feeling more positive toward treating: HIV+/AIDS patients (D1/D2) and frail elderly (D2/D3), and more negative toward treating: low income, homeless, homebound, and non-English speaking (D1/D2); frail elderly, homebound, medically complex, mentally compromised and other ethnic groups (D3/D4). Positive changes in anticipated willingness to treat occurred for: medically complex, HIV+/AIDS (D1/D2); homebound, and mentally compromised populations (D2/D3). Negative changes occurred in willingness to treat: non-English speaking (D1/D2); low income, medically complex (D2/D3); and frail elderly (D3/D4) populations.

Conclusion: Although students' feelings toward treating underserved populations generally became more negative over time, positive changes did occur pertaining to willingness to treat some underserved populations. Students' attitudes changed at multiple points throughout their dental education, thus ample opportunities exist to positively influence students' attitudes toward treating underserved populations.

Funding: University of Iowa, Dental Research Grant

Abstract: #53

WEST VIRGINIA CONSUMER AND PUBLIC HEALTH NURSES' PERCEPTION OF ORAL HEALTH AND PERSONAL ORAL HEALTH PRACTICES

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Objective: This survey was undertaken to determine how a broad sampling of West Virginia consumers as well as WV public health nurses perceive oral health relative to overall health and to assess their personal oral health practices.

Methods: A population based telephone opinion survey on a representative sample of WV state wide consumers (n=299) was conducted to understand practices, habits and experiences with oral health and to understand barriers to oral health. Data was statistically weighted by age according to current US census data for the state of

West Virginia. Public health nurses were asked similar questions. 60 public health nurses were invited to participate with 53% accepting (n=32).

Results: West Virginians rank obesity and heart disease among the most serious health problems and dental health near the bottom. 2 in 5 West Virginians do not brush regularly and 47% rarely floss. Thirty percent use tobacco. Cost of care was the main reason given for not receiving regular oral care followed by accessibility and perceptions about oral health. More than half of public health nurses conduct oral screenings for 25% or less of their patients. One-third of these seldom or ever refer their patients to a dental clinic for care.

Conclusions: Links between oral health, obesity and heart disease need to be part of an outreach program for both consumers and public health nurses to have them embrace oral health promotion, change current attitudes and beliefs with the ultimate goal of developing sustainable oral health programs in communities.

Funding: Claude Worthington Benedum Foundation

Abstract: #54

HOSPITAL EMERGENCY DEPARTMENT VISITS FOR ORAL HEALTH CONDITIONS AMONG RHODE ISLAND ADULTS, 2005-2009

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Rhode Island Department of Health, Providence, RI, United States

Objective: Report extent of RI adults' ED utilization with oral health conditions and its related spending in Calendar Year 2005-2009.

Method: From the RI Hospital Discharge Data, adults' (age under 65) ED encounters that were reported with oral and dental primary diagnoses that did not result in hospital admission were collected.

Results: Of the over 1.3 million ED encounters, 41,655 visits (3.1%) were reported with an oral health-related diagnoses. Dental caries and pupal/periapical pathology made up of 72% of the specified diagnoses. Young adults age 25-34 years made the most frequent visits (36%): visits by this age group increased, from 33% in 2005 to 37% in 2009. The total dollar amount paid was more than \$28 million: the annual spending was increased from the \$3.7 million in 2005 to \$6.3 million in 2009. Medicaid and self-paid fees were two major sources of payment. Over the five years, self-payment showed the greatest dollar amount increase, which nearly doubled from less than \$1.2 million in 2005 to \$2.3 million and exceeded the Medicaid payment in 2009. ED visits by adults younger than 35 years of age were more likely to be paid as out-of-pocket expenses than those by adults older than 35 years and older.

Discussion: Reliance on the ED for preventable, or non-emergent oral conditions results in significant spending for the state and individual patients. Increased ED utilization for oral health-related conditions, particularly among young uninsured adults who do not have routine and regular access to dental care needs, to be addressed immediately since more RI adults are projected to lose insurance coverage due to the current economic crisis.

Funding: None

Abstract: #55

SOMALI ORAL HEALTH AND HEALTH LITERACY

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Objectives: Refugees arrive in the United States with unmet health needs. In particular, oral health problems have been identified as the most common health problem of newly arrived refugee children

and the second most common of refugee adults. Little is known about how refugees' English literacy levels affect oral health status over time. This study, focused on Somali adults in Massachusetts, hypothesized that increased English literacy may lead to better oral health status independently of the adoption of Western cultural and social factors affecting oral health status.

Method: We interviewed 439 Somali adults in the U.S less than ten years, using standardized instruments to assess acculturation, health literacy (STOFHLA, REALD), English oral proficiency (BEST-Plus), oral health practices and oral health.

Results: [(To be determined*)] Sample characteristics show that 37% of participants had no education and an additional 39% did not complete high school. Almost half (45%) reported speaking no English. About 90% had limited or no indicators of acculturation 29% had never seen a dentist. 72% had periodontal care needs, whereas 35% had dental referral needs. 77% of participants had public health insurance, while 11% had no health or dental insurance.]

Discussion: Two-thirds of participants had very low literacy and very low levels of English proficiency. *By April, our analysis will discuss associations between oral health, health literacy and acculturation.

Funding: National Institute of Dental and Craniofacial Research (NIDCR)

Abstract: #56

CANADIAN DENTISTS' QUALITATIVE OPINIONS: ARE THEY BARRIERS OR ENABLERS TO PUBLIC ORAL HEALTH REFORM IN CANADA?

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Objectives: To consider Canadian dentists' views regarding publicly financed dental care and provide policy leaders insight into barriers and opportunities for effective reform.

Method: Using provincial/territorial dental regulatory listings, a 26-item questionnaire plus optional comments was sent to a representative sample of Canadian dentists (n=2219; response rate=45.8%; 21% provided comments). The comments represented secondary data and were coded line-by-line into component parts using grounded theory principles. Each line was defined for its implicit action/meaning such as "problems with remuneration" and "no longer accepting public patients". Axial coding and diagram creation amalgamated the fragmented data into whole categories. A constructivist approach was used to understand Canadian dentists' experiences.

Results: Canadian dentists describe interdependent issues concerning public dental care, including governance and service delivery based on insurance status. Respondents appear most dissatisfied with remuneration; however, this is fuelled by deeper issues including the culture of private dentistry and undermining of professional autonomy. As a result, a large proportion of dentists are limiting or refusing to treat publicly insured patients. Dentists rationalise this and have created a social reality that endorses a refusal to help marginalized populations.

Conclusions: Dentists' opinions of publicly financed dental care are deeply rooted in the culture and values of Canadian dentistry and highlight dentists as key enablers, yet significant barriers to productive change in oral health policy. Dentists' concerns are woven tightly together with their social values and are crucial for policy leaders' understanding that no one solution exists for the improvement of oral health policy in Canada.

Funding: University of Toronto, Faculty of Dentistry, Department of Biological and Diagnostic Sciences / Community Dentistry

Abstract: #57

DEVELOPING CULTURAL COMPETENCY EDUCATION RESOURCES THROUGH STAKEHOLDER COLLABORATION AND CONSENSUS BUILDING: THE HHS OFFICE OF MINORITY HEALTH PROCESS

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Objectives: To help address oral health inequities, the Department of Health and Human Services (HHS) Office of Minority Health (OMH) is developing an e-learning program to equip oral health professionals with the skills necessary to provide culturally and linguistically appropriate services.

Methods: OMH's e-learning program development process includes an environmental scan, a needs assessment based on nationwide focus groups, and an advisory panel of subject matter experts. This session will explore this initiative's development process in terms of stakeholder collaboration and consensus building, and help illustrate how audience members may apply these skills in their own organizations and communities. The session will outline the importance of obtaining stakeholder buy-in and techniques used to achieve it for this initiative.

Results: Stakeholder collaboration and consensus building, particularly a three day meeting of subject matter experts, has shaped the direction that this e-learning program will take - in both content and format - by providing ideas and information on the opportunities and needs presented by the field, based on their hands-on experience and expertise.

Conclusions: The initial stages of the development process for an e-learning program for cultural and linguistic competency in oral health, especially input from an advisory panel, have provided a solid foundation upon which this program will be built over the coming months. Through this development process, OMH aims to produce creative and practical programs that increase knowledge, skills and awareness regarding culturally competent and linguistically appropriate practices.

