Title: Opioid Analgesic Prescribing Practices of US Dentists: Results of a Survey

Objectives:
1. Discuss known research outcomes regarding opioid prescribing habits of U.S. dentists.
2. Describe the results of a web-based survey of the opioid prescribing habits of U.S. dentists.
3. Identify endodontic and dental extraction procedure-specific analgesic prescriptions.

Methods:
The project was approved by the Saint Louis university IRB. Using an online survey (Qualtrics), 16,859 U.S. dentists from a commercially-obtained list of e-mail addresses were invited to answer a brief scenario-based survey of their prescribing habits.

Results:
Highlighted results include:
• 51.4% of dentists ONLY prescribe a non-narcotic analgesic for post-operative pain relief for simple tooth extraction and most commonly prescribe ibuprofen (83.0%).
• 23.0% of dentists prescribe a narcotic analgesic for post-operative pain relief for simple tooth extraction and most commonly prescribe hydrocodone (66.7%).
• For surgical tooth extractions, 44.2% of dentists ONLY recommended non-narcotic medications, while 39.4% recommend BOTH a narcotic-containing and a non-narcotic medication.
• For root canal treatment of teeth WITH preoperative pain, 68% of dentists prescribed only non-narcotic medications, 19.4% prescribed narcotic medications and 12.6% did not recommend any medications.
• For root canal treatment of teeth WITHOUT preoperative pain, 58.3% of dentists prescribed only non-narcotic medications, 5.9% prescribed narcotic medications and 35.8% did not recommend any medications.

Conclusions:
Individual prescribing habits and procedure-specific prescribing practices were documented. Ibuprofen was the most commonly prescribed or recommended non-narcotic analgesic and hydrocodone was the most commonly prescribed narcotic analgesic. These findings generally agree with those of other research modalities on opioid prescribing practices of U.S. dentists.

Source of Funding: none

Presenting Author: Karl Woodmansey, DDS, MA, Saint Louis University, Center for Advanced Dental Education
Title: Improving Access to Preventive Oral Care for High-risk Children in Minnesota

Objectives: Define Childhood Caries Prevention. Describe how the team of Minnesota Oral Health Project (MNOHP) penetrated the 80 counties of Greater (rural) Minnesota with education about oral health. Compare how Primary Care Medical Providers (PCMP) are addressing Childhood Caries Prevention today with previous practices. Assess Minnesota Department of Human Services (MN DHS) data before and after fluoride varnish requirement.

Methods: High risk children in Minnesota have limited access to dental care; consequently, prevention of cavities is essential and caries prevention must be offered by other health care professionals. Strategies of MNOHP include training of PCMP to implement Childhood Caries Prevention in every primary care medical clinic in Minnesota. Childhood Caries Prevention includes a gross oral evaluation, risk assessment, anticipatory guidance, and quarterly fluoride varnish application. MN DHS initially offered reimbursement for PCMP to apply fluoride varnish during Child and Teen Check-ups (C&TC) examinations. Since March 2018, MN DHS has required the application of fluoride varnish by PCMP in order to qualify for full reimbursement for C&TC exams.

Results: Fluoride varnish applications for high-risk children in MN have increased from 2015 to 2017 statewide in dental, PCMP, and community health provider categories and those applied by PCMP in Greater MN have increased most. Overall, fluoride varnish applications for high-risk children are provided more by non-dental providers than by dental providers.

Conclusions: PCMP are providing Childhood Caries Prevention services to high-risk children with increasing frequency. This presentation will demonstrate how Childhood Caries Prevention by PCMP is successful and can be replicated nation-wide.

Source of Funding: Bentson Foundation

Presenting Author: Cris Gilb, MHA, RN, PHN, Minnesota Oral Health Project; Author Amos Deinard, MD, MPH, Minnesota Oral Health Project
Title: Awareness of dental therapists as a new oral health care provider

Objectives: Since 2009, dental therapists have been educated in the State of Minnesota as advance practice dental providers. While dental therapists have been slowly gaining acceptance within the dental profession, little is known about the public’s awareness of this new professional. This study explored the awareness of dental therapists by respondents’ geographic location.

Methods: Data were collected from 1897 adults during the 2017 Minnesota state fair and during four 2018 county fairs through completion of questionnaires. Descriptive Statistics were performed to describe study participants’ awareness of dental therapists by geographic location.

Results: Respondents came from 63 of the state’s 87 counties. Roughly 27% of respondents correctly identified dental therapists as a licensed provider while over 95% knew of dentists. This difference was irrespective of their geographic location. Majority (>90%) of the participants have utilized a dentist and dental hygienist for oral healthcare services, where less than 5% of the survey respondents reported utilizing a dental therapists.

Conclusions: Findings demonstrate a crucial need for promoting the awareness of dental therapists among the public as one mechanism for enhancing the utilization of their services. The low awareness and utilization rates of dental therapists can be attributed to the recency of the new profession. It took decades for the public to be aware of and routinely utilize other professionals such as Nurse Practitioners. Thus, innovative and evidence-based targeted interventions should be considered as a means to promote the awareness of dental therapists to improve utilization rates.

Source of Funding: None

Presenting Author: Dina Elyamany, RDH, Metropolitan State University; Author Karl Self, DDS, MBA, University of Minnesota School of Dentistry
Objective: The purpose of this was to explore the oral and mental health challenges for a sample of refugees in Lowell, MA, during their fleeing period, and after arriving in the US.

Methods: Using a snowball sampling method, we recruited 12 informants representing countries from Syria, Iraq, Sudan, Afghanistan and Zimbabwe. Inclusion criteria included: adults >18 years who were current refugees within the last three years; and who spoke Arabic or English. We asked about oral health behaviors, access to dental care, and emotional/social behaviors within the context of reasons why refugees left their country and their transition from their home country to the US. The semi-structured interviews were audiotaped and transcribed verbatim. Utilizing a phenomenological qualitative approach, two coders identified codes and identified themes.

Results: 7 male and 5 female informants aged 21 to 66 were interviewed. Key findings included themes about 1. knowledge regarding access to oral-health care in country of origin and in US; 2. cultural views about seeing providers, current diet and oral hygiene practices; and 3. attitudes about their current emotional health and behaviors and attempts of group social integration.

Conclusions: Themes identified in our study suggest that refugees have attitudes and experiences that contribute to their perspectives on oral health care. Understanding how the various health factors interact is crucial step towards understanding how to target the risk factors to optimize health outcomes for this high-risk population. Further, this study provides formative data to design a comprehensive oral health needs assessment in Lowell, MA.

Source of Funding: Karam foundation, a non-profit organization dedicated to building a better future for Syria.

Presenting Author: Shaikha AlDukhail, BDS, Harvard School of Dental Medicine; Author Tamara Cadet, Ph.D., L.I.C.S.W., M.P.H, Simmons College & Harvard School of Dental Medicine
Poster Number: 5

Title: Emerging Threats to Child Nutrition in Urban and Rural Nepal

Objective: Globalization and urbanization in Nepal have shifted the nutrition landscape from an agricultural-based diet to a processed, nutrient deficient diet. This study examined the impact of diet on child oral health and nutrition.

Methods: Subjects included children ages 6 months to 6 years and their families in rural and urban Nepal. Mothers were interviewed about nutrition, oral health knowledge, practices and their child’s mouth pain. Children received dental exams and height/weight measurements. Nutrition Z-scores were compiled with WHO AnthroPlus. SPSS was used for descriptive, comparison and association analyses.

Results: Of the sampled 632 mothers and 836 children, three fourths lived within a 5-minute walk to a junk food store. Most mothers knew sweets cause caries, but had limited knowledge about risk factors. 50.8% of children were given sweets daily, while 24.0% were given junk food daily. Overall, 58.2% of children presented with caries. Caries began in the first 2 years and progressed in prevalence and severity to age 6. Among 5-6 year olds, 74.3% had caries and 20% experienced mouth pain. Despite better health knowledge and resources among urban mothers (p=.006), urban children had greater access to junk food (p<.001) and frequency of junk food consumption (p<.001) associated with higher prevalence (p=.002) and severity of caries (p<.001) compared to rural children.

Conclusions: Junk food consumption is a major risk factor for early childhood caries and mouth pain. Health knowledge and resources are outweighed by social factors of junk food accessibility and negative home practices, leading to poor health outcomes.

Source of Funding: None

Presenting Author: Chloe Tsang, BS, DMD and MPH candidate, A.T. Still University Arizona School of Dentistry and Oral Health, University of California Berkeley; Author Karen Sokal-Guiterrez, MD, MPH, UC Berkeley- UCSF Joint Medical Program
The “Pregnancy and Oral Health: An Important Connection” educational campaign was launched in September 2017 across Pennsylvania.

The objectives of the campaign were to educate patients and health providers on the importance of regular oral health care during pregnancy.

Methods: The target audience for the campaign included approximately 35,000 women who were pregnant or could become pregnant, English- or Spanish-speaking, and enrolled in Medical Assistance. Fourteen counties within PA were selected for the campaign based on demographics, income levels, overall health assessments, and location within major media markets.

Obstetrical practices in high-need areas were identified within the target counties. These practices received print materials that complemented the media messages.

Key Campaign Messages:
- Maintaining optimal oral health is important during pregnancy
- Medical Assistance provides dental benefits for pregnant women
- Dental treatment is safe and effective during pregnancy

Campaign Elements:
- 8 weeks of online commercials
- 5 weeks of television commercials
- Print materials in English and Spanish sent to obstetricians
- Flyers providing pregnant women with oral health education
- Magnets with key oral health messages
- Infant feeding spoons with key oral health message

Results: Digital and TV video impressions of campaign materials exceeded 7 million for adults 18 and older. Website traffic to resource page increased by more than 400% during the campaign.

Conclusions: We await availability of 2018 PRAMS data to determine whether the campaign was effective in driving pregnant women to the dental office. Providers were interested in receiving additional materials.

Source of Funding: Funding for this project was provided by the Pennsylvania Department of Health through Centers for Disease and Prevention (CDC) of the U.S. Department of Health and Human Services (HHS) under the Preventative Health and Health Services Block Grant. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by CDC, HHS or the U.S. Government.

Presenting Author: Helen Hawkey, BSDH, PHDHP, PA Coalition for Oral Health
Poster Number: 7

Title: Assessment of oral health related quality of life among ESRD patients in Southwest Florida – a pilot study

Objectives: To determine and compare OHRQoL (oral-health related quality of life) using Geriatric Oral Health Assessment Index (GOHAI) and Oral Health Impact Profile (OHIP-14) among patients receiving hemodialysis (HD) in southwest Florida.

Methods: Face-to-face interviews using GOHAI-12 and OHIP-14 questionnaires and intra-oral examinations were conducted at three dialysis centers. Mann-Whitney U test and Kruskal-Wallis test were used to compare each item score with demographics, dental and overall health status.

Results: n = 70. Mean age: 64.5±13.7 yrs.; Mean years on dialysis: 4.7±7.5 yrs.; Mean number of teeth: 19.74±11.04; Median values GOHAI: 52; OHIP-14: 64. Within GOHAI, limiting food (p .043), uncomfortable eating in front of people (p.045), limiting contact with people (p .046) and eating without discomfort (p .011) were significantly associated with females. Being worried (p .040) and self-conscious (p.048) were significant for age groups ≤65 years. Prevented from speaking was significantly associated with >20 teeth (p .016). Being worried about oral health was significantly associated with number of years on dialysis (p .042). Within OHIP-14, speech was significantly associated with the number of teeth present (p .024). Total inability to function was significantly associated with race (p .018), number of teeth (p .028) and edentulousness (p .031).

Conclusions: GOHAI revealed a few functional impairments not found in OHIP-14. Most clinical findings did not correlate with subjective measures of oral health. HD patients may have come in terms with dental impairment over the years and systemic health issue like ESRD affecting QoL may take precedence over dental problems.

Source of Funding: Inter-Professional Practice Grant, Marieb College of Health & Human Services, Florida Gulf Coast University

Presenting Author: Jayanta Gupta, MD, PhD, Florida Gulf Coast University; Author Payal Kahar, PhD, MPH, Florida Gulf Coast University; Author Carol Chapman, MS, BS, Florida Southwestern College; Author Julie Zemplinski, MSH, MS, MLS(ASCP)CM, Florida Gulf Coast University
Title: Physician Advice for Routine Dental Checkups: Results from the Medical Expenditure Panel Survey 2001-2016

Objectives: To assess the trend of being given advice from physicians about the need for routine dental checkups; and to assess whether there are racial/ethnic disparities in receipt of advice from 2001 to 2016.

Methods: Data were from the 2001-2016 Medical Expenditure Panel Survey (MEPS). The sample included 133,167 children aged 2-17 years. The outcome variable was whether or not a child was offered advice from a doctor or other health provider for routine dental checkups. We calculated the weighted annual prevalence overall and by racial/ethnic groups, examined the time trend by racial/ethnic groups, and assessed racial/ethnic disparities over time.

Results: Overall, the rate of being offered advice for dental checkups for children increased from 41% in 2001 to 63% in 2016 (Trend p<0.001). No racial/ethnic difference was found in the rate of being offered advice (p=0.06). An increasing trend was observed for all racial/ethnic groups (Trend for all groups p<0.001). Children from the highest income level were more likely to be offered the advice (AOR=1.38). Children without health insurance (AOR=0.69) were less likely to be offered advice than those with private insurance.

Conclusions: The rate of children that were offered advice for routine dental checkups by physicians increased in the US in the past decades. No significant racial/ethnic disparities were found in the rate or the rate of change over time. Expanding health insurance coverage for children would likely enhance progress. Educational strategies are needed to promote the integration of oral health care within primary health care.

Source of Funding: NONE

Presenting Author: Huabin Luo, PhD, East Carolina University; Author Mark Moss, PhD, DDS, East Carolina University; Author Ronny Bell, PhD, East Carolina University; Author Wanda Wright, DDS, East Carolina University
Title: Creating an Oral Health Education Program for a Medical Community Clinic

Objectives: El Milagro Community Clinic (EMCC) is located in South Texas and serves a predominantly adult, Hispanic, low literacy and low income population. Many patients are diabetic or prediabetic with multiple health needs. EMCC provides no dental services however they indicated an interest in developing an oral health education program relevant to patients but not time-intensive to the providers. This project aims to develop an education program, where the relationship between oral health and diabetes is highlighted.

Methods: The project took place from January to April 2018. The program was designed to have two components: a patient and a provider version. A literature review identified oral health educational resources for patient education. Selected evidence based brochures were reviewed and modified to match the targeted populations’ literacy level. Furthermore, a literature review search identified training oral health educational resources for providers. Selected evidence based resources were adapted and modified as appropriate.

Results: Two modules were developed. The patient module was regarding oral health and its association to diabetes and included three educational brochures (English and Spanish) at a literacy level of ≤ 3rd grade. The provider module included: i) a list of training resources on oral health ii) a list of techniques for demonstrating oral hygiene to patients and iii) a PowerPoint presentation to be used as a tool to educate patients on oral health and diabetes.

Conclusions: Two modules were developed to inform patients and providers about oral health and diabetes. Future directions include implementation and evaluation of both modules.

Source of Funding: None

Author Namrata Rathod, BDS, MPH, Texas A&M College of Dentistry; Author Peggy Timothe, DDS, MPH, Texas A&M University College of Dentistry; Author Shirley Lewis Miranda, BDS, CAGS, MScD, Texas A&M College of Dentistry; Author Olga Gabriel, MPH, Texas A&M Health Science Center, McAllen Campus; Presenting Author: Anneta Bitouni, DDS, MS, MPH, Texas A&M College of Dentistry
Poster Number: 11
Title: Barriers and Attitudes Associated to Medicaid Participation among Pennsylvania Dentists

Disadvantaged populations suffer from oral disease burden and diminished quality of life. The proportion of children who receive screening and diagnostic treatment services in Pennsylvania is around 10% lower than the national average. Access to care for Medicaid recipients is significantly affected by provider’s participation, attitudes and perceptions. The aim of this study was to identify the barriers and attitudes associated to Medicaid participation among Pennsylvania dentists.

Methods: A self-administered survey (18 items) was mailed to a sample of 2000 dentists that was selected randomly from a list provided by the Pennsylvania Board of Dentistry. Descriptive analyses were conducted and differences by key demographics were explored.

Results: A total of 356 surveys were returned. Majority of respondents were male (72%), white (87%), Non-Hispanic (97%), with a mean age of 54 ± 13.4 years. About 62% were not currently enrolled as Medicaid providers, and only 11% were not taking new Medicaid patients. The top five challenges reported as extremely important regarding Medicaid were low reimbursement rates (80.3%), broken appointments (75.6%), and denial of payment (63.1%), limited services coverage (56%) and complicated paperwork (46.8%). Four out of 10 dentists feel personally unable to have an impact on the problem of meeting the dental needs of the underserved.