Funding: None.

Abstract: #58

RURAL-URBAN DIFFERENCES IN DENTAL PROCEDURES PROVIDED TO CHILDREN ENROLLED IN DELTA DENTAL IN WISCONSIN

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Objective: Studies on rural-urban differences in dental care have primarily focused on utilization of preventive dental services, but little is known about rural-urban differences in the provision of other dental procedures. This study examined patterns of preventive, restorative, endodontic, and extraction procedures provided to children enrolled in Delta Dental of Wisconsin.

Methods: We analyzed Wisconsin Delta Dental claims data for children aged 0-18 years from 2002 to 2008. We used a modified rural and urban classification based on zip-codes developed by Wisconsin Area Health Education Center. Classification of rural zip-codes was based on population: R1= <2500 people; R2= 2500-9999 people; R3= 10,000-49,999 people. Classification of urban zip-codes was based

on location: inner city-Milwaukee; suburban-Milwaukee; and other-urban. Descriptive and multivariable analysis using generalized linear mixed models (GLMM) was used to predict the number of procedures provided to children per year. Tukey-Kramer adjustment was used to control for multiple comparisons.

Results: Approximately, 42%, 56% and 57% of enrollees in inner city-Milwaukee, R1 zip-codes and suburban-Milwaukee had at least one dental visit respectively. Children in inner city-Milwaukee had the lowest utilization rates for all procedures examined, except for endodontic procedures. Compared to children from inner-city Milwaukee, children in other locations had significantly higher odds of receiving a preventive procedure. Children in R1-zip-codes had higher odds of receiving restorative care, endodontic procedures and extractions, compared to children from all other regions.

Conclusions: Substantial geographic variation exists in the provision of dental procedures provided to children enrolled in Delta Dental in Wisconsin.

Funding: Funding: Supported, in part, by UL1RR031973, CTSA award, NCRR, NIH.

Abstract: #60

FINDING SUCCESS IN PUBLIC SERVICE AS A PRE-DOCTORAL DENTAL STUDENT: A CASE STUDY

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Objectives: Carrying out a large scale, 200-hour independently run community service project as a pre-doctoral dental student presents a host of obstacles; not the least of which is the lack of a substantial source of pragmatic advisement. The Albert Schweitzer Fellowship provides a well-constructed platform to encourage the successful completion of these public service aspirations with appropriate guidance.

Methods: More than any other aspect of this program, the most beneficial provision is the assembly of a diverse network of mentors. Each Fellow selects an academic mentor and a mentor at the site of their project. The program additionally assigns two mentors: an established professional who also serves on the Fellowship Advisory Council and a Fellow from the group immediately previous to the current class. In the case of a Fellow from the University of Illinois-Chicago College of Dentistry, these mentors facilitate the implementation of oral screening for underserved children and providing the children, their parents, and their educators with oral hygiene instructions and nutrition counseling.

Results: Through frequent interaction, each mentor plays a unique and indispensable role in providing the Fellow with support, delivering essential problem solving strategies.

Conclusion: With this arrangement of mentors, the Schweitzer Fellow cultivates success in not only completing a significant commitment to improvement of oral health status, but also in the training of the public health leaders of the future. This presentation will delineate the development of the previously described community intervention and the quintessential role of effective mentoring in making this program a success.

Funding: Funding was received in the form of a small stipend to the Fellow for the project provided by The Albert Schweitzer Fellowship.

Abstract: #61**DENTAL CARIES PREVALENCE AND CLINICAL PROCEDURES PROVIDED TO CHILDREN ENROLLED IN THE DENTAL HOME FOR CHILDREN PROJECT, 2006-2007**

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Objective: To assess dental caries prevalence and treatment for children enrolled in the Dental Home for Children Project (DHCP). The DHCP was designed to improve the oral health of poor and underserved children who tend to receive episodic and urgent dental care only at Eastman Dental in Rochester, NY.

Methods: The study was a retrospective chart review of data from DHCP enrollees ages 3-19 years. Dental caries experience and untreated decay using DMFS/dmfs index (D-decayed, M-missing, F-filled, S-surface) were recorded. Descriptive statistics were collected for age, gender, race/ethnicity, and treatment procedures (diagnostic, preventive, and restorative).

Results: Based on inclusion criteria, data from charts of 63 children out of 117 enrollees (year 2006-2007) were analyzed. There were 25 (39.7%) males and 38 (60.3%) females; African Americans = 31 (49.2%), Caucasians = 16 (24.5%), other = 7 (11.1%), and unknown = 9 (14.3%). Caries experience of the 63 children was 74.6%. Mean total DMFS = 11.08, mean carious surfaces = 8.27, and mean filled surfaces = 1.94. Caries rate was 42.9% for females, 31.7% for males; 38.1% for African Americans, 19% for Caucasians and 17.4% for others. Caries experience was 44.4% for children insured by Medicaid/Child Health Plus, 19% for other insurance plans, and 11.1% for uninsured. Treatment included 134 restorations, 29 extractions, and 34 sealants.

Conclusions: The prevalence of dental disease and extensive treatment needs of DHCP enrollees suggests a need to focus on high risk children who would not receive dental care in the absence of a dental home.

Funding: HRSA Maternal and Child Health Bureau Healthy Tomorrows Partnership for Children Program Grant No.: H17MC02531

Abstract: #62**DENTAL STUDENTS' PERCEPTIONS AND READINESS TO PROVIDE CARE IN SCHOOL-BASED SETTINGS FOR THE UNDERSERVED POPULATION**

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Objective: This study explored first year dental students' perceptions and readiness to provide dental care including oral health education to underserved populations following their participation in a mandatory school-based oral health educational program within the Marquette University School of Dentistry curriculum.

Methods: Pre/Post test questionnaire surveys were administered online to first year dental students after participation in a mandatory school-based oral health education program in Milwaukee Public School District classrooms. Data collected included age, gender, and whether dental students had a family member who is a dentist (i.e., parent, sibling, relative, etc), self efficacy, cultural competence, and students' intent to provide care for the underserved population. Descriptive statistics, chi-squared and Mantel-Haenszel tests were performed.

Results: Response rates for pre/post test surveys were 75% (60 out of 79) and 70% (56 out of 79). Twenty-two percent of the respondents reported having a dentist as a family member. Students'

reporting that they have a family member who is a dentist had significantly higher odds of self efficacy and cultural competence, compared to those who did not report having a dentist as a family member. There was no significant relationship between having a member of the family who is a dentist and the intent to provide dental care to the underserved population.

Conclusion: The mandatory participation by dental students in oral health education program led to an increase in self efficacy/comfort and cultural competence, but, it had no effect on their intent or readiness to provide dental care to the underserved population.

Funding: None

Abstract: #63**URGENT DENTAL PROBLEMS AND ACCESS TO CARE DURING PREGNANCY AMONG CALIFORNIA WOMEN WITH A LIVE BIRTH, 2008**

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Objective: To determine the prevalence of urgent dental problems among California pregnant women in 2008.

Methods: Pregnant women with urgent dental problems were identified using the 2008 Maternal and Infant Health Assessment (MIHA) survey (n=3,035), an annual, statewide, representative survey of California women who recently gave birth to a live infant. Urgent dental problems were defined as problems that indicate current oral infection, which require immediate attention by a dentist.

Results: More than half (52.1%) of pregnant women in California reported having at least one urgent dental problem during pregnancy. Almost one-third (31.5%) reported serious signs of dental caries, such as toothache, cavities or missing fillings in the crown of a tooth, or needing a tooth pulled. More women (41.4%) reported serious symptoms of periodontal disease, which included bleeding gums, painful, red or swollen gums, loose teeth, or a tooth that needed to be pulled. Of the women who reported having an urgent dental problem, 45.0% reported having one problem, 29.9% reported having two problems, 15.3% reported having three problems, and 9.8% reported having four or more urgent dental problems. About 3 out of 5 women (61.7%) with an urgent dental problem did not receive dental care.

Conclusions: A majority of pregnant women in California reported having urgent dental problems that require immediate attention by a dentist. Because maternal oral infection may have negative health consequences for mother and baby, appropriate dental care before and during pregnancy is an important prevention strategy.

Funding: Title V Block Grant

Abstract: #64**A PILOT STUDY ON INFANT FEEDING PATTERNS IN SOUTH WESTERN SYDNEY, AUSTRALIA**

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Objectives: The purpose of this study was to develop and pilot a telephone interview questionnaire on infant feeding practices suitable with new born children, prior to implementing a larger project.

Methods: The Child and Family Health Nurses from Sydney South West Area Health Service recruited new mothers (n=51) on a home visit within the first six weeks of their delivery. Information on feeding practices (breastfeeding, formula feeding, introduction to fluids and solids) and demographic data were obtained via a telephone interview when the child was 3 to months old.

Results: All the parents agreed to participate in the telephone interview and did not find it intrusive. The interviewer had no problems and the mothers were keen to discuss their children's feeding habits. Each interview lasted about 10 minutes. Ninety-six percent of the mothers had breastfed their babies at some point, but only 25 percent (n=11) were exclusively breastfeeding at age 6 months. Eighty-six percent (n=38) of the mothers were bottle feeding their infants with infant formula by the age of six months. Less than 20 percent of the infants were consuming fruit juice by age 6 months. Over half the babies (52 percent) were using dummies as a comforter and about a third (32 percent) had started using a sipper cup by the age of 6 months.

Conclusions: The questionnaire was acceptable to parents and useful data were collected for future studies.

Funding: This study is funded by the Centre for Oral Health Strategy, New South Wales Health.

Abstract: #65

MEETING ORAL HEALTH NEEDS OF THE UNDERSERVED IN THE TWENTY FIRST CENTURY: BRONX LEBANON HOSPITAL CENTER (BLHC) DEPARTMENT OF DENTISTRY(DOD) A MODEL FOR IMPROVING ACCESS TO CARE

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Introduction: According to the surgeon general's report on oral health in America 2000; one of the Challenges for Oral Health in the 21st century is to ensure all people have access to healthcare.

Objective: BLHC in New York, serving the primarily minority population of the Bronx, is addressing the problem of disparate access to oral health through programmatic initiatives. South Bronx is one of the poorest congressional districts in the USA with 43% of all households having an income below \$10,000 /year and 70% Medicaid recipients. Ninety percent of the south Bronx is federally designated as a health professional shortage area (HPSA).

Methods: Initiatives to improve access to care currently employed by BLHC:

- multiple clinical sites including access for HIV/AIDS patients
- growing general (GPR) and pediatric (PD) dental residency training programs emphasizing underrepresented minorities
- Curriculum includes: cultural competency, evidence-based dentistry, clinical research and oral-systemic health dynamics.
- Community outreach in school based programs and health fairs
- Clinician development programs for faculty and residents for career s serving underserved communities

Results:

- Patient visits since 1990 increased from 6,600 to 60,000, includes 1300 HIV/AIDS patients annually and 1500 elementary school students
- GPR increased from 3 to 34 residents
- PD established in 2001 increased from 2-12 residents
- Culturally diverse faculty

Conclusion:

BLHC DoD is a model for improving access to oral health care. Strong commitment of institutional leadership to oral health and residency training continues to equip BLHC to meet the challenges of the 21st century.

Funding: NONE

Abstract: #66

SCREENING FOR ORAL LESIONS IN MAJOR LEAGUE BASEBALL PLAYERS: FIRST YEAR RESULTS

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AT Still University, Mesa, -

Objective: Although malignant and dysplastic oral mucosal lesions (OML) occur almost solely amongst tobacco users, there exists an extensive history of association between baseball players and smokeless tobacco (ST). The aim of this study was to assess current prevalence of ST-use and presence of OMLs amongst a sample of major league baseball (MLB) players and compare the findings with published data.

Method: A cross-sectional epidemiological study was conducted, wherein 438 participants from two MLB organizations were personally interviewed and screened with an oral exam by calibrated examiners during spring training physicals. Data were de-identified, and analyses were performed using parametric and nonparametric tests, as appropriate.

Results: ST use amongst sampled MLB-affiliated players (36%) was substantial; six times the national average rate amongst adult males. MLB and Minors players did not differ in their use of ST (p=0.72), and age of participant was not predictive for ST-use (p=0.45). Risk of developing an OML was nearly three times higher amongst ST- users (RR=2.86, p<0.001). Among ST users, age (p<0.004), frequency (p=0.02) and duration (p=0.01) of ST use were associated with presence of an OML.

Conclusions: Despite popular claims about empirical evidence of ST-use becoming a declining trend, the rate remains unchanged from data collected twenty years ago. Policy intervention directives appear to have had no effect on the rate of use. ST-use is endemic amongst baseball culture, and evidence-based solutions are required to alter this unhealthy behavior.

Funding: Trimira, LLC

Abstract: #67

TOBACCO USE AMONG PATIENTS PARTICIPATING IN STUDENT MANAGED DENTAL CLINICS

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Background: Limited access to dental care for underserved populations is well documented. Therefore the dental students and faculty at the University of Nebraska Medical Center (UNMC) recently initiated an after-hours dental student managed dental clinic program. Individuals at high-risk for oral cancer are generally of low-income status, minority, older, and lack access to dental care.

Objective: The purpose of this study was to determine the prevalence of tobacco use among patients participating in the UNMC evening dental clinic sessions managed by the dental students from 2007-2010.

Methods: Data was collected from 547 dental patients records (N=547) generated by the students participating in the evening clinics at the College of Dentistry. The Institutional Review Board (IRB) approved a 14 item data collection form, which was utilized to gather data from patient treatment records regarding the patient's health history, medications, type of dental services received, and demographic information. Descriptive statistics and chi-square analysis was conducted.

Results: Eighty-five percent of the patients participating in the student managed, evening sessions were age 20-60 years old. Approximately 45.2 % of the patients participating in the evening

clinics used tobacco. Of the patients who received a teeth cleaning, restorations, or extractions, 30.3%, 45.1%, and 52.4% used tobacco respectively.

Conclusion: An opportunity exists to implement a tobacco cessation or counseling program as a part of the student managed evening dental clinic sessions.

Funding: HRSA Grant# D85HP20046

Abstract: #68

ORAL AND PHARYNGEAL CANCER RELATED HOSPITALIZATION IN NEW YORK STATE: TRENDS IN SPARCS DATA 2003-2008

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Objective: Oral and pharyngeal cancers are often diagnosed at later stages, thereby increasing the cost of treatment. However, the treatment charges incurred in hospitals have not been adequately reported. Therefore, a study was undertaken to determine the number of hospitalization and associated charges related to oral and pharyngeal cancers in New York State.

Method: We analyzed Statewide Planning and Research Cooperative System inpatient data to report trends in hospitalization and associated charges related to oral and pharyngeal cancer hospitalization. The ICD-9-CM diagnosis codes 140 to 149 were used to include all oral and pharyngeal cancers. The length of stay, total and per day charges of hospitalization, and charges by payer were summarized.

Results: Between 2003 and 2008, the number of hospitalizations ranged from 1676 to 1887 per year with average length of stay of 10 days. Two-thirds of the cases were males with mean age of 60 years. The total charges for hospitalization steadily increased from \$59.7 million in 2003 to \$97.8 million in 2008. Medicare and Medicaid were the primary payers for more than half of the total charges.

Conclusions: While there is no consistent trend in the increase in the number of hospitalizations, the total charges for the treatment of oral and pharyngeal cancers increased dramatically over the period of six years. Further studies are needed to understand the dynamics of hospitalization charges. This increasing burden of oral and pharyngeal cancers emphasizes the need to focus on prevention and early detection.

Funding: Funding: HRSA - 35001801

Abstract: #69

IMPACT EVALUATION OF A MULTI-COUNTY ORAL CANCER HEALTH LITERACY INTERVENTION

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Objectives: 1) To evaluate the efficacy of a brief multi-media based intervention to improve community members' health literacy on oral cancer; 2) To provide recommendations for improvement of this multi-media intervention for future cancer screening events.

Method: A six minute PowerPoint presentation on oral cancer health literacy was developed with voice over narration, and burned to a DVD. The DVD was shown to participants awaiting oral cancer screens during community health fairs within two counties in New Jersey. Prior to viewing the DVD, participants were given a brief pre-test that measured oral cancer knowledge, signs and symptoms, and willingness to lower risk behaviors. Once the DVD was viewed,

participants received their oral cancer screen by a dentist, and then completed the parallel post-test.