Conclusion: Attitudes and perceptions of dentists towards Medicaid play a vital role in their participation. While the percentage of dentists providing care to Medicaid patients remains similar to previous state level reports, the number of those accepting new Medicaid patient was substantially higher.

Source of Funding: Temple University Kornberg School of Dentistry and Pennsylvania Coalition Oral Health

Presenting Author: Marisol Tellez, BDS, MPH, PhD, Temple University School of Dentistry; Author Vinodh Bhoopathi, BDS, MPH, DScD, Temple University Maurice H. Kornberg School of Dentistry; Author Helen Hawkey, BSDH, PHDHP, PA Coalition for Oral Health; Author Jonysue Palaparthi, BDS MPH, Temple University; Author Arjun Singh, BDS, Research Assistant
Title: Examining the impact of clinical observation on the beliefs of general dentistry students in regard to working with patients with SHCN

Individuals with special health care needs (SHCN) experience unique barriers to receiving oral care, including challenging behavior, lack of trained dentists, and inadequate insurance coverage.

Objectives: The purpose of this study is to understand how student attitudes related to working with children with SHCN are potentially influenced by clinical observation.

Methods. IRB review status was exempt. Data for this study were drawn from an oral health and clinical training program aimed at providing predoctoral general dentistry students knowledge in the treatment of children with SHCN. After completing a didactic curriculum in D2, D3 students were exposed to at least one half day rotation in the special needs clinic; students observed dental appointments from behind a one-way mirror. Following this experience, students (N=50) completed an opened ended questionnaire focused on how the observation impacted their attitudes and feelings related to clinical practice with this group.

Results: The uniqueness of each child was found to be a prominent theme that connected all responses; appreciating the individuality of each patient in turn highlighted the importance of getting to know each patient in order to modify the treatment approach. The students recognized the value of changing their approach based on the patient’s specific needs in order to obtain the most successful outcome. In addition, students indicated that the training brought forth more positive feelings and a desire to work with individuals with SHCN.

Conclusions Findings illustrate the crucial role of clinical observation in training general dentists in the treatment of children with SHCN.

Source of Funding: This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number D85HP30826 and titled, “Predoctoral Training in General, Pediatric, and Public Health Dentistry and Dental Hygiene” for $290,694. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Presenting Author: Jennifer Chung, PhD, Nova Southeastern University; Author Maria Levi-Minzi, PhD, Nova Southeastern University; Author Stephanie Hall, B.A., Nova Southeastern University; Author Oscar Padilla, DDS, Nova Southeastern University; Author Romer Ocanto, DDS, MS, MEd, Nova Southeastern University
Title: Prevalence of dental care utilization among U.S. and non-U.S. born Hispanics/Latinos: Hispanic Community Health Study/Study of Latinos (HCHS/SOL)

Objective: To describe the prevalence and barriers to dental care utilization in a diverse group of Hispanic/Latino adults.

Methods: Data from 14,352 participants of the HCHS/SOL study were analyzed using SAS 9.4. Dental care utilization was based on time since last dental visit (<1, 1-5 yrs, never). Factors considered as facilitators/barriers to dental care utilization were: age; gender; income; current or past year dental problems; perceived dental care need; reason for no visit and health insurance. Also considered were acculturation factors like duration in the U.S. and U.S. or non-U.S. born status. Age and gender standardized percentages and standard errors (SE) assessed differences in time since last dental visit using chi-square tests.

Results: Most participants were non-U.S. born (77%), dentate (96%), with a mean age of 41 years. Overall, 72% reported needing dental care, while 50% reported past year dental visit. The percentage (SE) of U.S. and non-U.S. born participants with a past year dental visit was 12% (0.53) and 38% (0.72) respectively. Upon age and gender adjustment, barriers to dental care utilization appear to be similar among these two groups. For instance, proximity to a dentist, 86% (6.87) and transportation 83% (6.39) were cited as barriers among U.S. born and non-US born participants: 73% (4.67) and 69% (5.15) respectively.

Conclusions: Contrary to expectation, a greater percentage of non-U.S. born participants visited a dentist in the past year. Nonetheless, barriers to dental care utilization were similar. Additional research is needed to elucidate the impacts of acculturation on dental care utilization.

Source of Funding: none

Presenting Author: Erin Donahue, BS, Virginia Commonwealth University; Author Sarah Raskin, PhD, MPH, Virginia Commonwealth University; Author Aderonke Akinkugbe, DDS, MPH, PhD, Virginia Commonwealth University, School of Dentistry
Poster Number: 14

Title: Swallowing and masticatory function, physical function, and oral health-related quality of life in community-dwelling older adults

Objective: The oral functions associated with aging results in xerostomia and tooth loss, influencing the strength of chewing, swallowing and quality of life. We aimed to assess swallowing and masticatory function associated with frailty, sarcopenia and oral health-related quality of life (OHRQoL) in Taiwanese elderly.

Method: The cross-sectional survey recruited 449 adults aged ≥65 years old. People with mental disorder, moderate to severe cognitive impairment and difficult language expression were excluded. Dental examination was implemented by a dentist. Information concerning physical function, xerostomia index, food patterns, swallowing function, and Geriatric Oral Health Assessment Index (GOHAI) were collected via a face-to-face interview questionnaire. Moreover, 10 seconds oral diadochokinesis and masticatory function using color-changeable chewing gum were recorded. Multivariate regression models analyzed the relationship between physical function and oral status in the elderly.

Result: About 38.3% of participants had fewer than 20 teeth, 16.5% had swallowing problem, 8.9% had dry mouth problem and 19.8% had poor masticatory performance. The elderly with swallowing problem was significantly associated with frailty (adjusted odds ratio [aOR= 2.73]) and sarcopenia (aOR= 4.65). Dry mouth was significantly associated with frailty (aOR= 3.28) and sarcopenia (aOR= 3.42). The significant determinants of OHRQoL were ≥20 teeth (β= 0.14), frailty (β= −3.34), sarcopenia (β= −5.81), dry mouth (β= −6.40), poor masticatory performance (β= −4.41) and swallowing problem (β= −3.19).

Conclusion: Special consideration should be given to community elderly with regard to < 20 teeth, poor swallowing and masticatory function, and dry mouth concerns in order to improve their OHRQoL.

Source of Funding: The National Health Research Institutes, Taiwan

Presenting Author: Ting-Yu Lu, , Department of Oral Hygiene, Kaohsiung Medical University; Author Jen-Hao Chen, , School of Dentistry, Kaohsiung Medical University; Author Ying-Chun Lin, , Department of Oral Hygiene, Kaohsiung Medical University; Author Hsiao-Ling Huang, , Department of Oral Hygiene, College of Dental Medicine, Kaohsiung Medical University
Objective: The Louisiana Department of Health, Office of Public Health, Well-Ahead Oral Health Promotion (WAL-OHP) implemented the 2016-2018 3rd grade Basic Screening Survey (BSS) to determine the oral health status of its third grade children. Prior to the 2016-2018 BSS, Louisiana 3rd grade oral health data had not been collected and since the 2007-2009 BSS. Evaluation of the 2007-2009 data determined that 41.9% of children screened had untreated cavities, 65.7% had dental caries experience, only 33.2% had sealants present, and 42.7% had to be referred to dentists for treatment urgency.

Methods: WAL-OHP analyzed school protocols and navigated through each individual school system to conduct the BSS. Obtaining school support for this process took several approaches. There were various meetings between staff at the Health and Education Departments which lead to dental hygienists screening 1264 3rd grade students from a statewide representative sample of 49 schools across Louisiana.

Findings: The 2016-2018 BSS determined that 26.2% of 3rd grade students had untreated cavities compared to 16.2% nationally, 56.4% had dental caries experience compared to 51.7% nationally, 28.7% had sealants present compared to 40.7% nationally, and 23.1% had to be referred to a dentist for early treatment or urgent care.

Conclusions: The findings indicate that 3rd grade students experience less untreated cavities and dental caries than previously reported in 2007-2009 and although Louisiana isn’t close to the national averages the state is on track to meet the Health People 2020 goals for 3rd graders.

Source of Funding: CDC, Division of Oral Health

Poster Number: 16

Title: Explaining member intention to complete dental healthy behaviors – An examination of Iowa’s Medicaid Healthy Behaviors Program

Objectives: In July 2017, the Dental Wellness Plan, Iowa’s Medicaid dental benefits program, implemented a Healthy Behaviors (HBs) Program wherein members must complete two HBs annually - a dental visit for check-up/cleaning, and an online oral self-assessment. Failure to complete both behaviors results in the payment of $3/month premium for the succeeding year. Our study objective is to examine factors associated with members’ intention to complete the dental visit component of Iowa’s Medicaid HBs program.

Methods: DWP members were surveyed in March 2018 (N=18,000). Outcome is member intention to complete dental visit i.e., response ‘Yes’ to either question: ‘Since July 2017, have you seen a dentist for check-up/cleaning?’, or ‘Do you plan to see a dentist for check-up/cleaning before July 2018?’. Andersen Model of Healthcare Utilization was used as a framework for covariates selection.

Results: Adjusted response rate was 23.8% (N=3748). 83% of survey participants reported intention to complete dental visit. Bivariate analyses (Chi-square tests) found that intention to complete dental visit was significantly associated (p<0.05) with: predisposing characteristics - lower age, female gender, employment, >high school degree, excellent/very good oral health, regular dental visits, some knowledge of HBs program, and knowledge of having dental insurance coverage; enabling characteristics - presence of regular dentist, perceived ease in getting dental check-up, and perceived ability to pay $3/month premium; and need characteristics - perceived dental care need, pain in mouth during past 6 months, and loss of fewer teeth.

Conclusions: Multiple factors were found to be associated with member intention to complete a dental healthy behavior.

Source of Funding: Iowa Medicaid Enterprise

Presenting Author: Aparna Ingleshwar, BDS, MPH, University of Iowa College of Dentistry; Author Susan McKernan, DMD, MS, PhD, University of Iowa College of Dentistry; Author Julie Reynolds, DDS, MS, University of Iowa College of Dentistry; Author Peter Damiano, DDS, MPH, Unievrsity of Iowa College of Dentistry
Title: Do Dental Students’ Attitudes Predict Actual Treatment of Underserved Populations?

Objective: To determine whether dental students’ predictions about their willingness to treat underserved populations as dentists is accurate post-graduation.

Methods: A questionnaire was developed to assess dental students’ anticipated willingness to treat 13 underserved populations 5-years post-graduation. A similar survey with a few of the same questions was developed to assess which populations the same students are now treating as alumni. Each student was assigned an identifying code so that their answers could be linked to each year they were in school (D1-D4 years; Classes of 2011-2013; N=240) and to their answers as a practicing dentist. A Cohen’s Kappa statistic was used to evaluate the degree of agreement between the students’ and alumni’s responses (alpha=0.05). IRB approval was obtained.

Results: 46 alumni returned surveys for an adjusted response rate of 22%. Fair agreement was noted between student and alumni responses pertaining to the following populations: D1-jail inmates (kappa=0.24); D2-homebound (kappa=0.29) and medically complex (k=0.20) patients; D3-no agreement; D4-low income (kappa=0.25) and medically complex (kappa=.25) patients. With the exception of treating patients with Medicaid, when agreement was not noted, alumni behaviors were often more positive than anticipated. More than 90% of respondents reported treating the following populations: frail elderly, medically complex, mentally compromised, other ethnic groups, known drug users, patients with HIV+/AIDS, and non-English speaking patients.

Conclusion: Preliminary findings suggest that dental students’ predictions about whom they will treat post-graduation may not accurately predict future behavior.

Source of Funding: University of Iowa College of Dentistry and Dental Clinics

*Presenting Author:* Ryan Shaw, Dental Student, University of Iowa College of Dentistry and Dental Clinics; Author Michelle McQuistan, DDS, MS, University of Iowa College of Dentistry and Dental Clinics; Author Fang Qian, PhD, MA, MPhil, University of Iowa College of Dentistry and Dental Clinics
Poster Number: 19

Title: Patient failure rates and characteristics of patients at the University of Iowa Pediatric Dental Clinics

Objective: To compare patient characteristics of failed/late cancelled appointments with kept appointments in predoctoral clinics at University of Iowa Pediatric Dental Clinics (UIPDC).

Methods: Data were collected from 1545 patients who failed/late cancelled appointments and 3323 who kept appointments from May 1, 2017 to April 30, 2018. Patient data included: sex, age, distance from UIPDC, morning/afternoon appointment, day of the week, appointment month, insurance status (private, Medicaid/Hawk-I, or self-pay), and reasons for cancellation/failure. The chi-square test, Fisher’s exact test, Cochran-Mantel-Haenszel test and Wilcoxon rank-sum test were used for statistical analysis.

Results: For failed appointments, 51.8% were male, mean age was 9.30, mean distance to UIPDC was 38.5 miles, 14.3% were Hispanic and 69.8% had Medicaid, 93.5% preferred English, 66.0% missed afternoon and 29.8% were on Monday with 31.9% in April-June. For kept appointments, 49.7% were male, mean age was 9.26, mean distance to the dental school was 27.8 miles, 16.5% were Hispanic, 65.42% Medicaid, 91.8% preferred English, 63.9% afternoon and 33.3% were scheduled April-June. Subjects with unknown ethnicity were more likely to fail than Hispanic and other ethnic groups (73.7% vs. 28.8% vs. 26.2%; p<0.0001). Self-pay subjects (56% vs. 19.7% and 33.2%; p<0.0001), English preferring (32.1% vs. 27%; p=0.0404), and Monday and Wednesday appointments (37.2% and 36.7% vs. 30% and 26.8% and 27.1%; p<0.0001) were more likely to fail.

Conclusions: Initial data demonstrates when patients are more likely to miss appointments based on day of the week and preferred language, which will aid in intervention development to increase patient attendance.

Source of Funding: University of Iowa Dental Research Grant

Presenting Author: Tanner Brolsma, BA, University of Iowa College of Dentistry; Author Kecia Leary, DDS, MS, University of Iowa College of Dentistry; Author Tad Mabry, DDS, MS, University of Iowa College of Dentistry; Author Fang Qian, PhD, MA, MPhil, University of Iowa College of Dentistry and Dental Clinics; Author Kristin Flick, MSW, University of Iowa College of Dentistry
Title: pH and Titratable Acidities of Ready-to-Drink Coffees and Smoothies

Ready-to-drink coffees and smoothies are increasing in popularity and becoming a staple in the American diet. The potential of these beverages to erode teeth is unknown.

Objectives: Our objective is to measure the pH and titratable acidity (TA) of various ready-to-drink coffees and smoothies to characterize their erosive potential.

Methods: Medium and dark roast coffees, lattes, cappuccinos, and espresso shots were purchased from local coffee shops (e.g. Java House®, Dunkin Donuts®, Starbucks®, and Caribou Coffee®). Regular, light/dairy free, and protein-infused smoothies were purchased from local smoothie shops (e.g. Orange Julius®, Jamba Juice®, and Power Café®). All beverages were purchased in triplicate, and their respected pH and TA were measured using an automatic titrator.

Results: The pH (mean) of medium roast coffees ranged from 4.8-5.6, dark roast coffees from 5.2-5.7, lattes from 6.5-6.6, cappuccinos from 6.4-6.6, and espresso shots from 5.3-6.0. The TA (mean) of medium roast coffees ranged from 0.23-0.60, dark roast coffees from 0.20-0.31, lattes from 0.22-0.34, cappuccinos from 0.24-0.46, and espresso shots from 0.29-1.52. The pH of regular smoothies ranged from 4.1-4.4, light/dairy free smoothies from 3.8-4.3, and protein-infused smoothies from 4.7-5.0. The TA of regular smoothies ranged from 2.29-2.37, light/dairy free smoothies from 1.39-2.48, and protein-infused smoothies from 1.31-1.45.

Conclusions: The pH of a few ready-to-drink coffees and most smoothies was below pH 5.0, suggesting that these beverages are potentially erosive. The low TAs of all coffees and smoothies suggest that the beverages’ buffering capacities are limited, enabling saliva to neutralize the acid and reduce erosive potential.

Source of Funding: None

Presenting Author: Layton Fritsch, BS, University of Iowa College of Dentistry; Author Teresa Marshall, PhD, RD/LD, University of Iowa College of Dentistry
Poster Number: 21

Title: A Randomized Clinical Trial of An Oral Health Care Program for The Dementia Elderly in Taiwan: A Pilot Study

Objective: Well oral care training for the elderly and their primary caregivers, can help to reduce the rapid deterioration of oral diseases and the incidence of aspiration pneumonia, further improve their health and quality of life. In this pilot study, we aimed to evaluate a newly developed oral health care program for the dementia elderly.