Results: Paired T-tests determined that a significant 17% improvement in knowledge scores from the pre-test to the post-test. Greatest improvement was seen in items measuring oral cancer risk behaviors.

Conclusions: This six minute DVD can be a cost effective method for improving community members' oral cancer health literacy. Since many of the participants were Spanish speaking, efforts are underway for developing a Spanish version of the DVD. Future efforts will focus on the use of "clicker technology" as an alternative strategy to paper-pencil efforts to obtain outcome data.

Funding: The New Jersey State Department of Health and Senior Services funded this initiative.

Abstract: #70

AN ASSESSMENT OF THE QUALITY OF SERVICES DELIVERED THROUGH JAMAICA'S PUBLIC DENTAL HEALTH SERVICES

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Background: Oral health is a critical aspect of the general health conditions in the Latin America and Caribbean region. Service delivery within the Jamaica's Government Dental Services is guided by the Ministry of Health's Oral Health Policy and Procedure Manual. However, the compliance of clinics with service delivery requirements has never been assessed.

Objective: Use locally relevant quality indicators to assess the quality of oral health care services delivered through Jamaica's Government Dental Services.

Methods: Indicators were developed in collaboration with the Oral Health Director at the Ministry of Health. A working group was established and the data collection instrument piloted. Data are expressed as frequencies and percentages.

Results: Half of the facilities had a surplus of dental staff, 17% had a shortage, and 33% had adequate staffing levels. Only 14% of the selected clinics throughout the country had greater than 80% of their equipment fully functioning. Overall, 28% of clinics exceeded the benchmark in all areas assessed for operable critical instruments. In the area of infection control, no clinic achieved the 80% benchmark for decontamination. In environmental design and cleaning, no region had more than 31% of the clinics exceeding the benchmark.

Conclusions: The outcomes of the study will be useful to the Ministry of Health to appeal for more funding in problem areas. Despite the problems that exist, the areas identified in the study as insufficient to meet quality standards can be improved upon to produce more positive quality outcomes.

Funding: T32-DE-009957

Abstract: #71

ENGAGING UNDERGRADUATE JOURNALISM STUDENTS IN PROMOTING ORAL HEALTH

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Objective: The project served to create an awareness and to promote an education campaign around oral health issues with senior journalism students upon graduation from West Virginia University (WVU).

Methods: Through the WVU Oral Health Initiative, the WVU Journalism Public Health Relations course was charged to creatively address oral health issues identified through a recently conducted population based telephonic opinion survey. The survey targeted samples of the public at large (consumers) and public health nurses. To obtain student input regarding their own oral health beliefs values and knowledge, a pre and post survey was administered using turning point software at the commencement of and completion of the project.

Results: West Virginians rank obesity and heart disease among the most serious health problems and dental health near the bottom. Utilizing these findings, the senior journalism students developed a multi-media campaign aimed at promoting oral health with specific target groups. The campaign included:

- Development of multiple web pages to compliment the primary WVU School of Dentistry site
- Development of an oral health promotional packet for school teachers alerting educators to free resources and linking the resource information to education content standard and objectives
- Development of promotional materials for use in WIC offices and with public health nurses

Conclusions: Much work including involvement of non-dental professionals in the promotion of oral health needs to be accomplished if effective communication is to be established motivating individuals to action. To change perceptions of oral health in West Virginia, links between oral health, obesity and heart disease need to be part of outreach programs.

Funding: Claude Worthington Benedum Foundation.

Abstract: #72

THE USE OF TECHNICAL ASSISTANCE TO STRENGTHEN ORAL HEALTH PROGRAMS

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Objective: To understand the importance of using technical assistance to enhance program effectiveness. To illustrate the strengths and weaknesses of the formats of technical assistance provided in the infrastructure development program.

Methods: The CDC/DOH utilized a mixed methods approach consisting of both qualitative and quantitative data sources. A paper-based exit survey that assessed satisfaction levels, perceived quality and impact of technical assistance was disseminated to program participants in person or via e-mail. Phone interviews were conducted with three state oral health programs who did not receive continued funding. Interviews were transcribed and analyzed using ATLAS.ti qualitative software. Common themes were identified within and across the data.

Results: Technical assistance provided by CDC and partners was a key component of the infrastructure development program and supported infrastructure development for program participants. CDC utilized various methods of technical assistance throughout the course of the infrastructure program including: grantee workshops and meetings, tools and guidance documents, site-visits and project officers. Program participants perceived project officer support as the most impactful mode of technical assistance. Site-visits were deemed as the most valuable and key piece of the technical assistance. Grantee workshops were useful for training, networking and information sharing opportunities. Tools and guidance documents were beneficial in assisting states with policy activities.

Conclusions: Funding alone is not enough to sustain a program. Technical assistance is an important element to strengthen oral health programs by enhancing the skills, expertise and capacity of program staff; ultimately ensuring progress and achievement of program goals.

Funding: Centers for Disease Control and Prevention (CDC)

Abstract: #73

EMPLOYING THE INTERNET FOR CONSUMER EDUCATION ON TOOTH PAIN AND SENSITIVITY

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Objectives: The purpose of this study was to evaluate the dental pain and sensitivity experience among users of a consumer oral health educational website and subscribers to an insurance company health newsletter, and to provide tailored information through a web-based health promotion website on the possible causes of the dental pain and sensitivity.

Methods: This study consisted of an initial survey and an evaluation survey that was completed after viewing the educational website.

Results: A total of 468 people who were experiencing tooth pain or sensitivity completed both the initial self-assessment and follow-up evaluation survey. Sixty-one percent reported that the information they received from the website would influence them to visit the dentist. Thirty-seven percent indicated what they learned would help them change how they handled their dental pain. Eighty-one percent of participants had dental insurance. Only 2% of persons with dental coverage used prescribed medications to manage their pain compared to 6% of those with no dental coverage. Further, persons with dental coverage used other methods of pain management (which could include their dental provider) at higher rates than those with no dental coverage. Five percent of respondents missed work or school because of their pain and almost 12% reported they often change their non-work activities because of pain.

Conclusion: Tailored online health information is effective in encouraging people with dental pain to change the way they are managing their pain. This provides a new opportunity for increasing public knowledge and consumer oral health related behaviors.

Funding: This project was supported by grants from the New York State Foundation for Science, Technology, and Innovation and Aetna Inc.

Abstract: #74

PATIENTS' PERCEPTIONS REGARDING THE IMPORTANCE OF UNDERSTANDING PROPOSED DENTAL TREATMENT

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Objective: The purpose of this study was to determine which components of dental treatment plans patients consider important.

Methods: A 100-item phone survey was developed to assess new University of Iowa College of Dentistry patients' oral health literacy. The survey was administered to a convenience sample of patients from the fourth year comprehensive student clinic after obtaining IRB approval (Fall 2010). Data were entered into an Excel database and analyzed using SAS 9.1.3. Descriptive and bivariate analyses were completed. Alpha=0.2.

Results: Forty subjects completed surveys. Respondents were the most interested in understanding the prognosis of their proposed treatment (90%) and home care instructions (88%). 70% of respondents were interested in understanding the cause of their dental disease, the total cost of their proposed treatment, and who will provide their treatment. Fewer respondents were interested in the materials that would be used during treatment (63%) and the number of appointments to complete treatment (50%). Subjects with a history of receiving regular dental care were more likely than infrequent attendees to believe that it was very important to understand their prognosis, cause of dental disease, and the materials and cost associated with completing treatment. Demographic characteristics and reading ability were rarely associated with differences in subjects' desires to understand their proposed treatment.

Conclusions: In general, patients are interested in understanding all aspects of their proposed dental treatment. Patients with a history of infrequent attendance may need additional time spent with them to explain dental treatment.

Funding: University of Iowa, Dental Research Grant

Abstract: #75

REVIEW OF STUDIES RELATED TO ORAL MANIFESTATIONS AS AN INDICATOR OF HIV/AIDS: A GLOBAL VIEW

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Objectives: HIV/AIDS is an epidemic that has been steadily rising globally. There is a proven association between oral manifestations and HIV/AIDS. 40-50% of HIV positive persons have oral fungal, bacterial or viral infections often occurring early in the course of the disease. One of the goals of the WHO oral health program is to co-ordinate and facilitate successful initiatives such as identification of most indicative oral manifestations of HIV/AIDS. The aim of this systematic literature review is to discuss published peer-reviewed literature conducted globally in the area of oral manifestations of HIV/AIDS.

Method: In order to collect materials for this review an extensive database search of PubMed, Google scholar, CINAHL, Medline, Health Sources, ERIC and Psychology and Behavioral Sciences Collection was conducted for the years 2005-2010.

Results: A lack of knowledge related to oral manifestations of HIV/AIDS is often observed globally. Furthermore there is a remarkable deficiency of awareness towards oral manifestations in people affected with HIV/AIDS. The current review replicates previous research findings portraying a consistent association between oral manifestations and HIV/AIDS. Results of this systematic review throw light on the existing oral health scenario globally.

Conclusion: The following recommendations are made: a) conducting similar studies in the area of oral health in HIV/AIDS affected populations, along with development of awareness programs globally b) identification of the most indicative oral manifestations of HIV/AIDS, c) dissemination of information on the disease and its prevention through every possible means of communication d) HIV/AIDS prevention through campaigns and community programs.

Funding: None

Abstract: #76

HEALTH CARE REFORM LAW AND ITS IMPLICATIONS FOR ORAL HEALTH

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Objective: To assess the 2010 health care reform law and the provisions that will have the greatest impact on the nation's oral health.

Methods: The Patient Protection and Affordable Care Act and its provisions were reviewed to identify those that have either direct or indirect implications for access to dental care and oral health. These provisions were then categorized into various domains depending on the populations it will affect, and what aspects of oral health it would impact. They were then analyzed to understand what barriers to access to oral health will be addressed by the PPACA, and which problems will remain unaddressed.

Results: The PPACA has several provisions that impact access to oral health both directly and indirectly. The major provisions that will have an impact are mandatory dental coverage for children, Medicaid expansion to include all adults below 133% FPL, children to be covered on parents' policies till the age of 26, workforce training grants and support for innovative workforce models, national oral health education and other preventive programs targeted towards vulnerable populations.

Conclusions: The health care reform law has several provisions that will improve the oral health of the nation if they successfully venture through intermediary steps to their implementation. The populations most likely to be affected are children, poor and underserved adults, pregnant women, elderly and minorities. These provisions ensure improved oral health by addressing the problem at various levels from educating the public to expanding the capacity of the oral health care delivery system.

Funding: None

Abstract: #77

RETENTION RATES COMPARISON OF DENTAL SEALANTS PLACED IN 1ST PERMANENT MOLARS WITH TWO ISOLATION TECHNIQUES IN A COMMUNITY SEALANT MOBILE DENTAL PROGRAM

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Success of dental sealants may be influenced by the operator skills, isolation, surface preparation, and placement technique among others. This study compared retention rates of dental sealants placed on upper and lower 1st permanent molars using two different isolation techniques.

Materials and Methods: Seal Indiana is a mobile dental program that provides preventive services including dental sealants. Both faculty and senior dental students (under faculty supervision) have provided these services since 2003. Up until 2006 the isolation technique included use of cotton rolls, dry angles, and high and low volume suction. From 2007 to 2010, the Isolite™ System has been used as the isolation technique. The preparation of teeth prior to sealant placement, the sealing criteria, and the sealant brand have remained identical since 2003. Retention rates of sealants placed using either of the two isolation methods were compared using a two sample t test to determine proportion of failed sealants.

Results: During the 2003-2006 period, 8709 sealants were placed and 740 evaluated: 165 were replaced, with a 78% retention rate. During the 2007-2009 period 4837 sealants were placed and

2061 were evaluated: 603 were replaced, with 71% retention rate. Differences showed that sealants placed with cotton rolls had better retention rates on teeth 3 and 14 than sealants placed using the Isolite system.

Conclusion: Isolation approaches did accrue some significant differences for dental sealants placed in upper 1st permanent molars as determined by retention rates in a non-randomized retrospective assessment undertaken in an educational, service/learning, outreach community program.

Funding: None

Abstract: #78

GIVE KIDS A SMILE

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Objective: An analysis and summary of the Give Kids A Smile program/event data over the last 5 years is presented. The program was envisioned with two components: 1) dental team members donate large amounts of free care on a single day and brand activities as GKAS events; the ADA could aggregate those charitable endeavors more effectively; 2) communicate results of the campaign and the message that charitable activities do not constitute intervention sufficient to meet oral health needs of low-income children.

Methods: In 2004, the program began collecting data. The system provided little valuable information, poor research platform and no historical trend data. In 2010, a new GKAS Enrollment Application was launched that retain past year's information, separate events from programs, and users enter planned and actual event data separately. A Data Mart was designed to store historical and current data. With its 10 year anniversary approaching, the ADA wants to share the successes, struggles and misconceptions of the program.

Results: Over the past 5 years, program participation was consistent. But, in 2010 the percentage of children receiving clinical and preventative services declined whereas education and screening programs increased. It must be noted that these trends could be influenced by differences in data reporting in 2010 vs. the past 5 years.

Conclusions: The new GKAS Enrollment Application allows for analysis of programs/events on a macro and micro level and provides communities with valuable gap and need data useful for planning more effective programs/events for children in need of oral care.

Funding: None

Abstract: #79

COMPARISON OF DENTAL ESTHETIC PERCEPTIONS OF YOUNG ADOLESCENTS AND THEIR PARENTS

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Objectives: To compare dental esthetic perceptions of 13 year old adolescents with those of their parents and to assess their associations with fluorosis.

Methods: 550 subjects in the Iowa Fluoride Study participated in dental examination at the age of 13. They were assessed by trained and calibrated examiners for fluorosis. Adolescents and their parents completed a questionnaire concerning their satisfaction with adolescents' dental appearance. McNemar and Bowker tests of symmetry were used for comparisons of esthetics ratings between parents and adolescents. Comparison of satisfaction between fluorosis cases and non-cases were made using Cochran-Armitage Trend and Fisher's Exact tests.

Results: Excluding subjects with orthodontic treatment, 376 adolescents were included. 26% had definitive fluorosis mostly at mild level. 15% of adolescents were dissatisfied with dental appearance. Main concerns of adolescents were tooth color (45%) and alignment (35%). Compared to parents, adolescents were significantly less satisfied with overall appearance ($p < 0.001$) and color ($p = 0.048$) and more concerned about tooth shape ($p = 0.002$). Fluorosis was not significantly associated with adolescents' satisfaction with overall dental appearance, tooth color, or areas of concern ($P > 0.05$) whereas parents of subjects with maxillary incisor/canine fluorosis were more dissatisfied (compared to parents of those without fluorosis) with overall appearance ($p = 0.014$) and overall color ($p < 0.001$), and also more concerned about color ($p = 0.005$) and color irregularities ($p < 0.001$).

Conclusion: Adolescents had generally less satisfaction with overall appearance and tooth color and were more concerned with tooth shape than parents. Fluorosis was not associated with adolescents' esthetic satisfaction level whereas it was related to parental satisfaction.

Funding: Supported by NIH grants R01-DE09551, R01-DE12101, M01-RR00059, the Wright-Bush-Shreves Endowed Research Professorship.

Abstract: #80

BEST PRACTICES FOR INTERGRATING ORAL HEALTH AND SCHOOL HEALTH ASSOCIATION OF STATE & TERRITORIAL DENTAL DIRECTORS SCHOOL AND ADOLESCENCE COMMITTEE/BEST PRACTICES COMMITTEE

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ASTDD SAOH Committee, Throughout the /US, United States

Objective: Integrating Oral Health into Coordinated School Health

Method: The poster describes the mission of the Association of State and Territorial Dental Directors (ASTDD) School and Adolescent Oral Health Committee, which promotes the intergration of oral health into school health through the use of evidenced- based practices being incorporated into the school health curriculum.

Results: The poster is an example of an innovative approach (the CDC 8 component model) and provides the attendees with tools and resources for intergrating oral health into school health. The SAOH Best Practice Approach Report, which is one of the ASTDD resources (we have a flyer on it with the website to view it) is shared with the poster presentation. Data and measurable outcomes on successful programs from across the nation that are intergrating oral health into coordinated health are found within the report.