Method: We used randomized controlled trail. Overall, 17 and 19 patients with mild dementia were randomly assigned to the experimental group (EG) or control group (CG). Patients and their caregivers in EG received a 30-min one-on-one oral health care session including oral hygiene skill, chewing and swallowing practices, safe eating methods, and oral function rehabilitation training by a well-trained dental hygienist. The participants in EG were encourage to do it themselves at home at least once a day. Participants also received a monthly phone call to remind them of oral care. The baseline and 3 month follow-up data regarding oral health care behaviors, simple mental status, dry mouth conditions, swallowing conditions, plaque index (PI), Winkel tongue coating index (CI), repetitive saliva swallowing test(RSST), measurement of the diadochokinetic (DDK) rate were collected by questionnaire and dental examination record.

Results: Swallowing problem was significantly decreased in EG compared to CG (P=0.023). Patients in EG significantly improved in the DDK rate (P=0.004) and dry mouth (P=0.046) between baseline and 3 month follow-up.

Conclusion: The oral health care method may effective on swallowing, oral function and dry mouth for dementia elderly.

Source of Funding: Fund: National Health Research Institutes, Taiwan

Presenting Author: Ai-Hua Chang, , Department of Oral Hygiene, College of Dental Medicine, Kaohsiung Medical University; Author Ming-An Chen, , School of Dentistry, College of Dental Medicine, Kaohsiung Medical University; Author Shun-Te Huang, , Department of Oral Hygiene, College of Dental Medicine, Kaohsiung Medical University; Author Hsiao-Ling Huang, , Department of Oral Hygiene, College of Dental Medicine, Kaohsiung Medical University
Poster Number: 22


Objectives: To examine changes in untreated tooth decay and sealant prevalence among Mexican-American adolescents and compare them to changes among non-Hispanic white adolescents.

Methods: Data from the National Health and Nutrition Examination Survey (NHANES), 1999–2004 and 2011–2016 for adolescents, age 12 to 19 years were used. T-tests were used to examine whether changes in age-adjusted estimates of untreated decay and sealant prevalence between surveys and disparities by race/ethnicity in 2011–2016 were significant at p<0.05.

Results: Among Mexican-American adolescents, untreated tooth decay decreased by 7.8 percentage points between the two survey periods, whereas there was no change among non-Hispanic white adolescents. In 2011–2016, untreated decay prevalence, however, remained higher for Mexican-American than for non-Hispanic white adolescents (20.8% vs. 15.6%). There were corresponding increases in sealant prevalence among Mexican-American adolescents (increased from 27.2% to 45.0%).

Conclusions: There have been marked improvements in Mexican-American adolescents' dental health status. The decrease in untreated decay may be attributable to increased dental insurance coverage among children/adolescents and school programs that increased access to evidence-based prevention (e.g. sealants) and needed restorative care.

Source of Funding: None

Presenting Author: Cassandra Stewart, DDS, MPH, Centers for Disease Control and Prevention; Author Gina Thornton-Evans, DDS, MPH, CDC, Division of; Author Mei Lin, MD, MPH, MSc, Centers for Disease Control and Prevention; Author Susan Griffin, PhD, Centers for Disease Control and Prevention; Author Liang Wei, MS, Centers for Disease Control and Prevention
Poster Number: 23

Title: Association between Diabetes and Tooth Loss among Adult Patients Receiving Health Services at HRSA Supported US Health Centers

Objective: To examine the relationship between diabetes and tooth loss, among adult community health center patients (CHCP).

Methods: Cross-sectional study using the Health Resources and Services Administration (HRSA)'s 2014 Health Center Patient Survey (HCPS) data, a nationally representative sample (n= 5,512). Analyses were conducted to compare the self-reported responses of tooth loss among patients with and without diabetes.

Results: The overall HCPS population was comprised of non-Hispanic Whites (24%), non-Hispanic Blacks (23%), Hispanics (38%), non-Hispanic Asians (5%), non-Hispanic Others (10%), females (63%), from urban communities (70%), with household income ≤100% of the Federal Poverty Level (65%). Twenty-three percent of the respondents had diabetes; of these the majority were Hispanic (43%), female (62%), from urban communities (67%), with household income ≤100% of the Federal Poverty Level (66%), and less than high school education (51%). About three quarters (73%) reported having medical insurance, more than half (53%) reported having a dental visit in the last 12 months, and 80% reported having lost one or more teeth. From those who reported tooth loss, 13% reported being edentulous, from which 4% were 65+

Conclusion: Diabetes is a chronic disease that affects millions of Americans. These results underscore the critical role of the HRSA funded Health Centers and the National Center for Equitable Care for Elders (ECE), which supports the integration of oral health into primary healthcare services. Continued efforts are necessary to reduce the prevalence of both diagnosed and undiagnosed diabetes in addition to tooth loss through competent models to improve health outcomes among vulnerable populations.

Source of Funding: This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number U30CS30788, titled Training and Technical Assistance National Cooperative.

Presenting Author: Steffany Chamut, DDS, MPH, Harvard School of Dental Medicine; Author Shaikha AlDukhail, BDS, Harvard School of Dental Medicine; Author Hesham Alhazmi, BDS, Harvard School of Dental Medicine; Author Christine Riedy, PhD, MPH, Harvard School of Dental Medicine
Title: Trends and disparities in tooth loss and untreated tooth decay among adults 65 years and older, National Health and Nutrition Examination Survey (NHANES) 1999–2004 and 2011–2016

Objective: Dental surveys indicate that the proportion of older adults retaining their teeth is increasing, yet disparities persist. Untreated tooth decay is a common cause of tooth loss for the older adult population. Accessing dental treatment can be challenging due to limited financial resources and lack of dental insurance.

Methods: The authors used data from the National Health and Nutrition Examination Survey (NHANES). NHANES is a cross-sectional survey designed to monitor the health and nutritional status of the resident, civilian, non-institutionalized US population. Data from the 1999–2004 and 2011–2016 data cycles were used for adults aged 65 years and older (n=7037), to examine changes (T-tests, p<0.05) and disparities in the prevalence of tooth loss and untreated tooth decay.

Results: Overall, untreated tooth decay declined from 18.1% in 1999–2004 to 15.9% in 2011–2016 among adults aged 65 years and older. In addition, tooth loss declined from 27.2% in 1999–2004 to 17.3% in 2011–2016. Disparities persisted among non-Hispanic black older adults, with tooth loss nearly twice that of non-Hispanic white older adults, 30.7% versus 15.2%, respectively. Similarly, in 2011–2016, 29.1% of non-Hispanic black older adults had untreated tooth decay, compared to 13.4% of non-Hispanic white older adults. Comparisons were significant.

Conclusions: For 1999–2004 to 2011–2016, untreated tooth decay and tooth loss declined among older adults. However, large disparities persisted among non-Hispanic blacks. In older adults, these oral health conditions can have negatively impact healthy food choices and overall quality of life.

Source of Funding: Funding sources: N/A

Presenting Author: Marcia Parker, DMD, MPH, Centers for Disease Control and Prevention; Author Gina Thornton-Evans, DDS, MPH, Centers for Disease Control and Prevention; Author Susan Griffin, PhD, Centers for Disease Control and Prevention; Author Mei Lin, MD, MPH, MS, Centers for Disease Control and Prevention; Author Liang Wei, MS, DB Consulting Group
Poster Number: 25

Title: Emergency Dental Treatment at Open Door Family Medical Centers

Overview: Emergency departments (EDs) have seen an increase in patients presenting for dental problems, however most hospitals do not have the resources to provide appropriate dental care. This descriptive research study aims to observe the treatment provided for emergency patients presenting to Open Door Family Medical Centers (ODFMC), a Federally Qualified Health Center.

Objective: To establish baseline data for dental emergency patients seen at ODFMC, and to observe whether definitive care was received, if a prescription was necessary, and/or an appropriate referral was given. Procedures performed at the center and whether the patients' chief complaint was addressed will be quantified.

Methods: Retrospective data will be collected from ODFMC’s electronic health record (EHR), eClinicalWorks, for September 1, 2017 through August 31, 2018. The de-identified patient information will be downloaded to Relevant for analysis. The number of patients seen during that period, nature of the emergencies, type of treatment received, and what percentage of patients presented for follow-up visits will be examined. Preliminary data for the one-month period (September 1st 2017 - September 30th 2017) was evaluated.

Results: Of the 308 emergency visits, we found that: 28.6% received definitive dental treatment, 47.9% were given a referral to a specialist, and 37.7% were given a prescription, and 53.3% of the patients followed up for comprehensive or recall examinations.

Conclusions: Community health centers are a better alternative to hospital EDs for patients seeking emergency dental care, as definitive care and follow-up treatment can be provided at a lower cost.

Source of Funding: This research project is supported by a grant from HRSA.

Presenting Author: Maham Siddiqui, DDS, New York Medical College
Title: Prevalence of Pediatric Dental Treatment Completed Under General Anesthesia Among American Indian Children in Northern Plains Tribal Community

Objectives: To evaluate patterns of treatment under general anesthesia (GA) due to dental caries among American Indian children from a Northern Plains tribal community.

Methods: As part of a longitudinal study, mothers who had recently given birth were recruited and follow up visits were conducted when children were 1, 4, 8, 12, 16, 22, 28, and 36 months of age. Another follow up was performed at age 6-7 years, and for this visit, pediatric dental records were collected and evaluated. Specifically, information regarding the date of each dental visit, the extent of treatment and whether the treatment was completed under GA were recorded. Data were converted into SPSS format to generate descriptive statistics.

Results: Data were obtained from 117 children and dental records of 95 of those individuals were collected. The age range of the visits to the pediatric dental office varied from 5 months to 8 years, 4 months. Of the 95 children that had been seen, 83.16% received dental treatment under GA at least once. 25.2% received dental treatment under GA two or more times. The youngest child that was treated under GA was 15 months old.

Conclusion: A large majority of American Indian children in a Northern Plains Tribal Community received dental treatment under GA; many were treated under GA multiple times which emphasizes the high prevalence of caries in this community. Given the high cost of this treatment, even modestly effective preventive strategies could yield cost savings.

Source of Funding: Dental Student Research Program and Delta Dental Foundations of South Dakota, Iowa, and Wisconsin

Presenting Author: Steven Thrap, University of Iowa College of Dentistry; Author John Warren, DDS, MS, University of Iowa College of Dentistry
Title: New York State Department of Health’s (NYSDOH) Model of Collaboration for Chronic Disease Prevention and Oral Health Programs: Reducing Sugar-Sweetened Beverage (SSB) Consumption to Reduce Dental Caries and Obesity

Background: Studies show an association between sugar intake, dental decay and obesity. Americans consume at least one sugary drink daily, increasing their risk for these chronic conditions. Erie and Monroe Counties in Western New York (WNY) have a high prevalence of daily SSB consumption, particularly in Black and Hispanic adolescent males.

Objectives: Develop a collaboration between Oral Health (OH) and Chronic Disease (CD) Prevention Programs to create health messages for a media campaign targeting Black and Hispanic adolescents in WNY. The goal was to reduce the risk of developing two chronic conditions by changing one health behavior through substituting sugary drink consumption with drinking water.

Methods: OH and CD Prevention staff recruited stakeholders and professionals who closely interact with adolescent Black and Hispanic males in Erie and Monroe Counties. A workgroup of OH professionals, pediatricians, health communications specialists, community health organizations, youth leadership, and academicians provided expertise on adolescent health and social behaviors that contribute to SSB consumption. Focus groups with the target population assessed knowledge, attitude, and beliefs around drinking SSBs. Workgroup and focus group discussions informed the content, design, and dissemination of campaign messages.

Results: The NYSDOH launched a media campaign using streaming video, display banners, and social media platforms to broadcast messages in two languages. Out-of-home placements included convenience stores, billboards, buses and bus shelters. Over 9,000 companion posters were distributed to over 1,000 schools, health departments, and organizations.

Conclusions: Collaboration and consumer input are effective strategies for launching a media campaign targeting Black and Hispanic adolescents.

Source of Funding: Centers for Disease Control and Prevention, Division of Oral Health, DP16-1609.

Presenting Author: Karen Davda, New York State Department of Health; Author Marilyn Kacica, MD, MPH, NYS Department of Health; Author Dionne Richardson, DDS, MPH, NYS Department of Health
Objective: To identify differences in sociodemographic and clinical characteristics between returning and non-returning HIV+ patients seen at the Columbia University College of Dental Medicine's (CUCDM) clinic over a 3 year period, following an initial new patient exam.

Methods: Data were extracted from the electronic health records of HIV-positive patients, 18 years or older, who completed an initial new patient exam at the CUCDM dental clinic between July 1, 2013 and June 30, 2015. Returning patients completed one or more recall exams during the 3-year follow-up period; non-returning completed zero. Fisher’s Exact Tests were conducted to determine differences in sociodemographic and health-related characteristics between returning and non-returning patients.

Results: 281 patients met the study’s inclusion criteria. 58.7% of study participants did not return for a recall exam in the three year follow up period. 47.4% percent of returning patients presented with a chief complaint of needing a checkup or cleaning vs 26.7% of non-returning patients (p<.05). 92.5% of patients reported having seen their physician for a physical exam in the last 1 year.

Conclusion: HIV-positive adults in general are not returning for regular dental care despite reporting recent regular medical care. Those who do return for recall exams are more likely to want a check up or cleaning (rather than treatment for a reported oral health problem). More research is needed to identify the barriers to regular oral health care faced by HIV-positive patients with the ultimate goal of developing an intervention to increase regular dental care among this clinic population.

Source of Funding: Columbia University, College of Dental Medicine, Section of Population Health. This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number D88HP20109 “Postdoctoral Training in General, Pediatric, and Public Health Dentistry and Dental Hygiene” for the amount of $3,742,998. None of this endeavor is financed by nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Presenting Author: Laura Pauwels, DDS, Columbia University College of Dental Medicine; Author Ye Zhang, PHD, Columbia University College of Dental Medicine; Author Codruta Chiuzan, PHD, Columbia University Mailman School of Public Health; Author Anne Wetmore, DDS, MPH, Columbia University Mailman School of Public Health; Author Carol Kunzel, PHD, Columbia University Mailman School of Public Health
Title: Beverage Consumption Patterns in Early School-Aged American Indian Children

Objectives: Early childhood caries remains high among American Indian and Alaska Native children, and the role of diet and beverage consumption in caries formation is unknown. As we investigate this association, the objective of current study was to assess beverage consumption in a group of early school age American Indian children.

Methods: Beverage consumption questionnaires were administered to parents of children included in the OST SMILEs Study Cohort in a Northern Plains tribal community. The questionnaire asked about the number of servings per week and ounces per serving for the following beverages: 100% juice, milk or milk-based products, soy milk, water and sugar-free beverages, and sugar-sweetened beverages such as regular soda, juice drinks, Kool-Aid®, and sports drinks. Beverage consumption data were recorded on paper forms, entered in Excel, and converted into SPSS format.

Results: One hundred seven parents completed questionnaires; the median age of the children was 7 years. All children consumed water and other sugar-free beverages, and nearly all consumed milk (87%) and 100% juice (86%). A majority consumed regular soda pop (58%) and powder-based sugar-sweetened beverages (54%). Water and other sugar-free beverages constituted the largest proportion of beverage amounts consumed (44%), followed by sugar-sweetened beverages (25%). The mean amount of sugar-sweetened beverages consumed per week was 119 ounces, while the median value was 68 ounces.

Conclusion: Results suggest sugar-sweetened beverage consumption is high in these American Indian children, and may contribute to high caries rates in this population.

Source of Funding: Delta Dental Foundations of South Dakota, Iowa and Wisconsin.

Author John Warren, DDS, MS, University of Iowa College of Dentistry; Presenting Author: Elise Montesinos, University of Iowa College of Dentistry
Poster Number: 30

Title: Understanding community engagement in lower income, predominantly Black communities to promote oral health

Objectives: The purpose of this project was to describe a community engagement process of working with a lower income, predominantly Black community to assist with the development of a community-led oral health initiative.

Methods: The process involved one individual networking with community organizations and oral health stakeholders from three target communities to establish at least one neighborhood coalition.

Results: Organizations from each community expressed interest in addressing oral health needs. One community was selected for coalition building based on community interest, oral health stakeholder capacity, and oral health needs. Observed themes that emerged during the process of engaging community organizations and oral health stakeholders were: Finding a champion organization within the community; the alignment of community capacity to meet oral health needs with organizational priorities; the availability of time, human, and financial resources to balance community needs and organizational priorities; the role of politics and navigating community power structures; appreciating the historical context of stakeholder and community relationships; establishing trust among oral health stakeholders and community organizations; negotiating shared immediate and anticipated benefits of coalition participation; and leadership. Different themes were relevant for different organizations.

Conclusions: Community engagement approaches in lower income predominantly Black communities varies and is specific to neighborhood contexts. It also demands strategic approaches. The availability of time and human resources to meet the oral health needs of communities was consistent among other themes. The process of establishing the coalition is ongoing.

Source of Funding: American Association of Public Health Dentistry Foundation

Presenting Author: Patrick Smith, DMD, MPH, University of Illinois, Chicago College of Dentistry
Title: Factors associated with toothpaste use among low-income families

Objectives: To assess factors related to access to toothpaste and toothpaste use patterns in children from low-income families.

Methods: The study was conducted at the University of Iowa Pediatric Dentistry Clinic and the Women, Infants and Children (WIC) Nutrition program sites in Iowa City and Des Moines. Parents of children 0-5 years of age were recruited and asked to complete a questionnaire. Items included frequency of toothbrushing, whether toothpaste was used, if they had trouble obtaining toothbrushes or toothpaste due to cost, and knowledge of fluoride. Data were entered into Excel and descriptive statistics were generated in SPSS. Chi-square tests were used to assess relationships between regular brushing and independent variables.

Results: 349 questionnaires were completed (129 at the Pediatric Dentistry Clinic, 134 at Iowa City WIC and 86 at Des Moines WIC). Children’s ages ranged from 0-16 years, but most were 5 years old or younger. 74% reported that they regularly used toothpaste for their child, and 68% of the children brushed their teeth once per day or more. 20% reported trouble obtaining toothbrushes or toothpaste because of cost. Bivariate analyses found that parents who made more than $20,000 per year, brushed their child’s teeth with toothpaste, and did not think fluoride was harmful were more likely to have their kids brush once per day or more.

Conclusion: Limited use of toothpaste, and lack of regular toothbrushing appears to be significant problems in this lower income population. Infrequent brushing was related to income and lack of knowledge about toothpaste.

Source of Funding: Iowa Dental Research Grant

Presenting Author: Frankie Chyi, University of Iowa College of Dentistry; Author John Warren, DDS, MS, University of Iowa College of Dentistry
Title: An Oral Health Needs Assessment in a Medical Community Clinic using the Seven-Step ASTDD Model

Objectives: The aim of this project was to assist the El Milagro Community Clinic’s (EMCC) - located in South Texas - proposal for a dental clinic. Currently, no oral health services are provided. Most EMCC patients are adult Hispanics and low income.

Methods: The Association of State and Territorial Directors’ (ASTDD) Seven-Step Needs Assessment Model was used to form a committee, develop goals, create an assessment plan, collect, organize and analyze information, report findings and perform formative/summative evaluations. An online search regarding existing dental public health programs was completed. Key informant interviews provided historical perspectives and information on local dental public health resources. Committee members provided clinical demographic data.

Results: EMCC identified goals included: establishment of oral health metrics, identification of dental public health clinics in the area and education of stakeholders on oral health issues. Health questions regarding patients’ oral health status and access to care were created and added to the medical record. Seven low-cost or free dental programs in the region were identified. Three expressed an interest to collaborate, of which one was initiated.

Conclusion: Access to oral health is a significant issue for EMCC. Due to this process, EMCC recognized the need for a short-term solution and collaboration with existing programs is feasible. A comprehensive oral health prevention program including clinical services will be in future expansion plans.

Source of Funding: None

Presenting Author: Aparna Biradar, BDS, MPH, Texas A&M University College of Dentistry; Author Peggy Timothe, DDS, MPH, Texas A&M University College of Dentistry; Author Shirley Lewis Miranda, BDS, CAGS, MScD, Texas A&M College of Dentistry; Author Anneta Bitouni, DDS, MS, MPH, Texas A&M University College of Dentistry
Title: Survey of Dentists and Primary Care Physicians in Pennsylvania Showed Differences in Comfort and Practices Regarding Oral Health Care

Objectives: With 80% of Pennsylvania’s counties facing dental health professional shortages and Pennsylvania earning a grade of D in a 2011 report on children’s oral health, Pennsylvania needs to better integrate oral health into primary care. Surveys conducted August-October 2018 assessed Pennsylvania dentists’ and primary care providers’ (PCP) training, information sources, comfort, and practices regarding oral health care.

Methods: Previously fielded surveys guided survey development. Surveys were distributed at an oral health conference, via email by Pennsylvania’s primary care association and oral health coalition, and via mail to PA Area Health Education Center lists (dentist n=235; PCP n =803). Respondents could self-identify to enter a gift card drawing.

Results: A total of 103 primary care and 54 dental responses were received. Significant differences were found between dentists and PCPs. Dentists felt better trained than PCPs in oral health care. Dentists were less comfortable than PCPs educating patients about systemic diseases connected to oral health, collecting alcohol history, and palpating neck lymph nodes. PCPs were less comfortable than dentists screening for and educating patients about oral cancer. Differences across PCP specialties (FM, IM, Peds) were predictable. Pediatricians were less comfortable screening for, identifying, and educating patients about oral cancer. Family physicians and internists were less comfortable performing caries risk assessments and applying fluoride varnish. Reported oral health practices closely followed reported comfort levels. Respondents received oral health information from various sources.

Conclusions: Survey responses suggest topics ripe for continuing education and skill development to improve overall oral health care.

Source of Funding: Pennsylvania Area Health Education Center and Pennsylvania Department of Health

Presenting Author: Stephanie Gill, M.D., Penn State Health Hershey Medical Center; Author Pat Bricker, Penn State College of Medicine
Title: Identifying Variants Contributing to Nonsyndromic Orofacial Clefts in Dachshund Family Transcription Factor 1 Gene in African and Philippines Populations

Objective: Orofacial clefts are the most common craniofacial malformation in humans, occurring in about 1 out of every 700 births worldwide. The goal of this project was to identify variants in the Dachshund Family Transcription Factor 1 (DACH1) that could contribute to the development of nonsyndromic orofacial clefts.

Methods: The DACH1 gene was recently identified through the first African Clefts Genome-Wide Association Study (GWAS) as highly associated with individuals with nonsyndromic orofacial clefts. We performed Sanger sequencing of the DACH1 gene in 192 individuals from Africa with nonsyndromic cleft palate only and 91 individuals from the Philippines with nonsyndromic cleft lip and palate.

Results: We found one previously identified missense variant with an observed frequency of .03, compared to a reported frequency of <.0001, that was predicted as deleterious and possibly damaging by SIFT and PolyPhen bioinformatic tools, respectively. This missense variation changes the protein sequence of the DACH1 gene and, according to HOPE bioinformatic tool, could change the folding and function of the protein by exchanging the smaller amino acid Glycine with the larger Serine.

Conclusion: We have identified a variant, enriched in our population, that may have something to do with orofacial clefts, but we have not yet fully explained the biology of that variant, which requires further research. We hope that our finding will lead us to a more complete understanding of the complex etiology of orofacial clefts and give us the tools to reduce the negative psycho-social impact of orofacial clefts on individuals affected and their families.

Source of Funding: Iowa Dental Research Grant

Presenting Author: James Park, University of Iowa College of Dentistry
Title: Improving Public Oral Health Through Collective Impact

The Pennsylvania Expanding Access to Oral Health Collaborative Project grant was awarded to the Pennsylvania Department of Health in September of 2014. The project signified an important step in Pennsylvania’s approach to address gaps in the oral health workforce and oral health system and has led to the development of systems for supporting oral health as well as improved oral health outcomes for low-income children across a variety of measures. Since that time a group of community collaborators that includes members of public, private, nonprofit, and regional, state and national stakeholders have worked together to garner additional funding and maximize project impact using a collective impact approach. The outcomes of the project include leveraging funds from four different funding streams, significantly increasing the number of at-risk children and families that receive oral health education and prevention services in non-dental settings, and providing training to integrate oral and physical health to oral health professionals, students, childcare providers and other groups working with low income families and children under five years.

Source of Funding: Health Resources Services Association Grant

Author Andrea Abbott, PA Department of Health; Presenting Author: Jan Miller, Pennsylvania Department of Health; Author Helen Hawkey, BSDH, PHDHP, PA Coalition for Oral Health
Title: Implementation of a Perinatal Dental Screening Tool in an OB Practice

Objective: In Maryland, pregnant women enrolled in Medicaid have coverage for dental care until delivery. Despite this, only 25% of the Medicaid-enrolled pregnant women received a dental service. The purpose of this Doctor of Nursing Practice (DNP) quality improvement project is to implement a perinatal dental screening tool in an obstetric practice to identify women with oral health needs and provide a referral for dental service.

Method: A six-item dental screening tool was administered to all pregnant women who were patients at one of three locations of an obstetrical practice. The screening tool was used to gather data regarding last teeth cleaning, report of dental problems (pain) and problems with bleeding gums, dental provider, if first prenatal appointment, and Medicaid enrollment status. Descriptive statistics will be used to report outcomes.

Results: The following results are preliminary; data collection is ongoing until the end of November. A total of 565 (N=565) screening tools have been analyzed between September and October. The rate of women that indicated they had not had their teeth cleaned was 15.2%. Of the women who were screened, 0.8% reported dental problems and 23.4% indicated problems with bleeding gums. About one-third (31.7%) of the women were screened during their first prenatal appointment. The Medicaid enrollment status was 41.4%. Almost half (46.7%) of the women screened received a referral for dental service.

Conclusion: Obstetrical providers are in an ideal position to address the oral health needs of pregnant women by implementing an oral health screening and referral system.

Source of Funding: None

Presenting Author: Michelle Spencer, MS, RN, University of Maryland School of Nursing
Title: Prevalence of Non-Traumatic Dental Problems in West Virginia Emergency Departments

Objectives: This study seeks to understand the prevalence and characteristics of the population who utilizes the emergency department for non-traumatic dental problems, as well as document the burden of oral health disease on the health care system when treatment is palliative.

Methods: All patients presented during calendar year 2016 at three tertiary hospitals in West Virginia via the emergency department. These hospitals used the Epic electronic health record as part of an integrated health system. A list of primary diagnoses (ICD-10 codes) indicative of a non-traumatic dental complaint was developed as informed by the academic literature. Codes were provided to the health system to query patient primary/secondary diagnosis; payer; cost/charge data; demographics and discharge/hospitalization status. Data were analyzed with JMP to generate descriptive statistics.

Results: Half of non-traumatic dental visits had Medicaid as the payer, and 1 in 5 visits were by the uninsured. Adults (19+) accounted for 86% of visits. Five diagnoses accounted for 82% of all visits; four of the diagnoses could have been better addressed in a dental setting. The fifth could have been prevented with appropriate preventive dental care.

Conclusions: For less than the average charge of an emergency department visit for a non-traumatic dental problem, which does not permanently address the underlying issue, a patient could receive preventive dental care in West Virginia for one year. Findings lend credence to the creation of a Medicaid adult dental benefit in West Virginia, as this population is disproportionately utilizing the emergency department for dental care.

Source of Funding: Funding for this study was provided by the Claude Worthington Benedum Foundation based in Pittsburgh, Pennsylvania.

Presenting Author: Fotinos Panagakos, DMD, PhD, West Virginia University School of Dentistry; Author Joshua Austin, MA & MSc, West Virginia University School of Public Health; Author Stephen Davis, PhD, MPA & MSW, West Virginia University School of Public Health
Title: Public Health Integration: Creating a Tobacco Prevention Network among Dental Providers in Montana

Objective: Develop a model of training dental providers in tobacco prevention and cessation to reduce the burden of tobacco-related diseases in Montana.

Methods: A training targeting dental providers was developed based on the Five A’s of Treating Tobacco Dependence and a train-the-trainer event was facilitated to support initial network development. Evaluation framework included administration of attendee pre- and post-assessment tools to assess knowledge and confidence in tobacco prevention activities. Clinical practice outcome metrics included Medicaid claims data queries for tobacco counseling (D1320) and intake survey data for referrals to the Montana Quit Line.

Results: Outreach began in July 2015 and reached 97 dental offices, clinics, and education settings, with 32% sites hosting a training. 230 attendees completed the pre-assessment and 227 completed the post-assessment. Results from the assessment showed increased confidence in providing tobacco counseling (5.62 to 7.51 weighted mean), knowledge of cessation medications (4.67 to 7.33) and Quit Line resources (4.59 to 7.93). Similar changes were seen in intent to modify clinical practices in documenting readiness to quit (2.38 to 3.71), making referrals (2.36 to 4.05) and advising medications (2.06 to 3.41). Clinical practices related to prescribing cessation medications exhibited the lowest change, 1.67 to 2.68. Providers submitting Medicaid claims data increased by 79% (43 to 77), and number of Medicaid claims increased by 185% (408 to 1161) from 2015 through 2017.

Conclusions: Peer-to-peer trainings were effective in increasing provider knowledge, confidence, and subsequent billing although prescribing cessation medications exhibited the lowest level of intent to change clinical practices.

Source of Funding: The project was funded through Montana State Special Revenue by the Montana Tobacco Use Prevention Program with Oral Health Program staffing support provided by Health Resources and Services Administration Grant No. T12HP30538.

Presenting Author: Tonette Hollingsworth, RDH, MS, Montana DPHHS; Author Elizabeth Rolle, RDH, MPH, Partnership Health Center
Title: A Framework for Assessing Partnerships for Oral Health in South Carolina

Objectives: South Carolina (SC) has consistently demonstrated improvements in oral health status for SC residents since the inception of the SC Oral Health Coalition (OHC) and SC Oral Health Plan implementation in 2003. We evaluated the self-reported effectiveness of partnerships that formed through OHC membership and participation. We operationalized partnership value as a measure of the following indicators: perceived value of partnerships to promote oral health; satisfaction with coalition leadership structure; processes used to prioritize goals and activities; and strategies for expanding OHC membership.

Methods: We used a mixed methods approach organized by Bailey and Koney’s Organizing Framework for Nonprofits. Electronic surveys were administered to all OHC members (n=102). A convenience cohort of 28 participants completed surveys. Through snowball sampling, 8 key informants participated in structured interviews, of those, 6 were OHC members. 4 partners were also identified as key informants due to their heightened-level of engagement in the OHC. Qualitative interviews were analyzed using the constant comparative method. Survey data was collected and analyzed using REDcap.

Results: Survey responses describe 3 areas of perceived value for their partnerships, including: networking and building collaborative relationships, evidenced-based oral health information, and identifying funding resources. Survey participants (n=16) reported that the OHC has been most successful in addressing their prioritized goals for oral health promotion and activities for children. 5 key recommendations emerged based on key informant perspectives around strategies to expand OHC partners and membership.

Conclusions: This study provides a framework on how to assess partnerships among organizations promoting oral health.

Source of Funding: None

Presenting Author: Joni Nelson, PhD, MS, Medical University of South Carolina; Author Jarvetta Heyward, MPH, SC Area Health Education Consortium; Author Mary Kenyon Jones, MEd., S.C. Dept. of Health & Environmental Control - SC Division of Oral Health; Author Ray Lala, DDS, FACD, S.C. Dept. of Health & Environmental Control; Author Cathy Melvin, PhD, MPH, Medical University of South Carolina
Title: Integration of an Enhanced Teledentistry Exercise in Pediatric Dental Education

Objectives: Tele-dentistry is an increasingly accepted and cost-effective method to improve oral health and increase access to services for patients living in remote and underserved areas. The Department of Pediatric Dentistry at NYU received a HRSA-funded grant to prepare graduates for advanced roles in oral health through teledentistry experiences. Pediatric dental faculty launched an enhanced tele-dentistry project that seeks to familiarize third-year dental students with tele-dentistry and improve students’ understanding of applications of tele-dentistry to improve community dental health.

Methods: Trainees learn how tele-dentistry increases access to care for remote and underserved communities, through simulated teledentistry exercises and discussion. Working in small groups under faculty oversight, students complete clinical case review. Students learn to develop treatment plans that integrate and address the unique social, behavioral, economic, and geographical characteristics of patients and potential barriers to care.

Results: Eighty third-year trainees participate in tele-dentistry, each 6-week rotation. Pre-test data show that 60% of students were slightly or not at all familiar with tele-dentistry. 36% of students were slightly or not at all confident using teledentistry. Yet, 49% of students reported that they were likely to incorporate tele-dentistry into their future careers, indicating a need for enhanced training. Post-test survey data will be reported.

Conclusions: Dental trainees plan to incorporate tele-dentistry into their practice, but further training is needed. This project demonstrates that it is possible to leverage training in tele-dentistry to educate students about barriers to care and how to integrate non-dental factors into treatment planning to improve community dental health.