Conclusion: The comprehensive programs- models featured include providing services through school based health centers.

Funding: None

Abstract: #82

APPLICATION OF GEOGRAPHIC INFORMATION SYSTEMS TO STUDY ASSOCIATION BETWEEN ORO-PHARYNGEAL CANCER AND ACCESS TO TREATMENT IN MARYLAND

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Objective: This study utilized Geographic Information Systems (GIS) to examine the spatial pattern of access to care for oro-pharyngeal cancer (OPCa) in Maryland, and assess its association with OPCa incidence and mortality and various socio-economic-demographic factors.

Methods: A point map layer of cancer treatment centers in Maryland was created to study their distribution. County/Baltimore-city-level age-adjusted OPCa incidence and mortality data (2003-2007) for Maryland was analyzed for association with all measured factors and hospital distribution (Pearson's correlation). Data sources included Maryland cancer registry, US Census Bureau, and Geographic Names Information System. Spatial-statistical analyses using SAS v9.2, SatScan™ and Epi-info™ are being conducted to examine these associations across all counties in Maryland.

Results: 17 of 23 Maryland counties contain accredited cancer treatment centers. Nine have only one center, whereas Baltimore County has 11 centers. OPCa incidence rates ranged from 8.2 (Montgomery and Prince George's counties) - 13.2 (St. Mary's county) per 100,000 population. Baltimore city had the highest OPCa related mortality (range 0.1-4.4). Preliminary analysis of the seventeen counties having cancer centers showed high correlation between number of cancer hospitals in counties and number of OPCa cases ($r=0.75$) and OPCa deaths ($r=0.68$). Median income was not highly correlated with number of OPCa cases ($r=0.11$) or deaths ($r=0.38$). Detailed spatial analyses including distance analysis are ongoing.

Conclusions: GIS is a useful tool for exploring spatial attributes of OPCa care delivery systems. Cancer centers tended to cluster in urban counties and their number appears to be associated with reported OPCa incidence/mortality rates.

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Abstract: #83

BURDEN OF ORAL CANCER CASES ATTRIBUTABLE TO SMOKELESS TOBACCO USE IN CAMBODIA: FINDINGS FROM A NATIONAL PREVALENCE SURVEY

Presenter: Yashashri Urankar, BDS, MPH, Texas A&M Health Science Center Baylor College of Dentistry; Danny Kwon, MPH, Loma Linda University; Jayakaran Job, Dr.Ph, Loma Linda University; Pramill Singh, Dr.Ph, Loma Linda University

Objective Determine the health burden of oral cancer due to smokeless tobacco use in Cambodia.

Methods: A stratified three-stage cluster sample of 13 988 adults aged 18 years and older from all provinces in 2005–2006 was used. Participants completed an interviewer-administered survey that contained items on tobacco use and health and lifestyle variables.

Findings: Smokeless tobacco use in the form of a betel quid (areca nut, tobacco, limestone paste) was predominantly a habit among women and we used sampling weights to estimate that were used to estimate that 560 482 women (95% confidence interval, CI: 504 783 to 616 180) currently chewed tobacco (typically as a component of betel quid). Age-standardized prevalence of oral cancer for categories of chewing tobacco was (per 100,000 women) 1.3 cases for 0 g/day, 2.3 cases for >0 to 10 g/day, and 5.7 cases for > 10 g/day. The odds ratio of oral cancer per 10 g of chewing tobacco was 1.78 [95% CI 1.17, 2.70]. We used the age-specific prevalence data to estimate incidence of oral cancer. Based on these incidence data we found an etiologic fraction for smokeless tobacco use of 1.00 – indicating that almost all oral cancer in Cambodia was attributable to smokeless tobacco use.

Conclusion Smokeless tobacco is the predominant form of tobacco use among Cambodian women and is the primary contributor to the oral cancer burden of that nation. Oral cancer prevention can be achieved through cessation and prevention of betel quid use among Cambodian women.

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Abstract #85

EFFECTS OF EARLY PREVENTIVE DENTAL CARE ON DENTAL OUTCOMES AMONG MEDICAID ENROLLED CHILDREN

Presenter: Heather Beil, PhD, MPH, University of North Carolina School of Dentistry

Objective: Professional guidelines recommend a preventive dental visit by 12 months of age, but there is not strong evidence to support this recommendation. This study determines the effects of the timing of a first preventive visit before age 5 years on caries-related treatment, expenditures and dental caries history.

Methods: This retrospective cohort study used claims data from 40,915 NC children enrolled in Medicaid (1999-2006), 7,329 of whom were in an oral health surveillance database of kindergartener students (2005-2006). We compared the number of caries-related treatment procedures, expenditures and caries experience (dmft) for children who had an early preventive visit to children with visits at older ages using a negative binomial model, a generalized linear model, and a zero-inflated-negative-binomial regression model, respectively. All models controlled for child and county level covariates and adjusted for selection bias with propensity score weights.

Results: Children with a preventive visit at age 25-36 months had a higher rate of treatment (Incidence-Density-Ratio, 1.15, 95% CI, 1.04-1.27) and expenditures than children with a first visit by 18 months. No differences were observed in dmft by age of visit. Children who had early preventive visits appeared to be at a higher risk for poor oral health and treatment.

Conclusions: Findings support the recommendation to give priority to Medicaid children at high risk for caries before 3 years of age when dental workforce is limited, but children at lower risk can delay a first preventive visit.

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Abstract #86

RACIAL AND ETHNIC DISPARITIES IN ACCESS AND UTILIZATION OF DENTAL SERVICES AMONG CHILDREN IN IOWA: THE LATINO EXPERIENCE

Presenter: Alejandra Valencia, University of Iowa College of Dentistry

Objectives: To identify factors associated with the use of preventive dental services in Iowa children and to understand the role of Latino acculturation in the use of dental care.

Methods: The study used data from the Iowa Child and Family Household Health Survey (IHHS) 2005, which was a state-wide population-based telephone survey that used a combination of random digit dialing and targeted phone numbers. Participants in this study were 3,288 families with children 3-17 years of age. Latinos' language chosen for the interview (English or Spanish) was used as a proxy measure for acculturation. A conceptual framework for Latinos oral health care was used to identify factors related to the used of care for this population. Multiple logistic regression models were developed to identify factors associated with having a dental check-up visit during the past year and to assess the association of race/ethnicity with the use of dental services.

Results: After controlling for several factors, having a regular source of dental care, having a dental need, dental insurance status, family income, rating of child dental health, children age and brushing habits were associated with having a dental visit last year for Iowa children. Findings suggest an indirect association of race/ethnicity

with the use of dental services through other related factors: having a regular source of dental care ($pd^{0.001}$), dental insurance status ($pd^{0.001}$), and family income ($pd^{0.001}$), as significant differences were found between the two Latino groups.

Conclusion: Individual antecedent factors, which lead the intention of the individual to seek dental care, were identified as the most significant factors associated with the use of dental care for children in Iowa. Less acculturated Latinos consistently showed poorer outcomes compared to other racial/ethnic groups. Differences found between more and less acculturated Latinos suggest that the classification of them as one Latino ethnic group should be avoided. Additional findings emphasize the need for studies to clarify the complex role of race/ethnicity with the use of dental services in order to develop interventions that will effectively address disparities affecting minority children.

Funding: None

Abstract #87

OHIO DENTISTS' AWARENESS AND ADOPTION OF THE DENTAL HOME CONCEPT

Kimberly J. Hammersmith, DDS, MPH; Mark D. Siegal, DDS, MPH; Homa Amini, DDS, MPH, MS; Paul S. Casamassimo, DDS, MS; Dr. Hammersmith is a graduate student and resident, the Ohio State University and Nationwide

Purpose: The "dental home" has been promoted as a strategy to prevent early childhood caries. Although the evidence base for this assertion consists largely of expert opinion, promoting adoption of the dental home concept is now policy of several national dental professional associations. No studies, however, have measured general and pediatric dentists' awareness and understanding of the concept or their willingness to incorporate its characteristics into their current practices for children ages 5 and under. This study measured Ohio pediatric and general dentists' awareness of the dental home concept and the extent to which their practices included the characteristics listed in policy statements that describe it (i.e., accessible, compassionate, family-centered, comprehensive, culturally effective, coordinated, and continuous).

Methods: A pre-tested 20-question survey was distributed to all Ohio pediatric dentists ($n=156$) and a random sample of approximately 20% of general dentists ($n=800$), with adjusted response rates of 75 percent and 65 percent, respectively. Results were analyzed for statistical significance and assessed for clinical importance.

Results: On average, general dentists and pediatric dentists reported that their practices incorporated 79 percent and 90 percent of the measured dental home characteristics, respectively. For the most part, dentists answered that they are not planning to incorporate the dental home aspects they do not currently provide. Pediatric dentists are more likely to be accessible to Medicaid patients and to those with special healthcare needs. Pediatric dentists also provide more comprehensive and coordinated care. Most pediatric dentists (78 percent) but relatively few general dentists (18 percent) had prior knowledge of the term "dental home." More recent graduates were more likely to be familiar with the concept.

Conclusions: Although largely unaware of the concept, most Ohio general dentists report to already serve as dental homes for children ages 5 and under. Ohio pediatric dentists are more likely to incorporate dental home characteristics in their practices than general dentists and are more likely to be familiar with the concept. Dentists whose practices do not largely incorporate dental home characteristics already may be unlikely to do so in the future.

Funding: Research supported by The Research Institute at Nationwide Children's Hospital Intramural Grant #249710.

Abstract #88

DENTAL HYGIENISTS' AWARENESS AND SUPPORT FOR EXISTING AND NEW MIDLEVEL PROVIDERS

Presenter: Jennifer D. Sanders, Case Western Reserve University School of Dental Medicine

Purpose: The study investigated the scope of services and satisfaction in providing them as well as awareness and support of dental hygienists to the existing and proposed midlevel providers: Expanded Function Dental Auxiliary (EFDA), Dental Therapist (DT), and Advanced Dental Hygiene Practitioner (ADHP).

Methods: The study sample consisted of all 676 dental hygienists from Cuyahoga County, Ohio. Data were collected by a self-administered mail questionnaire which assessed the scope of services provided by the dental hygienists, their levels of satisfaction in providing such services, and who they think should be providing these services. Respondents' awareness and support for midlevel providers were assessed on a scale of 1 to 10.

Results: After two mailings, four weeks apart, sixty one surveys were returned as undeliverable and we received 158 completed surveys for an effective response rate of 26%. Prophylaxis and dental health education were the two most commonly performed services by the study subjects: 121 and 111 times/month. While subjects were most satisfied in performing these services, they were least satisfied with intra-oral bite registrations for diagnostic models and also with repair, construction and finishing of prosthetic devices. Respondents' average ratings for the knowledge levels were 2.8+2.6 for DT, 4.0+3.4 for ADHP, and 8.1+2.6 for EFDA. Respondents were supportive of the EFDA position (7.7+2.9), followed by ADHP (7.0+3.4), and DT (4.0+3.4).

Conclusions: Dental hygienists in the study were mostly knowledgeable and supportive of EFDAs, ADHP, and DT in that order; findings indicate a need to improve respondents' awareness of the newly proposed midlevel providers.

Funding: None

Abstract #89

AAPHD UIC-GOLDIE'S PLACE STUDENT RUN DENTAL CLINIC

Presenters: Brian Homann and Rana Shahi, University of Illinois at Chicago School of Dentistry

Students from the AAPHD student chapter at the University of Illinois at Chicago (UIC) College of Dentistry have collaborated with Goldie's Place to provide free dental care to the homeless community of Chicago in the context of the nation's first completely student-run dental clinic. Goldie's Place provides employment preparation services and skills for homeless adults, including a dental clinic equipped with four operatories. Seventy-five students volunteer their time on Saturday and Sunday mornings to provide dental care completely free of charge to the program's participants. This program is incredibly unique because every aspect of the clinic has been designed and run by student volunteers. The way the clinic runs, including scheduling, and all other aspects of clinic operation were developed by students, and every daily task including front desk, scheduling, radiology, sterilization, lab technician, supply coordination, assisting, and providing care is performed by a student. Currently, the clinic is able to provide oral hygiene instruction, digital radiographs, prophylaxes, cleanings, extractions (simple and surgical), direct restoration, root canal treatment, "flippers", denture repairs, partial dentures, and full dentures and has provided \$63,149 worth of free dental services.

Brian Homann and Rana Shahi, the two students being nominated for this award, have both performed every job from front desk to provider, but more importantly, they have been the driving forces of the program's expansion. Brian and Rana are also responsible for organization of volunteers, fundraising, setting up schedules, finding faculty volunteers, and weekly clinic management.

Funding: The Tarrson Award from the American Dental Association Foundation.

Abstract #91

ADDRESSING HUNGER AND HEALTH: ASSESSMENT OF A GARDEN INITIATIVE AT THE HURON VALLEY BOYS AND GIRLS CLUB

Presenter: Elizabeth Brown, Anja Hoffstrom, Brandi Johnson

Background: The Boys and Girls Clubs of America (BGCA) is a non-profit organization that provides programs for school-aged children, with a focus on becoming responsible adults. Because members typically come from low-socioeconomic backgrounds, food insecurity is often a concern. Food insecurity can contribute to behavioral and health problems, including those associated with oral health. Community gardens can be one solution to this issue.

Purpose: This study assessed the outcomes of a community garden initiative at the Huron Valley Boys and Girls Club (HVBGC) Ypsilanti, Michigan, including cost of initiative, yield and value of the produce grown, club member participation and how the yield was used.

Methods: An existing community garden was expanded and 21 fruits and vegetables were planted, maintained and harvested. The produce was weighed and tracked along with club member participation, including those fed. Monetary value was determined by comparing supermarket value of the yield to the overall cost of the garden. Health education was integrated in all facets of this seven-month program.

Results: The cost of the garden initiative was \$571.36. The yield from the garden was 423 pounds, valued at \$343.37. During 26 days of Garden Club, 29% of HVBGC members present participated. An average of 16 members was fed each week over the 15 sessions where meals/snacks were prepared. The average of HVBGC members present and fed was 29%. Of the 423 pounds harvested, 77% was used to prepare meals/snacks for HVBGC members, 21% was donated and 2% was lost to spoilage.

Conclusions: The garden initiative addressed the issue of food insecurity by utilizing garden yield to feed HVBGC members. Health education was integrated, also addressing BGCA curricular needs. Additional research on community gardening should focus on socioeconomic benefits and effects on quality of life.

Funding: University of Michigan Ginsberg Center Professional Development Fund American Dental Hygienists' Association Rosie Wall Community Spirit Grant.

Abstract #92

CRALL DAY HOUSE, LOUISVILLE, KENTUCKY

Presenter: Catherine E. Holtman, East Tennessee State University College of Clinical & Rehabilitative Health Sciences

The Academy of Pediatrics (2003) reports that human dental flora is site specific, and an infant is not colonized with normal dental flora until the eruption of the primary dentition. Mothers who have a high caries incidence can pass the cariogenic bacteria to their infants and predispose the infant to a high caries risk (American Academy of Pediatrics, 2003). The American Academy of Pediatrics (2003) recommends decreasing dental decay by assessing the mother's caries risk, educating about oral hygiene care for mother and infant/child, optimizing systemic and topical fluoride use, and implementing nutritional counseling. The Cralle Day house located in Louisville, Kentucky is a home dedicated to helping pregnant and parenting teenagers. Six teenage mothers ranging in age from 15-17 years participated in the community dental health project. To determine the oral health care needs of the target group, a written medical/dental survey and oral assessment was conducted. The assessment concluded that 83.3% had a high plaque index and moderate

generalized inflammation. In addition, 50% of the teenage mothers had visual decay present. Analysis of all data collected supported the need for dental education in this target group to help decrease the decay risk for the mother and their infant/child. With learner outcomes identified through the assessment process, a plan to educate through several different learning modalities was constructed. The results of the project demonstrated increased dental knowledge for mother and infant/child, nutritional counseling, increased knowledge of fluoride application and usage, and the knowledge to create a "Dental Home" (American Academy of Pediatrics, 2003). In addition, each mother was given the dental homecare tools to ensure quality homecare for themselves and their infant/child.