Source of Funding: Health Resources and Services Administration (HRSA) Grant #D8HP28495

Presenting Author: Michelle Goldstein, DMD, New York University College of Dentistry, Department of Pediatric Dentistry; Author Marisa Pereira, DMD, New York University College of Dentistry, Department of Pediatric Dentistry; Author Madeline Beauregard, MPH, New York University College of Dentistry, Department of Pediatric Dentistry; Author Courtney Chinn, DDS MPH, New York University College of Dentistry, Department of Pediatric Dentistry
Objective: To determine the association between socioeconomic status (SES) and oral health in Soroti, Uganda.

Methods: We conducted a cross-sectional study administering questionnaires to capture dental health and SES in households. We used principal components analysis to generate asset index scores and logistic regression to determine the association between SES and poor oral health.

Results: Of the 991 persons screened, 785 were enrolled and 71% were women, 297 (38%) attained at least secondary school, 336 (43%) reported having psychological distress, and 368 (47%) used public healthcare facilities. About 6 in 10 visits to dentists were for tooth extractions and personal dental expenditures averaged $5.30/year. The prevalence of poor oral health was 14% and was associated with advanced age (>45 years) [Odds ratio (OR) 2.32, 95% confidence interval (CI) 1.02, 5.25], >65 years [OR 4.85, 95% CI 1.38, 17.01], psychological distress [OR 2.34, 95% CI 1.25, 4.36], and coexisting chronic illness [OR 5.31, 95% CI 1.91, 14.75]. There was no statistical association between poor oral health and SES.

Conclusion: Two adults in every 20 households in Soroti had poor oral health and it is associated with increasing age, self-reported coexisting chronic illness. Integrating oral care into chronic disease management among aging populations is warranted.

Source of Funding: None

Presenting Author: Tishana Foster, University of Rochester; Author Samson Okello, MD, Lown Scholar, University of Virginia, Harvard University, Mbarara University of Science and Technology; Author Michael Kanyesigye, B.S., Mbarara University of Science and Technology; Author Rita Anane-Wae, University of Virginia
Title: Developing an Oral Health Communications Toolkit for Pregnant Women and Their Families

Problem: Pregnant women are more prone to dental disease including gum disease and dental caries and many are unaware of the importance of seeing a dental professional while pregnant. If oral health is not optimal this could lead to preterm or low birth weight and the transmission of caries causing bacteria. Pregnant women and health providers are also unaware of the safety of dental care while pregnant. Communication/educational tools are scarce.

Strategy: Build an oral health communications toolkit that can be used by health care providers, front line workers, and others to communicate the importance of good oral health.

Methods:
1. Conduct a rapid-research review of the available evidence and resources.
2. Identify draft messages and communication strategies to reach this population
3. Test messages with pregnant women
4. Create a provider toolkit
5. Market and disseminate the toolkit and test its utility

Results: The rapid-research review revealed that pregnant women have competing priorities, that oral health is not top of mind, that health care providers are not recommending pregnant women see a dentist, and there is a lack of information that can be used by health professionals to communicate this topic. Two key messages tested well in focus groups in two different states (Maryland and Florida) – Now You’re Brushing for Two, Hiding Beneath the Gums. These messages were used as a basis to create a provider toolkit with 2 posters, 2 infographics, a patient education pamphlet, 2 short animated videos, and an AAP.org and Healthychildren.org web page.

Source of Funding: Centers for Disease Control and Prevention

Presenting Author: Lauren Barone, MPH, American Academy of Pediatrics; Author Cassie Brailer, CDC Division of Oral Health; Author Nicole Johnson, MPH, Centers for Disease Control and Prevention, Division of Oral Health
INTRODUCTION: Home delivered meals (HDM) or Meals-on-Wheels provide food and nutrition for older adults unable to prepare meals due to cognitive and/or physical impairments. Oral health, which is central to food consumption, is not addressed by the HDM system—there is no policy regarding oral needs or provision of meals aligned to dental function. This work contributes to a larger initiative seeking to build the evidence needed to assess the effectiveness of HDMs.

OBJECTIVES: To document self-reported oral needs, ability to eat and impact on HDM effectiveness among NYC HDM recipients.

METHODS: An 83-item instrument which included the shortened version of the Oral Health Impact Profile (OHIP-14) was administered by telephone to a random sample of HDM recipients in NYC (N=400), who were screened for cognitive and hearing ability. Descriptive/bivariate/multivariate analyses were conducted using SAS.

RESULTS: 84% of participants were female and averaged 13 years of schooling (4). 73% were white, mean age was 82 years (9). 56% had dental insurance; time since last dental visit averaged 4.2 years (7.3). 44% of participants reported difficulty chewing due to dental/oral problems; of these, 50% reported difficulty chewing meats, fruits and vegetables (47%). 48% reported food avoidance, 60% were unable to eat all of their HDMs. Primary reasons for difficulty chewing were mouth pain (24%) and ill-fitting dentures (20%).

CONCLUSIONS: These preliminary data indicate that community-dwelling older adults have unmet dental needs resulting in pain, difficulty chewing and food avoidance, which may result in nutritional decline, therefore impacting the effectiveness of HDMs.

Source of Funding: Columbia University, College of Dental Medicine, Section of Population Health. This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number D85HP20031 “Predoctoral Training in General, Pediatric, and Public Health Dentistry and Dental Hygiene” for the amount of $1,695,472. None of this endeavor is financed by nongovernmental sources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

Presenting Author: Nancy Mo, DDS/MPH Candidate, Columbia University College of Dental Medicine; Author Adam Ellenthal, DDS/MPH Candidate, Columbia University College of Dental Medicine; Author Yutao Wu, MPH Candidate, Mailman School of Public Health, Biostatistics Department; Author Rachel Sherrow, MSW, Citymeals on Wheels; Author Jose Sanchez, MA, Encore Community Services; Author Karol Tapias, LMSW, LiveOn NY; Author Kavita Ahluwalia, DDS/MPH, Columbia University College of Dental Medicine
Poster Number: 48

Title: Gender Diversity in Practice Patterns Among Male and Female Dentists

Objectives: The objective of this study was to evaluate the differences by gender of dental professionals in age, race/ethnicity, and practice characteristics including practice ownership, practice location, and work hours.

Methods: The study is based on data extracted from the American Dental Association’s Masterfile from 2010, 2012, 2014, and 2016. Gender differences were analyzed by age cohorts adjusting for race/ethnicity, location of training, residency, and specialty using logistic regression in SAS v9.4.

Results: Nationwide, from 2010-2016, there was an increase in the proportion of women (from 24.5% to 29.8%) and a decrease in the proportion of men (from 75.5% to 70.2%) working in dentistry. Over the study period, female dentists were more ethnically/racially diverse compared to male dentists. In 2016, 13.9% of female dentists were from underrepresented minority groups (P<.0001) versus 7.1% of male dentists. In all age cohorts, particularly in the 41-60 year-old cohorts, female dentists were more likely to be employed (OR=2.96, 95% CI=2.82-3.11 in the 51-55 year cohort) and to work in practices in urban areas (OR=1.67, 95% CI=1.43-1.92 in the 56-60 year cohort) than their male counterparts. Also in all cohorts, but particularly among the cohorts <40 years of age, female dentists were more likely to work part-time (OR=4.25, 95% CI=3.74-4.82 in the 31-35 years cohort) compared to male dentists.

Conclusions: Gender shifts in dentistry may affect practice models and work hours. Understanding differences in practice characteristics by gender is important to anticipate changes in the professional workforce that might affect the availability of dental services.

Source of Funding: US Health Resources and Services Administration, National Center for Health Workforce Analysis

Author Simona Surdu, MD, PhD, Oral Health Workforce Research Center; Presenting Author: Margaret Langelier, MSHSA, Oral Health Workforce Research Center
Objective: To understand the extent to which dental providers engage in chronic disease prevention with their high-risk patients and determine the factors associated with receiving chronic disease prevention guidance from dental providers.

Methods: Data from the 2011-2016 National Health and Nutrition Examination Survey were analyzed for 10,579 study participants aged 16 years and older who completed the oral health questionnaire. Prevalence of being told about chronic disease prevention by dental providers were calculated. Logistic regression analysis examined the association between chronic disease counseling and demographic and risk factors.

Results: Overall, 10.0% of the population were told about the benefits of giving up tobacco, 5.9% were told about checking blood sugar, 23.5% were told about checking for oral cancer, and 41.3% received an oral cancer exam. Among current tobacco users, 38.3% were told about the benefit of giving up tobacco; 9.0% were told about checking blood sugar, 24.2% were told about checking for oral cancer, and 31.8% received an oral cancer exam. In adjusted analyses, current tobacco users had greater odds of being told about the benefits of giving up tobacco (odds ratio [OR] 15.2; 95% confidence interval [CI], 11.8, 19.5) and being told the benefit of checking blood sugar (OR 1.8; 95% CI, 1.2, 2.5) compared to non-tobacco users.

Conclusions: The majority of adolescents and adults do not recall a dental provider engaging them in chronic disease prevention in the past year. Dental providers may be missing opportunities to promote public health, especially among patients at risk for chronic diseases.

Source of Funding: None

Presenting Author: Eleanor Fleming, PhD, DDS, MPH, Boston University Henry M. Goldman School of Dental Medicine; Author Ashta Singhal, BDS, MPH, PhD, Boston University Henry M. Goldman School of Dental Medicine
Introduction

Substantial disparities in children’s oral health and access to a full range of oral health/dental services exist throughout California and the US. The need for interprofessional collaboration is critical to ensure different health care providers are engaged and prepared to address the oral health needs of underserved populations.

Objectives

A. To establish a Strategic Partnership for Interprofessional Collaborative Education in Pediatric Dentistry (SPICE-PD) for pediatric & general dentistry, pediatric medicine, and nurse practitioners.

B. To enhance training in dental public health and population health management for pediatric and general dentistry residents through a partnership with the UCLA School of Public Health.

Methods

Online surveys were administered to SPICE-PD participants who just completed the program and alumni who graduated the prior year. Interviews were conducted with a subset of alumni. The surveys/interviews focused on 3 areas:

1. Progress made in improving SPICE-PD program;
2. Knowledge and skills gained by SPICE-PD participants;
3. Professional choices made by SPICE-PD graduates.

Results

Data (N=122) showed 78% strongly agreed/agreed that SPICE PD provided important perspectives on oral health that they did NOT receive elsewhere in their graduate education; 73% reported the program prepared them to address oral health needs of vulnerable populations; and 95% strongly agreed/agreed an interprofessional approach to oral health enhanced patient care.

Conclusions

Results indicate SPICE-PD contributes to creating a diverse and culturally competent oral health workforce that is responsive and empathetic to the needs of all children, including the underserved/special needs children; and ultimately contributes to decreasing childhood caries rates.

Source of Funding: Sources of funding: This five-year project (2015-2020) is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number (DHHS-HRSA D8HP201290500).

Affiliations: Strategic Partnership for Interprofessional Collaborative Education in Pediatric Dentistry (SPICE-PD), University of California Los Angeles (UCLA) website: http://www.uclachatpd.org/

Presenting Author: Hamida Askaryar, RDH, MPH, UCLA
Poster Number: 51

Title: Oral Health Status in a Rare Disease, Loeys-Dietz Syndrome: An Unmet Need

Objectives: Unmet dental public health needs remain for most patients with rare diseases. This study aims to describe the findings of the oral health status of Loeys-Dietz Syndrome (LDS) patients.

Methods: Twenty-eight patients affected by LDS subtype TGF beta-receptor 1 and beta-receptor 2 mutations seen at the NIH Clinical Center between 2015 and 2018 were retrospectively assessed. Data from dental examinations, including radiographs, were collected and analyzed. Each patient also completed a set of questionnaires inquiring about their oral health, oral hygiene routine, access to dental care, and tobacco use status. These data were later linked to each patient's quality of life as measured by OHIP-14.

Results: The cohort comprised 15 females and 13 males; mean age 17.5 (range, 3 to 57) referred by the primary team; the most common reason the patients participated in the study was to receive dental evaluation and recommendation of care. Among the LDS patients, the top dental problems were gingivitis (66.7%), Class 2 malocclusion (65%), dentinal hypersensitivity (59%), enamel defect (56.4%), and TMJ abnormality (37.5%). In behavioral terms, approximately 83.3% brush and floss their teeth at least once a day, 92% have access to dental care and 0% reported smoking. Individuals reporting poor dental health (25%) obtained a significantly higher OHIP score (mean 12) compared to those reporting good to excellent oral health (mean 3.4).

Conclusions: Regardless of accessibility to dental care and good oral hygiene, a significant number of LDS patients presented with severe dental enamel defects and dental problems that require treatment.

Source of Funding: None

Presenting Author: Quynh Nguyen, 4th-Year Dental Student, National Institute of Dental and Craniofacial Research, National Institutes of Health; Author Olivier Duverger, PhD, National Institute of Dental and Craniofacial Research, National Institutes of Health; Author Jani Priyam, BDS PhD, National Institute of Dental and Craniofacial Research, National Institutes of Health; Author Janice Lee, MD DDS MS, National Institute of Dental and Craniofacial Research, National Institutes of Health
Effective dental public health practice requires reliable, ongoing assessment of oral health conditions in areas in which policies or programs are administered. Basic Screening Survey (BSS) provides protocol for consistently measuring oral health indicators in school-ages children.

Objective: This study is to examine trends in the oral health status of 3rd grade students in Collier County, Florida and to compare oral health indicators in Collier County with state of Florida and other states with recent BSS data.

Methods: BSS initiated in 3rd grade of all 32 public schools in Collier County in School Year (SY)2013. Screenings conducted annually by University of Florida dental hygienists and pediatric dental residents. Passive consent used. Approximately 3,100 children screened per year; 15,899 children screened since SY 2013. Gloves, disposable mouth mirrors, and flashlights used to conduct screenings. Parents/caregivers of all children screened receive letter summarizing treatment urgency. Data were analyzed by using SPSS version 25.0 statistical software to generate descriptive statistics. Results compared to data from states that have conducted BSS within the past 5 years.

Results: Annual screening results from SY 2013 – SY 2018 showed a consistent trend in untreated caries and caries experience.

Conclusions: Consistent trends suggest BSS is reliable protocol to monitor oral health of 3rd grade students in Collier County, Florida. Increased prevalence of sealants reflects effects of implementation of program’s 2nd grade sealant program in SY2013. Collier County has much higher prevalence of caries experience and untreated cavities that state of Florida and nearly all other states.

Source of Funding: Naples Children and Education Foundation

Presenting Author: Susan Gorman, RDH, MEd., Department of Community Dentistry and Behavioral Science University of Florida; Author Scott Tomar, DMD, MPH, DrPH, Department of Community Dentistry and Behavioral Science University of Florida College of Dentistry
Objectives. Acute pain experienced during dental procedures can produce distress, difficulty with behavior guidance, and development of dental fear/avoidance. Aims of this study were to explore providers’ perceptions of pediatric procedure-related dental pain and describe their acute pain assessment practices.

Methods. We interviewed 16 dental providers currently/formerly employed by the Yukon-Kuskokwim Health Corporation. Participants included pediatric and general dentists, dental therapists, and dental hygienists who treat Alaska Native children. Participants described pediatric patients’ experiences with pain and clinical assessment of pain. Recorded interviews were transcribed, verified, and coded using inductive qualitative analytic methods. Responses were categorized into non-overlapping groupings of similar concepts.

Results. Dental hygienists generally reported not encountering pediatric acute dental pain. Dentists viewed acute pain to be a problem only until analgesia is established, as a function of injection, and because pain is poorly communicated by children. Participants indicated reliance on observation of body language, facial expression, and crying in younger children and verbal report in older children to know whether pain is experienced. Though available in the clinics, only two providers described use of standardized pain scales, with others relying solely on clinical expertise/experience rather than standardized tools.

Conclusions. Depending on clinician type, providers may or may not have to manage procedure-related dental pain in children. If they do, assessment practices appear to be non-standardized and based on individual provider preferences. Given the availability and importance of systematic assessment for pain management, enhanced integration of evidence-based pain measurement could improve pediatric dental care in Alaska Native children.

Source of Funding: The study was funded in part by the Pew Charitable Trusts, the W.K. Kellogg Foundation, and the Rasmuson Foundation (PI: Chi).

Presenting Author: Cameron Randall, PhD, University of Washington School of Dentistry; Author Scarlett Hopkins, RN, MA, Oregon Health and Science University; Author Ellen Zahlis, MN, University of Washington School of Nursing; Author Eliza Orr, BA, University of Alaska Fairbanks; Author Dane Lenaker, DMD, MPH, Southeast Alaska Regional Health Consortium; Author Donald Chi, DDS, PhD, University of Washington School of Dentistry
Poster Number: 54

Title: Oral Health Knowledge, Barriers, and Awareness of Dental Benefit Among Reproductive-aged Women Enrolled in Medicaid

Health-related knowledge and awareness are essential precursors to health care seeking behavior. With Medicaid being one of the largest health care program in the U.S., this study examined the oral health knowledge, barriers to oral health and explored the factors associated with the awareness of dental benefit during pregnancy among women enrolled in Medicaid.

Methods: A cross-sectional survey was administered to n=187 women, ages 21 to 45, in a large urban academic health center. Data on sociodemographic, health information source, last dental visit, oral health knowledge, barriers to care during pregnancy, and benefit awareness were collected.

Results: Forty percent of women reported Medicaid insurance, 51% private insurance and 8% reported no insurance. Medicaid-enrolled women had a lower prevalence of a routine checkup in the past year (50% vs. 71%, p-value=0.002) and lower knowledge scores (2.9 vs. 3.6, p-value<0.001) compared to women with commercial insurance. High percentages of Medicaid-enrolled women reported cost barriers, safety concerns and the inability to find the dental provider that would treat women during pregnancy. The awareness of dental benefit was modest among Medicaid-enrolled women (67%). In the adjusted model, benefit awareness was primarily associated with the receipt of health information from a healthcare source (p-value=0.030) and a high knowledge score (p-value=0.018).

Conclusions: To increase oral health utilization among Medicaid-enrolled reproductive-aged women, barriers to oral health needs to be addressed. Health care providers can play a vital role in improving oral health by educating these women about oral health and availability of the dental benefit.

Source of Funding: This study was funded in part by the HRSA Perinatal and Infant Oral Health Quality Improvement grant (#H47MC28478) through the Virginia Department of Health and the Oral Health Services Research Core, Philips Institute for Oral Health Research, VCU School of Dentistry.

Presenting Author: Shillpa Naavaal, BDS, MS, MPH, Oral Health Promotion and Community Outreach, School of Dentistry, Virginia Commonwealth University; Author Tegwyn Brickhouse, DDS, PhD, Virginia Commonwealth University, School of Dentistry; Author Caroline Carrico, PhD, Oral Health Promotion and Community Outreach, School of Dentistry, VCU; Author Tiffany Williams, DDS, MSD, Virginia Commonwealth University School of Dentistry
Title: An Assessment of the Attitudes and Understanding of Dental Students Toward Dental Public Health

Objective: The aim of this study was to assess the attitudes and levels of understanding of pre-doctoral dental students on the Dental Public Health (DPH) curricula in their dental schools. The survey assessed the level of accessibility and involvement in DPH activities, as well as materials covered in courses, while identifying barriers that prevent students from selecting careers in DPH.

Methods: Six questions were administered online from August 13 to October 27, 2018 to third and fourth year students at Harvard, Tufts, and Meharry Schools of Dental Medicine (n = 405). Surveys were distributed and recorded and analyzed via Qualtrics® software.

Results: Of 405 students who completed the survey, 80.1% were 25-30 years old, 62.0% were female and 38% male. 77.3% reported a desire to pursue a career in General Dentistry, 15.1% in Endodontics, and 7.6% selected either Oral Surgery, Pediatric Dentistry, and/or Prosthodontics. None of the students reported an interest in pursuing DPH. When asked to list the top three words to describe DPH, 31% of students used the word “community”. Among the barriers to choosing careers in DPH, the most common was “I need to work immediately, I have too much student debt.”

Conclusion: Current dental students are not selecting careers in Dental Public Health due to barriers including lack of exposure in pre-doctoral training, and student loan debt. Improvements in pre-doctoral DPH curricula could positively influence attitudes and understanding of the DPH specialty.

Source of Funding: none

Presenting Author: Nailah Tillman, DDS, Harvard School of Dental Medicine; Author Mary Tavares, DMD, Harvard School of Dental Medicine
Title: Addressing Dental Needs: Assuring that children enrolled in school-based care who need additional services receive them

Objectives: School-based dental providers (SBDPs) often refer children for follow-up treatment. Confirming receipt of treatment relies on parental reporting. To assess how many received additional care, NYC DOHMH’s Oral Health Program (OHP) piloted a 2-stage active follow-up approach to assess the validity of current reporting data and test strategies to improve treatment monitoring.

Methods: A dental treatment referral form was distributed to 732 children at 10 schools. Parents were asked to consent to in-school treatment or to take their child to an external provider. The referral form was to be signed by the external provider and returned to the SBDP. In stage 2, OHP called a sample of 125 parents of children whose treatment status remained unknown.

Results: Of the 732 children requiring follow-up, 133 (18.2%) received it in school. After 599 did not consent to additional in-school care, 11 (1.8%) returned signed forms confirming outside treatment. OHP reached 60 of the 125 (48%) parents in the telephone follow-up sample, of whom 54 (90%) reported a dental visit. Parents indicated confusion about the form, including not realizing it was to be returned at all, or the proper end-recipient.

Conclusions: Self-report of care was likely over-reported and needs confirmation. When given a referral form to verify care, many did not comply. Deeming it a more accurate approach, the form was amended to increase return rates and is being implemented across additional NYC SBDP programs. A partnership is also being explored with dental managed care organizations to help facilitate and document care.

Source of Funding: none

Author David Tepel, DMD, New York City Department of Health and Mental Hygiene; Presenting Author: Priyanka Ganesh, BDS, MPH, New York City Department of Health and Mental Hygiene; Author Ramneet Kalra, MPH, MBA, New York City Department of Health and Mental Hygiene
Poster Number: 60

Title: Impact Of Gender Diversification In Dentistry On Dental Services Delivery

Objectives: The objective of this study was to evaluate the differences by gender among dental professionals in service delivery including perception of practice busyness, patient volume, and characteristics of patient population.

Methods: The study used data from the 2017 Survey of Dental Practice collected by the American Dental Association. Gender differences were analyzed in SAS v9.4 using Chi-Square tests and logistic regression models by age cohorts, adjusting for race/ethnicity, location of training, residency, and specialty.

Results: Among the 2,258 professionally active dentists who responded to the survey, 585 (25.8%) were female and 1,673 (74.1%) were male. A higher proportion of female dentists were from underrepresented minority groups compared to male dentists (10.5% vs. 5.9%, P<.0001). More female dentists reported being overworked or too busy to treat all patients (27.9% vs. 23.5%, P=.0076) and having an increase in patient volume in the last year than male dentists (44.9% vs. 31.1%, P=.0056). In all cohorts, but particularly among those <55 years of age, female dentists were more likely to provide care to patients aged <17 years (OR=1.53, 95% CI=1.44-1.63) compared to male dentists. Also in the 36-65 age cohorts and particularly in the 56-65 year-old cohort, female dentists were more likely to treat patients covered by public insurance (OR=1.80, 95% CI=1.60-2.03) than their male counterparts.

Conclusions: The study findings suggest that female dentists assume care for proportionally more young patients than male dentists and may work in practice settings with higher percentages of historically underserved patients.

Source of Funding: US Health Resources and Services Administration, National Center for Health Workforce Analysis

Presenting Author: Simona Surdu, MD, PhD, Oral Health Workforce Research Center; Author Margaret Langelier, MSHSA, Oral Health Workforce Research Center
Poster Number: 61

Title: Differences in Dental Visits among Wisconsin Medicaid Enrolled Foster Care and Non-foster Care Children

Objective: In 2016, over 687,000 children spent time in the U.S. foster care (FC). The objective of this study was to compare the rates of annual dental visits among FC and non-foster care (NFC) Medicaid enrolled children in Wisconsin.

Methods: We analyzed enrollment and claims data for 0-21-year-old children enrolled in Wisconsin Medicaid in the year 2014. Children were categorized into 2 groups based on Medicaid eligibility criteria into FC and NFC groups. Descriptive and bivariate analyses were performed to test for differences in annual dental visits among children in FC versus NFC, by age, race and sex.

Results: Overall, 11001 and 555193 children were enrolled in FC in NFC, respectively. Significantly higher proportion (44%) of children in FC had at least 1 dental visit compared to children in NFC (39.4%) (p<0.01). Significantly higher proportion of FC children had a dental visit compared to NFC children across all age groups, except those in 19 to 21 age group (p=0.15). A higher proportion of FC children of age 15 to 18 visited a dentist compared to NFC children of the same age (p<0.01). Significant differences in dental visits by racial categories were observed between FC and NFC children, except for Whites (p=0.09) and Hispanics (p=0.3). African American children in FC were more likely to visit a dentist compared to African American children in NFC (p<0.01)

Conclusions: Consistently across all subgroups of age and race, children in FC were more likely to visit a dentist compared to children in NFC

Source of Funding: None

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Poster Number: 62

Title: Healthy Brain Initiative-An Innovative Train the Trainer (TTT) Model to Advance the Oral health of Minnesota's Aging Population

Purpose: The purpose of this proposal is to assure a competent workforce to educate the caregivers of Alzheimer’s patients on oral health care.

Curriculum: The Minnesota State Oral Health Program identified and developed appropriate educational information on oral health and geriatric care, health literacy, cultural competency, motivational interviewing, goal setting, resource mapping and care navigation. These modules were specifically designed to be used by Community Health Workers (CHWs) to empower dementia caregivers.

Outcomes: The Minnesota State Oral Health Program partnered with schools and non-profit organizations to train CHW students and professionals. These CHWs identified appropriate settings to provide group education to caregivers of Alzheimer’s patients. The trained CHWs were successful in reaching the underserved aging population, ethnic cohorts of older adults and communities of color.

Conclusion: This pilot project allowed us to test innovative ways to provide support to unpaid caregivers of people with Alzheimer’s disease who are typically resistant to oral hygiene care. We also learned the best practices in integrating CHWs into the broader health system.

Source of Funding: ASTHO

Minnesota State Funds

Author Don Bishop, PhD, Minnesota Department of Health; Presenting Author: Prasida Khanal, MPH BDS, Minnesota Department of Health
Poster Number: 63

Title: Nursing Students Knowledge and Attitude towards Maternal Oral Health Care

Objectives: Pregnant women have frequent encounters with nurses during pregnancy and for some time after their birth delivery. In this study, we measured midwifery nursing students’ knowledge and attitude towards oral health care in pregnancy.

Methods: This was a cross-sectional study and the study population were randomly chosen among second and third-year midwifery students at Hamadan Nursing School. The questionnaire used consisted of demographic questions along with ten questions on knowledge and seven on attitude. The validity and reliability were confirmed before the study began. Statistical analysis was conducted by using Chi-square and T-test. A p-value less than 0.05 was set as the significance level.

Results: In total 60 students participated and their mean age was 22.06±0.38 which the youngest and eldest were 17 and 35 years old respectively. Overall 25 (34.5%) of the students had high willingness to provide oral health care to pregnant women. Mean total knowledge scores on gingival health and dental caries in pregnant women was 1.59±0.1 (Min=0 & Max=3) and 1.45±0.1 (Min=0 & Max=3) accordingly. However, the total knowledge score was 4.71±0.2 (Min=1 & Max=8) and was significantly higher than the mean calculated average (Mean=4) (P<0.05). Also, the average attitude was 28.74±0.49 and the lowest score among students was 17 and the highest was 35.

Conclusions: Midwifery nursing students had a high eagerness and attitude to provide oral health care to expecting mothers. However, their knowledge is moderately low and it is necessary to implement education programs.

Source of Funding: None

Author Sepideh Seyedzadeh Sabounchi, DDS, MSc, New York Dental School; Presenting Author: Shabnam Seyedzadeh sabounchi, DDS, Ph.D Candidate, Binghamton University; Author Maryam Safari, DDS, Private Practice
Title: Oral Cancer Screening Project ‘Screening Saves Smiles’

Objectives: International Agency for Research on Cancer concluded in 2012 that oral cancers have the second highest incidence (8.6%) of all cancers in Pakistan. The ‘Screening Saves Smiles’ initiative is designed to screen a high-risk population of industrial zone workers in Abbottabad, Pakistan for oral cancer. The objective is the early diagnosis of oral cancer, and as a result reduced mortality and morbidity. The project aims to provide data to plan interventions.

Methods: Team of two maxillofacial surgeons from the Ayub medical complex in Abbottabad developed protocols for visually examining these workers. Health volunteers were trained at a workshop to conduct these visual examinations, record lesions and obtain a detailed history of tobacco use among the study subjects. Through the informed consent, suspected malignancies were referred to the oral maxillofacial department by health volunteers. Further histopathological investigation was performed by OMFS surgeons.

Results: A total of 578 workers (N=578) were screened. The age of subjects ranged from 25 years to 75 years with a mean age of 41.78 SD ± 8.41. Among the sample, 72 workers (12.46%) were referred by health workers. Biopsies were performed on 27 cases suspected by surgeons, out of the 72 referred cases. The histopathology data for these 27 subjects is anticipated to be compiled by 15th December’ 2018 for further analyses of results.

Conclusion: Early diagnosis will result in better prognosis. Almost 78% of the cases referred by health workers were using tobacco related-products. Therefore, this initiative can contribute in planning interventions with healthier outcomes and promote the importance of screening.

Source of Funding: none

Presenting Author: Muhammad Taimur Khan, BDS RDS MPH, Nova Southeastern University; Author Mariam Tariq, BDS RDS, Ayub Medical College, Abbottabad
Poster Number: 67

Title: Los Angeles County Free Dental Care Event – Who Attends and Why?

Objectives: Since 2014, California has provided dental insurance under their Medicaid benefits program, called Denti-Cal. An annual, multi-day free clinic, called Care Harbor, provides medical, dental and vision care for Los Angeles County’s (LAC) uninsured, underinsured and underserved residents. The objective of this presentation is to analyze the Care Harbor patients to understand the reasons for their attendance, patients’ personal experiences with accessing dental care and their insurance coverage & awareness.

Methods: Conduct a rapid assessment, self-administered survey to investigate the barriers that many people face to receive dental care – specifically among the low-income/uninsured population.

Results: 91% response rate of those who received the survey. 50% respondents chose the survey in Spanish and 50% in English. 11% of respondents had private dental insurance and 30% had Denti-Cal. 63% respondents with Medi-Cal replied they did not know that Medi-Cal also provided dental benefits. 77% of respondents with Medi-Cal needed dental care but hadn’t gotten it.

Conclusions: Although patients needed to stand in line for hours in order to attend the Care Harbor Event, attendees preferred this rather than going to their dental insurance provider. The majority of Medi-Cal recipients present were not aware that they also had dental insurance included with their Medi-Cal benefits. It is essential that Medi-Cal recipients are educated as to their dental benefits; and work needs to be done to mitigate the barriers they face in utilizing their private dental insurance.

Source of Funding: None

Presenting Author: Maritza Cabezas, DDS, MPH, Los Angeles County Department of Public Health
Michigan WIC partnered with Altarum, McMillen Health, Delta Dental Foundation, and the Michigan Health Endowment Fund to implement a WIC-oral health pilot project over 3 years in 50 Michigan WIC clinics in rural and urban settings.

Objectives: Provide BRUSH curriculum training and resources to WIC staff to increase their ability to discuss oral health with clients and provide dental referrals.

Methods: Clinic staff received BRUSH training to integrate oral health education and dental referrals into the nutrition education provided to mothers with young children. In visits with WIC staff following the training, families received oral health education appropriate to their child’s age, dental resources (toothbrushes and finger brushes), as well as a referral to a dentist based on zip code.

Results: WIC staff demonstrated increased knowledge regarding the recommended age for a child's first dental visit (from 65% to 99%), as well as an increased comfort level in discussing dental issues (from 28% to 74%). More than 5,000 BRUSH counseling sessions were documented and preliminary analysis of Medicaid dental claims indicates WIC referrals to dentists were associated with a significant increase in dental visits following referral (p=0.0158), though the effect varies widely from clinic to clinic.

Conclusions: More than 80,000 infants and children (around 40% of the state’s WIC participation) now have access to these 50 WIC pilot clinics. This pilot has increased access to care in both urban and rural settings, established dental homes before the onset of disease, and helped minimize the potential occurrence of early childhood caries.

Source of Funding: Funding for this project was generously provided by: the Centers for Medicare and Medicaid Services (CMS), Delta Dental Foundation, and the Michigan Health Endowment Fund.