Funding: None

Abstract #93

ORAL HEALTH MADNESS IN A COMMUNITY-BASED SPECIAL ADULT POPULATION

Presenter: Denise Claiborne & Marlana Gravely, Old Dominion University School of Dental Hygiene

According to the 2000 census, over 50 million Americans have a cognitive, physical or developmental disability that prevents normal and independent functioning Cinotti, et al, (2005). Intellectually disabled individuals are diagnosed when three criteria are met: onset occurs before the age of 18, impaired cognitive functioning, and significant limitations in adaptive behaviors Wikipedia Website, 2010. A higher incidence of oral malformations such as delayed tooth eruption patterns, periodontal infections, bruxing and grinding, and dental caries may be evident in individuals who are intellectually and developmentally disabled (IDD) Wilkins, 2009. Because oral developmental malformations are common, basic dental hygiene care such as daily plaque biofilm removal is essential in preserving attaining a positive oral health status. The purpose of the Community-Based Special Adult Oral Health Project is to provide oral hygiene instruction to mild to moderate high functioning adults with IDD to improve their oral health skills and status. A complete assessment of the five adult IDD target population was completed at Eggleston Services Business Fulfillment Center, a plan with goals and objectives was created utilizing four assessment tool that will aid in the evaluation of the projects success, the program was implemented for a five-week period and then evaluated by utilizing both formative and summative data. Results determined that improvement in the oral health status of individuals with IDD is an on-going concern with this population. The progress and improvement to increase five adults with IDD oral health status was minimal. Notwithstanding, however, the experience for both student and adult with IDD was invaluable and immeasurable.

Funding: None

Abstract #94

BARRIERS PREVENTING ANN ARBOR DENTISTS FROM VOLUNTEERING AT THE WASHTENAW CHILDREN'S DENTAL CLINIC

Presenter: Miranda Marion, Michelle Uekihara & Sabrina Williams, University of Michigan Dental Hygiene Program

Background: Due to the failing economy, Americans are not only losing their jobs, but their health care benefits as well. The U.S. Census Bureau estimates that twentyone percent of Washtenaw County lives in poverty and eighteen percent or fifty-eight thousand of these residents lack dental insurance¹. Access to care has become nearly impossible for those effected by the economy. Free clinics now play an important role in access to healthcare for those that are uninsured. The Washtenaw Children's Dental Clinic (WCDC) is a free clinic that provides care to the uninsured children of Washtenaw County. The WCDC is a nonprofit clinic that relies on dental volunteers to donate

their time and services. Volunteers, however, are hard to come by. The greatest need of the clinic is dental volunteers to provide care and oversee the clinic.

Purpose: The purpose of this project is to determine the barriers preventing Ann Arbor dentists from volunteering at the WCDC.

Methods: A survey with cover letter and self-addressed stamped envelope was mailed to 119 dentists of Ann Arbor. The dentists were given approximately two weeks to complete and return the survey.

Results: Once the surveys were returned, a 48% response rate was achieved. The data was analyzed to determine the barriers affecting volunteerism. The data showed that 42% of dentists reported time as a barrier of volunteering. It was also found that 23% reported cost and lack of awareness of the clinic as barriers. The results also showed that 50% of the respondents were interested in future volunteerism at the clinic. On the other hand, 50% still showed no interest.

Conclusion: Time, cost and lack of awareness are the barriers preventing dentists from volunteering at the WCDC. Time was found to be the most common barrier preventing volunteerism. Now that the dental community is aware of the clinic's need for volunteers, it is hopeful that the survey will help recruit more volunteers for the clinic to provide care to the children of Washtenaw County.

Funding: None

Abstract #96

DENTAL CARIES AMONG CHILDREN ATTENDING HEAD START CENTERS IN SAN ANTONIO, TEXAS

Presenter: Marguerite Laccabue, MPH, DDS, University of Texas Health Science Center at San Antonio Dental School

Objectives: The oral health status of San Antonio Head Start children is described with comparisons for caries experience and dental treatment needs of children based on the geographic location of each Head Start center.

Methods: Secondary data was gathered from all San Antonio Head Start Centers after dental screenings were performed on all children during the 2009-2010 school year. All centers were grouped by the five different contracting agencies and according to their Dental Health Professional Shortage Area (HPSA) score. Statistical analyses was performed comparing caries experience, untreated decay, and urgent care needs among those centers with the same supervising agency and for those centers with identical HPSA scores. ($p < .05$)

Results: The data indicated that 50.8% of San Antonio Head Start children had caries experience. Overall, 32.1 % of the children had untreated decay with 5.2% of all children needing urgent care. Several agencies had statistically significant higher levels of untreated decay and higher levels of caries experience when compared to other agencies as well as higher needs for urgent care. When individual centers were grouped by Dental HPSA scores, statistically significant differences were also seen for the prevalence of untreated decay, caries experience and need for urgent care.

Conclusions: Differences in oral health status do exist among children attending different Head Start centers in San Antonio. Those children attending centers located in areas with higher Dental HPSA scores (higher shortage of dental professionals) had a higher prevalence of untreated decay and a greater need for urgent treatment.

Funding: None

Abstract 97

EARLY CHILDHOOD CARIES RELATED VISITS TO EMERGENCY DEPARTMENTS AND AMBULATORY SURGERY FACILITIES IN NEW YORK STATE

Presenter: Sanket R. Nagarkar, BDS, MPH, Bureau of Dental Health, New York State Department of Health

Objectives: To assess the extent of early childhood caries (ECC) related visits to emergency departments (ED) and ambulatory surgery facilities (ASF) in children younger than six years of age and estimate the charges incurred for treating these visits in New York State from 2004 to 2008.

Methods: Data from 2004 to 2008 were obtained from the Statewide Planning and Research Cooperative System in New York State. We analyzed the data on 25,622 visits related to ECC and diseases of the pulp/periapical tissues (ICD-9-CM codes 521.00-521.09 and 522.0-522.9) in children younger than six years of age. Descriptive statistics and rates by selected indicators were calculated along with the total and per visit treatment charges.

Results: In 2008, 5,683 ECC related visits to ED and ASF were identified. A majority of these visits (85%) were to the ambulatory surgery facilities. Between 2004 and 2008, visit rates increased from 299 to 395 per 100,000. The total annual treatment charges increased from \$18.4 million to \$31.2 million with the per visit charges increasing from \$4,237 to \$5,501.

Conclusions: ECC related visits to ED and ASF and the associated treatment charges in children younger than six years of age in New York State increased substantially between 2004 and 2008. Future studies should assess the possible reasons for this increase and also determine effective strategies to prevent ECC.

Funding: HRSA-35-0018-01

Abstract 98

ASSOCIATION BETWEEN DIABETES AND TOOTH LOSS: ANALYSIS OF NHANES DATA

Presenter: Manthan H. Patel, BDS, MPH, Bureau of Dental Health, New York State Department of Health

Objective: Edentulism or tooth loss has a negative impact on quality of life. While poor oral health is associated with diabetes, the relationship between diabetes and tooth loss in the general population has not been adequately studied. This paper examines National Health and Nutrition Examination Survey data to better understand the association between diabetes and tooth loss in the United States.

Methods: A cross-sectional continuous NHANES data from 2003-04 was used for the analysis. The data on demographics, oral examination, and self-reported diabetes were analyzed for 2,510 subjects representing civilian, non-institutionalized US population who were 50 years and older. Edentulism and tooth loss were examined as outcome variables. Regression analyses were used to assess the association between diabetes and tooth loss.

Results: The prevalence of edentulism was 14% and 28% among the non-diabetic and diabetic population, respectively. The multiple logistic regression analysis revealed that persons with diabetes were more likely to be edentulous when compared to non-diabetic persons [Adjusted OR = 2.18; 95% CI: 1.17-4.07]. Among dentate persons, diabetics had more tooth loss than the non-diabetic population [$=9.8$ (SE 0.67), $=6.7$ (SE 0.29); ($p < 0.0001$)]. This difference persisted even after adjustment for other variables. Age, race/ethnicity, level of 3 education, annual family income, and smoking were also significantly associated with tooth loss.

Conclusions: Diabetes was independently associated with edentulism and tooth loss. This analysis supports the need for identifying diabetic individuals and making appropriate referrals for dental care. This action will serve to improve oral health and prevent systemic complications among diabetics, in an effort to improve quality of life.

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