Presenting Author: Allyson Rogers, M.A., Altarum; Author Tara Fischer, M.S., R.D., Michigan Department of Health and Human Services State of Michigan WIC; Author Holli Seabury, Ed.D, McMillen Health; Author Tom Taylor, Ph.D., Altarum; Author Molly Carmody, M.A., Altarum; Author Bagya Kodur, M.S., Michigan Department of Health and Human Services State of Michigan WIC; Author Kristen Hanulcik, M.P.A., R.D., Michigan Department of Health and Human Services State of Michigan WIC; Author Kobra Eghtedary, Ph.D., Michigan Department of Health and Human Services State of Michigan WIC
Objective: Dental plaque is a well-known etiologic factor for initiating periodontal diseases. Recently, natural and sea salt based organic rinses are a matter of scientific interest to inhibit plaque accumulation on teeth. The purpose of this study was to evaluate the effects of sea salt based mouth wash on plaque, gingival scores and S.mutans salivary levels.

Methods: Twenty gingivitis patients participated in this controlled, single-centred, double blind clinical study. By blind randomization, test subjects (n=10) used sea salt rinse and control (n=10) placebo rinse for 2 min twice a day during a 12 weeks observational period. The plaque score, gingival indices and S.mutans salivary levels were recorded at baseline and at the end of experimental period i.e. 3 Months. The mean reduction in plaque index, gingival scores and S.mutans salivary levels were determined and statistically analysed by using Two-way ANOVA and Tukey’s multiple comparisons test.

Results: The sea salt mouthwash lowered plaque index and gingival scores significantly (p <0.001) in comparison to the baseline, while there was no significant difference in control group. The CFU levels of S.mutans levels were also reduced significantly to 55% i.e. highly significant (p <0.001) from base levels.

Conclusion: Using sea salt mouthwash appears to benefit naturally in reduction of plaque, gingival and S.mutans salivary levels without any adverse effects.

Source of Funding: None

Presenting Author: Rajiv Saini, MDS, BDS, Department of Interdisciplinary Medicine, School of Medicine, University of Bari, Aldo Moro, Bar, Italy
Poster Number: 71

Title: Data Literacy Best Practices for Oral Health Surveillance

OBJECTIVES: To increase public access to easy-to-use and understand oral health surveillance data by applying data literacy best practices to the public facing, online Minnesota Oral Health Statistics System.

METHODS: A literature search of peer-reviewed publications and gray literature on data literacy, numeracy and data visualization was conducted to determine best practices. Guidance from the Centers for Disease Control and Prevention and Office of Disease Prevention and Health Promotion were also used to develop understandable, actionable, dynamic charts, tables and maps. Audience testing of diverse data users helped refine data presentation and messaging.

RESULTS: Plain language and data visualization features such as use of white space, color and typeface aid in the comprehension of tables, charts and maps that display oral health surveillance data.

CONCLUSIONS: Oral health surveillance data that is accessible, understandable and actionable is paramount for stakeholders to be able to identify health disparities, track trends in disease and service utilization, identify unmet needs and target resources more efficiently.

Source of Funding: Delta Dental of Minnesota Foundation; Centers for Disease Control and Prevention

Presenting Author: Genelle Lamont, PhD, MPH, Minnesota Department of Health
Title: School-based Prevention Enhancement Program - A targeted oral health approach

Objectives: Dental caries are the most common chronic disease of children aged 5 to 18 years old. In Niagara (Ontario, Canada), dental hygienists and dental assistants visit every elementary school each year to provide dental screening in JK, SK, grades 2, 4, 6, 7 and 8. Approximately 24,000 students are screened annually. Based on these results, in 2013 it was identified that caries rates were unacceptably high amongst elementary-aged students, despite access to various publicly available preventive and treatment services. Thus, 12 schools across Niagara were identified to receive universal screening and enhanced preventive services (such as fluoride, sealants and scaling) for five years, via the mobile dental clinic.

Methods: Socio-demographic indicators and dental screening results were used to identify schools that were at high risk for dental caries and other oral health conditions. The 12 schools received universal screening annually as well as preventive services via the dental mobile clinic, over a period of five years.

Results: Dental caries reduced from 20.6% in 2013/14 to 14.4% in 2017/18 across the 12 schools, with large variations between schools. Overall, all schools noticed a sustained decrease in cavities, urgent critical and non-urgent conditions.

Conclusions: As part of knowledge translation, each school received their individual results, with support from school nurses and health promoters, to continue to address oral health awareness and programs. Due to the success of this intervention, the mobile dental clinic is continuing to offer universal services to targeted schools identified as high risk in Niagara region.

Source of Funding: Healthy Smiles Ontario (for program implementation)

Presenting Author: Tara Wincott, BA, Niagara Region Public Health; Author Shailee Tanna, M.Sc, Niagara Region Public Health
Poster Number: 73

Title: Dental Workforce: One Year Post Graduation

Objectives: The objectives of this study were to evaluate recent dental school graduates’ opinions on the role of dentistry and access to care, how educational debt affects ability and desire to practice in underserved communities and to determine awareness of and participation in educational loan repayment programs.

Methods: A questionnaire was emailed to 79 alumni of Columbia University College of Dental Medicine Class of 2017. The survey included questions regarding educational debt, knowledge of and participation in loan repayment programs, likelihood of working with underserved populations and opinions on access to dental care, and all responses were confidential.

Results: Fifty-eight percent responded, and 61.5% agreed that the level of access to care is a major problem in the US. A majority agree or strongly agree that providing care to all segments of society is an ethical obligation (89.7%) or a professional obligation (69.2%). Serving underserved populations was an important part of their career plans (52.4%), with personal experience or background (27.3%) determined to be the most likely influencing factor. Nearly 53% reported having educational debt of over $200,000, but only 26.3% were willing to participate in a loan repayment program requiring a service commitment.

Conclusions: One year post graduation, most dental school graduates’ believe there is an ethical and professional obligation to provide care to all segments of society and that the level of access to dental care is a major problem. However, amount of educational debt did not significantly influence their willingness to practice in underserved populations.

Source of Funding: none

Presenting Author: Selene Wun, DDS, Columbia University; Author Mari Millery, Columbia University; Author Burton Edelstein, DDS, MPH, Columbia University
Title: Pediatric Dental Visits in the Emergency Department, 2014-2015

Objective: To determine if differences exist among factors associated with Emergency Department visit with dental condition and without; and secondly, estimate dental condition volume by type of disease.

Methods: Using the Nationwide Emergency Department Sample (NEDS) for 2014 and 2015, a retrospective secondary data analysis of ED visit for a non-traumatic dental condition was conducted.. All children < age 21 were included. Sociodemographic factors and clinical data included gender, age, dental diagnosis, patient location, primary payer, disposition, and income. Charlson comorbidity index was computed; categorical variables were compared using Chi-square; and breakdown of dental diseases across age-groups.

Results: Combined weighted sample was 70,616,194 children, with 465,353 (0.66%) ED visits for dental condition. Significant differences were observed in ED visits for NTDC and other conditions by age, income, disposition and expected payer. Significant differences in proportion of children ages 18-21 visiting the ED for dental (52%) versus non-dental (22%) were observed. Medicaid was the expected primary payer for more than 50% of all ED visits among children. Roughly, 52% of NTDC ED visits were by late adolescents (18-21 years). Proportion of uninsured children visiting the ED for a dental condition (19.5%) was twice that of children visiting the ED for a non-dental condition (8.8%).

Conclusions: There are major differences in dental and non-dental related ED use by age and insurance type. Reducing barriers to regular dental care use and improving dental care coverage could decrease ED utilization for non-traumatic dental conditions.

Source of Funding: We received faculty development/professional development funds from Marymount University and University of South Dakota to purchase datasets.

Author Denise Claiborne, Ph.D, RDH, Old Dominion University; Presenting Author: Uma Kelekar, PhD, Marymount University; Author Jewel Shepherd, PhD, Beacom School of Business; Author Shillpa Naavaal, BDS, MS, MPH, Oral Health Promotion and Community Outreach, School of Dentistry, Virginia Commonwealth University
Objective: Minimal oral surgeons participation in the Medicaid program creates barriers in access to care, leading to frustration by referring general dentists and increased risk of maxillofacial infection resulting in use of emergency room services.

Methods: A two-day mini-residency training in complex surgical extractions was provided in Rhode Island to general dentists in health centers and private practices participating in Medicaid in the state. In addition to lectures, 38 participants performed procedures both on pig jaws and specially fabricated models using surgical instrumentation. Pre- and post-training surveys via SurveyMonkey were performed to assess impact, asking for estimates in procedures performed and frequency of referral to a specialist.

Results: Review of the self-reported survey data revealed an increase in surgical extractions performed by general dentists and a reduced need to refer out to specialists.

Conclusions: Improving surgical skills of general dentists may be a strategy to address workforce gaps in the area of oral surgery.

Source of Funding: Health Resources and Services Administration (HRSA), Grants to States to Support Oral Health Workforce Activities [HRSA-13-142]

Presenting Author: Samuel Zwetchkenbaum, DDS, MPH, Rhode Island Department of Health; Author Sadie DeCourcy, JD, Rhode Island Department of Health
Introduction: Opioid prescribing in Emergency Departments (ED) for dental conditions has increased over the past decade. Little research examines the potential relationship between dental-related ED visits and opioid-related mortality. This study examines trends between the opioid-related mortality and ED visits for dental conditions in Maryland counties from 2010-2016.

Study Design: Data on opioid-related overdose deaths in 24 Maryland counties was analyzed. Data on ED visits for dental-related conditions among adults were aggregated from the data provided by HCUP and the Maryland HSCRC. Rates per 10,000 were calculated from CPE. Data are aggregated to the county level. Data were analyzed using descriptive statistics and random effects regressions with a first-order autoregressive disturbance term to correct for geographic and temporal data nesting. Control variables include income, insurances status, healthcare providers, and premature death rate.

Principal Findings: Opioid-related deaths per 10,000 adults increased. Fentanyl-related overdose deaths increased dramatically and at a significantly greater rate. There is a significant, positive correlation between ED visits for dental conditions and total opioid deaths. This relationship is present across years of data and across types of opioid-related overdose deaths. Significant and positive effects persist in random effects regressions controlling for median income, proportion of the population uninsured and living in rural areas, the rate of dentists, PCPs, and non-OD-related premature deaths.

Conclusions: Rates of opioid-related overdose deaths increased over time with the use of the ED for dental conditions. This is consistent with recent findings demonstrating links between opioid addiction and overdose through dependence and drug-seeking behavior.

Source of Funding: None

Author Sean Boynes, DMD, MS, DentaQuest's Partnership for Oral Health Advancement; Author Eric Tranby, PhD, Analytics and Publication; Author Vuong Diep, MPH, Analytics and Publication; Author Ilya Okunev, MS, Analytics and Publication; Presenting Author: Avery Brow, MA2, DentaQuest Institute
Objective: This cross-sectional study sought to estimate the degree of dental disease in elementary school children in rural and urban communities within Southeast Louisiana participating in a school-based dental screening and sealant program.

Methods: We utilized de-identified data provided by The Health Enrichment Network (THEN) oral health program covering 46 elementary schools from 12 parishes. Screenings adhered to procedures prescribed by CDC’s Sealant Efficiency Assessment for Locals and States (SEALS) program. Schools and participating children were a convenience sample obtained during 2007-2014 and entered into a REDCap database, extracted and analyzed in SAS 9.4. Screening forms recorded caries, the presence of sealants, and decayed, missing, and filled teeth (DMFT). The DMFT score was calculated by summing the numbers of permanent teeth with those conditions per child. Descriptive statistics for children’s demographic characteristics and oral health conditions were estimated. Schools were coded as located in either rural or urban communities.

Results: The children's DMFT scores varied by race (White=0.94, Black=0.56, Other=0.32). There was a notable difference in mean DMFT score between the urban (0.58) and rural (0.82) schools (p<.001).

Conclusions: We observed a significant difference in DMFT score between rural and urban parishes, with rural communities having a higher burden of oral health disease. Confounding factors may include rural parishes display a greater dental workforce shortage and less access to community water fluoridation systems compared to urban parishes. The combination of fewer providers and less fluoridation may result in a higher burden of disease in rural compared to urban parishes.

Source of Funding: Health Resources and Services Administration (HRSA) through the Delta State Rural Development Network Grant Program (DELTA) to Health Enrichment Network D60RH25758.

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Pfizer/Salvatore Giorgianni Professorship of Health Systems to Dr. Edward Peters

Author Edward Peters, DMD, SM, ScD, LSUHSC School of Public Health; Author Michael Conner, MPH, LSUHSC School of Public Health Epidemiology Program; Presenting Author: Lisa Staples, MPH, CHES, LSUHSC School of Dentistry; Author Marissa Duckett, National Science Foundation (NSF) through the Research Experiences for Undergraduates (REU) Program to Louisiana Health Sciences Center; Author Amy Karam, EatMoveGrow
Poster Number: 78

Title: Models of Collaboration for State Chronic Disease and Oral Health Programs in Minnesota

The proposed poster will highlight an innovative medical-dental integration model from start to finish, and will include best practices of epidemiology and evaluation.

The study design for this project was comparative. We looked at the number of patient visits versus the number of those patients screened. Using this, we found the percentage of those screened who were referred. We calculated the percentage of referrals which resulted in an office visit. We confirmed that even with a co-location of providers, it was difficult for a referral to result in an office visit.

The pilot project involved two different practice types: a private dental practice and parallel private medical group, and a federally qualified health center with co-located dental and medical clinics. The Advisory Group for this work included members from each of these clinics. Based on the premise that oral health and general health are linked, the pilot project and performance measures sought to address the public health problem of lack of integrated care. Each site participated in a pre-pilot clinic readiness assessment and work plan development. Each site held staff trainings ahead of the project launch, informing and calibrating the team who would be carrying out the project. Quarterly reports from each clinic site were generated. Workflow continuous improvements were made throughout the project to address challenges. Concluding reports were submitted, and findings were evaluated. The Minnesota Department of Health hosted a medical dental integration symposium, with panelists from each clinic site sharing lessons and victories to a public audience.

Source of Funding: CDC

Presenting Author: Linda Maytan, DDS MPH, Minnesota Department of Human Services; Author Prasida Khanal, MPH BDS, Minnesota Department of Health
Poster Number: 79

Title: Oral Health Information for Caregivers of Older Adults

The number of older adults who are keeping their teeth has increased steadily over the past several decades. Today, less than 20 percent of those age 65 and older have lost all their natural teeth, compared to the early 1960s when almost half of older adults had complete tooth loss. As a result, aging adults who need assistance with other activities of daily living also may need help taking care of their teeth.

To help caregivers learn about oral health and how to provide care, the U. S. Department of Health and Human Services created a new series of fact sheets titled Oral Health & Aging: Information for Caregivers. The materials were produced through a partnership between the National Institute of Dental and Craniofacial Research and National Institute on Aging at the National Institutes of Health, the Health Resources & Services Administration, the Administration for Community Living/Administration on Aging, and the HHS Office on Women’s Health.

This poster will describe the formative research that was conducted to identify audience needs and guide development of the new series. It will also summarize the results of the pretest, which was conducted with family caregivers, paid caregivers, and administrators/managers to determine if the materials resonated with these audiences, and to identify needed improvements prior to publication and dissemination.

Source of Funding: National Institute of Dental and Craniofacial Research

Author Mary Daum, National Institute of Dental and Craniofacial Research/National Institutes of Health; Presenting Author: Nicole Garcia-Quijano, MD, MPH, National Institute of Dental and Craniofacial Research/National Institutes of Health; Author Karina Boehm, , National Institute of Dental and Craniofacial Research/National Institutes of Health; Author Renee Joskow, DDS, MPH, FAGD, HRSA
The Surgeon General’s Report on Oral Health in America highlighted for the first time the importance and the connection of optimum oral health to a person's overall health and well-being. In 2050, the population aged 65 and over is projected to be 83.7 million, almost double the population in 2012. As the world is aging, the focus is moving towards managing chronic diseases and improving the quality of life. End of life care and managing multiple co-morbid conditions is a challenge. In such settings, oral care and management of optimum oral health takes effort and training. Nationally approved training modules for oral health care in the United States is not available. This presentation provides an overview of existing guidelines and modules for oral health management in the US, gives an overview of guidelines in developing nations and makes recommendations for oral health management in palliative settings in the USA.

Source of Funding: none

Presenting Author: Kavitha Das, BDS, MPH, MS, Mount Sinai Hospital
Title: Retrospective Study of Opioid Prescription Trends in a Dental School Clinic Using Electronic Health Record Data, 2012-2017

Background: In October 2017, the opioid crisis was declared a national public health emergency under federal law. As dentists have been identified among leading prescribers of opioids, academic dental institutions have an important role to play in educating faculty and students to respond to this devastating epidemic.

Objectives: To analyze trends in opioid-based prescription patterns in dental school clinics and to examine external influences on those trends.

Methods: Retrospective study using de-identified electronic health record data from clinics in a dental school. Scholarly literature and electronic databases were searched for professional and legal protocols impacting dental provider prescribing practices. Data were analyzed using SPSS v24.

Results: From 2012 to 2017, 12,549 opioid prescriptions were written from 20+ dental school clinics. Total prescription occurrence rates per 100 patients for 2014, 2015, 2016, and 2017 were 10.5%, 8.9%, 9.9%, and 6.4% respectively. Chi-Square test indicated a significant relationship between total prescriptions written in 2017 and all other years (p < .001). Nine CE courses, 3 guidelines, and 7 laws were identified as possible external influences.

Conclusion: Efforts to improve prescribing practices can promote safer, more effective pain management and reduce the misuse and abuse of opioids. This study was an important exploratory look at frequency trends of opioid prescriptions written in dental school clinics and potential drivers of those trends. Evaluation of these and future trends could help to minimize further impact of opioids on communities.

Source of Funding: None

Presenting Author: Colleen Freund, RDH, University of Michigan School of Dentistry
Title: Improving Caregiver Dental Hygiene Knowledge in a Long-Term Care Facility for Residents with Irreversible Physical Disabilities

Research shows that dental hygiene knowledge amongst caregivers, primarily certified nursing assistants (CNAs), working in long-term care facilities is not sufficient enough to provide adequate dental care and education to residents. The main objective of this project is to improve dental hygiene knowledge amongst these caregivers. During external rotations at the Virginia Home, Virginia Commonwealth University, School of Dentistry dental hygiene students recognized, first-hand, the need for improvement of dental hygiene care provided to residents by CNAs. The Virginia Home is a long-term care facility for adult Virginians with irreversible physical disabilities.

Methods used, as part of a Community Dental Health Course Practicum Project carried out by three senior dental hygiene students, include two in-person dental hygiene education sessions presented to CNAs employed at the facility. Articles with publication dates ranging from the year 2012 to present, all written in English, and electronic sources, PubMed and CINAHL Complete databases, were referenced as notable resources. Pre-tests and post-tests were administered and results compared. The project focused on evaluating the dental knowledge of CNAs at the Virginia Home prior to and after dental hygiene education was provided by dental hygiene students.

Results support the effectiveness of in-person dental hygiene education sessions in increasing dental knowledge among CNAs, which infer improvement of dental hygiene care provided.

In conclusion, this project revealed that dental hygiene education improved dental hygiene knowledge. Follow-up studies will reveal the effectiveness of these dental hygiene education sessions in improving the overall oral health of long-term care facility residents.

Source of Funding: None

Presenting Author: Christian Waterman, BSDH, 2018 Graduate Virginia Commonwealth University, School of Dentistry, Dental Hygiene Program; Author Brittany Badders, BSDH, 2018 Graduate Virginia Commonwealth University, School of Dentistry, Dental Hygiene Program; Author Mackenzie Blackwell, BSDH, 2018 Graduate Virginia Commonwealth University, School of Dentistry, Dental Hygiene Program
**Title: Community Service Project: Petersburg Home for Ladies**

**Problem:** Poor oral hygiene of assisted living residents stemming from lack of oral health education.

**Objective:** The objective of this community health project was to increase oral health knowledge on topics such as xerostomia, caries risk, proper oral hygiene, good nutrition and overall health of geriatric residents and their care providers of a women only assisted living facility.

**Methods:** Multiple search engines were utilized to find current sources on the association of aging and oral health. A target population was determined and oral hygiene and health education was organized to educate residents of an all women assisted living facility and their care providers. Relevant articles were incorporated to find an education model, create a lesson plan, and write a report of findings. It was determined the community health project would be held at the Petersburg Home for Ladies in Petersburg, Virginia. The target population included geriatric women who are capable of independent living, whom need minimal to considerable aid, and ladies with varying degrees of Alzheimer’s disease. Pre-visit and post-visit questionnaires were used to demonstrate residents’ and care providers’ process of understanding oral health care relating to the elderly population.

**Results:** There was improvement in the average post questionnaire scores compared to pre questionnaire scores. However, a paired t-test analysis was not statistically significant (P>0.05).

**Conclusion:** Comparing plotted data, there was a profound increase in understanding of topics discussed and accomplishment of the objectives. The questionnaires demonstrated the continuous need for education to the geriatric population and their care providers.

**Source of Funding:** None

**Presenting Author:** Tuongvi (Vi) Tran, BSDH, 2018 Graduate Virginia Commonwealth University, School of Dentistry, Dental Hygiene Program; Author Alexandra Manson, BSDH, 2018 Graduate Virginia Commonwealth University, School of Dentistry, Dental Hygiene Program; Author Erin Lewis, BSDH, 2018 Graduate Virginia Commonwealth University, School of Dentistry, Dental Hygiene Program
Background: Dental providers are encouraged to screen for oral cancer (OC) and promote smoking cessation to their patients. This study investigated prevalence and correlates of receiving OC screening, tobacco and OC counseling from dental providers.

Methods: Data from NHANES 2015-2016 were analyzed for participants who reported a dental visit. Different samples were created for each sub-analysis, then categorized by smoking status. Weighted proportions and adjusted odds were calculated for receiving tobacco counseling and screening for OC in a dental office.

Results: Overall, 25.9% of U.S. adults ≥30 years old, who had ever visited a dental professional received OC screening. Odds of receiving an OC screening were lower among current smokers than never smokers (OR=0.47; 95%CI 0.30-0.74), and among non-Hispanic Blacks (OR= 0.35, 95%CI: 0.22-0.59), Mexican Americans (OR=0.23, 95%CI 0.10-0.53), non-Hispanic Asians (OR=0.21, 95%CI: 0.13-0.35), and Other race (OR=0.39, 95%CI 0.24-0.65) than non-Hispanic Whites. Individuals with ≥high school education have higher odds of receiving OC screening (OR=1.88; 95%CI 1.04-3.43) and counseling for screening (OR=1.64; 95%CI 1.07-2.51) than < high school. Family incomes ≥400%FPL have higher odds of OC screening (OR=5.17; 95%CI 2.06-12.94), but lower odds of receiving tobacco counseling (OR=0.45; 95%CI 0.24-0.82) compared to families <100%FPL.

Conclusions: 25.9% of adults who had ever visited a dentist received an OC screening. Dental providers under-screen for OC among high-risk groups including: current smokers, minorities, and individuals of low socioeconomic status. Continuing education on risk factors for OC may increase self-efficacy of dental providers in conducting screenings and counseling for OC and tobacco use.

Source of Funding: None

Presenting Author: Muath Aldosari, BDS, MPH, Harvard School of Dental Medicine; Author Jevae Nelson, DDS, Harvard School of Dental Medicine; Author Erinne Kennedy, DMD, MPH, Harvard School of Dental Medicine; Author Israel Agaku, DMD, PhD, Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, CDC; Author Constantine Vardavas, MD, RN, MPH, PhD, School of Medicine, University of Crete, Greece
Poster Number: 87

Title: Legally Authorized Representatives’ Awareness of the Oral Health Needs of Long Term Care Facility Residents

Objective: To evaluate whether the oral health knowledge of legally authorized representatives (LARs) of long term care facility (LTCF) residents is associated with LARs’ understanding of residents’ oral health status and treatment needs.

Methods: LARs of LTCF residents who were examined by the University of Iowa College of Dentistry’s Geriatric Mobile Unit (N=431) were asked to complete a survey with questions pertaining to the LAR and the LTCF resident. Responses were compared to the residents’ dental records. To determine which variables were associated with LARs’ knowledge about the LTCF residents’ missing teeth and oral health treatment needs, bivariate analyses were conducted using Chi-square and Cochran-Mantel-Haenszel tests, and multiple logistic regression models were developed.

Results: Of the 100 LARs who completed the questionnaire, 52% received a perfect score on the oral health knowledge section. In general, LARs underestimated LTCF residents’ missing teeth and oral health treatment needs. Final logistic regression models revealed that the LAR’s self-reported oral health status, resident’s age, and whether the resident’s health status influenced the LAR’s decision to seek care dental care for the resident were significantly associated with LARs’ knowledge about whether the residents were missing teeth. The LAR’s retirement status and confidence filling out medical forms were significantly associated with LARs’ knowledge about residents’ treatment needs.

Conclusion: Many LARs were unaware of the oral health status and treatment needs of LTCF residents in spite of high oral health knowledge. Increasing LARs’ awareness of residents’ oral health needs may improve their quality of life.

Source of Funding: Delta Dental of Iowa

Presenting Author: Nyla Balakrishnan, BDS, MPH, MS, University of Pittsburgh School of Dental Medicine; Author Michelle McQuistan, DDS, MS, University of Iowa College of Dentistry and Dental Clinics; Author Fang Qian, PhD, MA, MPhil, University of Iowa College of Dentistry and Dental Clinics; Author Howard Cowen, DDS, MS, University of Iowa College of Dentistry; Author Larry Newman, DNP, RN, AGPCNP-BC, University of Iowa College of Dentistry; Author John Warren, DDS, MS, University of Iowa College of Dentistry
Poster Number: 88

Title: Hospital Inpatient Admissions for Non-Traumatic Dental Conditions among Florida Adults, 2006 - 2016

Objective. This study analyzed patterns, trends, and correlates of hospital inpatient admissions for non-traumatic dental conditions (NTDCs) in Florida for calendar years 2006 through 2016.

Methods. The study was a retrospective analysis of hospital inpatient admissions for non-traumatic dental conditions throughout the state of Florida. Data were derived from a database maintained by the Florida Agency for Health Care Administration (AHCA), the state’s primary health policy and planning entity.

Results. There were 26,659 hospital inpatient admissions for NTDCs during the 11-year time period. The number of admissions increased from 1,808 in 2006 to 3,542 in 2016, while total charges increased from $46.1 million to $166.5 million. The most common diagnosis was periapical abscess without sinus. Emergency departments were the most frequently source of admission. Persons aged 40-49 years and those aged 65 years or older comprised the largest proportion of patients admitted for NTDCs.

Conclusions. Increasing numbers of hospital inpatient admissions for NTDCs are largely a consequence of using emergency departments to address dental-related conditions. Preventing hospital inpatient admissions for NTDCs should be a priority for the primary health care sector. If current trends continue, hospital inpatient admissions for NTDCs will place an increasing burden on the state’s health care system with major implications in health care resources and outcomes. Although some hospital admissions related to dental problems may be unavoidable, further studies are needed to better understand mechanisms for reducing the use of hospitals and emergency departments for care best provided in community-based dental offices.

Source of Funding: None

Presenting Author: Elías Morón, DDS, MPH, MHSM, NYU Langone Health
Objectives: The focus of this project was to evaluate oral health outcomes in communities with established DHATs compared to communities without established DHATs.

Methods: Research was conducted in 12 communities in rural Alaska. Examiners were calibrated to record both decayed, missing, filled primary and permanent teeth. Parental survey responses evaluated dental access and dental behaviors.

Results: In the 187 Head Start children participants the average age was 3.6 years and average number of decayed, missing and filled baby teeth was 11.0. In the 104 7th graders, the average age was 12.4 years and the average number of decayed, missing and filled adult teeth was 6.4. Head Start children living in communities with an established DHAT were 4.0 times more likely to have a lower amount of decayed, missing and filled baby teeth. We also found that both Head Start and 7th Grade children living in communities with an established DHAT were more likely to have more dental visits over the last year. Having an established DHAT did not affect the dental health of 7th Grade children. We found that an increase in the number of decayed, missing and filled permanent teeth was associated with older age, the female gender and the use of snuff, chew or iqmik.

Conclusion: Our results provide evidence that DHATs are having a positive impact on the oral health outcomes in their communities. These findings provide further evidence that DHATs are a valuable component to improving oral health equity in underserved populations.

Source of Funding: None

Presenting Author: Sarah Shoffstall-Cone, DDS, MPH, Alaska Native Tribal Health Consortium; Author David Cappelli, DMD, MPH, PhD, University of Nevada Las Vegas, School of Dental Medicine
Poster Number: 90

Title: Incorporating Dental Case Management into Medical Case Management for People Living with HIV/AIDS (PLWHA)

Objectives: Lack of access to oral health care is the largest gap in core services for people living with HIV/AIDS (PLWHA); medical case managers (MCM) could play a key role in eliminating this void.

Methods: This study developed, implemented and evaluated a dental case management training for MCM who serve PLWHA in the Cleveland Transitional Grant Area. The training included: 1) the importance of preventive oral health care for PLWHA, 2) the relationship between oral and systemic health, 3) Ryan White and Medicaid dental funding, and 4) integrating dental case management into HIV case management. Chi-squared tests investigated the differences in proportions between pre- and post-workshop responses from self-administered questionnaires.

Results: After the training, a higher proportion of MCM planned to refer their clients for dental care (p < 0.1). All 23 participants felt confident in their ability to convince PLWHA of the importance of dental care, a 27.3% increase (p = .01), and direct their clients to funding for dental care, a 29.4% increase (p = .02). A 52.9% increase was seen in MCM who would provide clients with oral health education materials (p = .00), and advise PLWHA to take their HIV lab results to dental visits (p = .00).

Conclusions: The training expanded the medical case managers’ repertoire to include the skills to effectively connect PLWHA to regular, appropriate and affordable oral health care. Increased access to dental care will positively impact the oral health and general health status of PLWHA, thus improving their quality of life.

Source of Funding: None

Presenting Author: Alisha Jimenez-Thompson, DMD-MPH Candidate, Case Western Reserve University School of Dental Medicine
Title: Victors For Veterans: Expanding Access to Oral Health Care for Lansing, Michigan Underserved Veterans through a Nationally Reproducible Model

The objective of Victors For Veterans: Expanding Access to Oral Health Care for Underserved Veterans in Lansing, MI through a Nationally Reproducible Model was to develop and expand upon a program where dental students, faculty, and community dental care providers worked together to treat underserved veterans with no-charge, comprehensive dental care to a case complete status.

Our methods structured this program in a manner where it could be reproduced throughout the state of Michigan and eventually nationwide working with different teams of dental students, providers, and patients to increase access to dental care on a larger scale. In order for veterans to qualify for full VA dental benefits, they have meet strict requirements such as being classified as 100 percent disabled or have been a prisoner of war (US Department of Veterans Affairs). Additionally, many of the United States veterans suffer from post traumatic mental disabilities, physical disabilities, and lack of support upon return home. This has left many veterans without the ability to receive dental care.

The results of University of Michigan School of Dentistry Victors For Veterans Program were the creation of a partnership with community dental providers and the treatment of a pilot group of Michigan veterans with comprehensive care ultimately increasing access to dental care for veterans.

These results lead to the conclusion that providing positive dental public health focused clinical experiences for dental students can lead to increased access to care for the patients treated and help facilitate a lifelong provider commitment to oral health.

Source of Funding: Our main source of funding is from a Delta Dental Grant for $48,000 for reimbursement to host clinics for reimbursement of supplies and clinic use, laboratory expenses, and administration and data management. Additional funding was provided by the Community Based Clinical Education Program due to the involvement of Victors For Veterans as a CBCE D4 rotation site. The project mentor, Dr. Howard Hamerink, managed the grant funds and program expenses due to the large budget. The Victors For Veterans Team has recently received an additional Delta Foundation grant for 2019 for $50,000 to continue the project.

Presenting Author: Rachael Vernon, University of Michigan School of Dentistry Student
Poster Number: 92

Title: Oral Health Surveillance System and School Nurses’ Competency in Identifying Dental Conditions/Diseases and Performing Appropriate Dental Referrals

The Institute of Medicine (IOM) recognized that the existing and graduating U.S. dental workforce may be inadequate to fulfill the public’s oral health needs, including children’s’. Therefore, non-dental professionals like school nurses (SNs) can play a role in promoting oral health of school children. Two of the 4 IOM recommended core clinical oral health competencies for non-dental professionals are: 1) recognizing common oral diseases, and 2) being able to make and track referrals to dental professionals when a person is in need of dental care. Those collecting data through Basic Screening Surveys for surveillance are expected to be competent in these functions. Therefore, we determined if SNs were competent in these functions, using 3 simulated case scenarios. 323 of 1027 active members of the Pennsylvania Association of School Nurses and Practitioners (PASNAP) completed a 24-item online survey. Almost 4 in 5 SNs reported children served had dental pain. On average, 50% accurately recognized retained root tips, untreated dental caries and an abscessed tooth, and from that at least 85% correctly chose the proper referral per scenario. Approximately half indicated willingness to perform simple oral health screening while 81% showed interest in additional oral health training. We conclude that, though only half of the participating SNs accurately recognized all three dental diseases presented in the survey, a vast majority chose the correct mode of referral to dentists. SNs when trained may be a potential reliable resource in collecting oral health needs data in schools for surveillance systems across the nation.

Source of Funding: Temple University Maurice H. Kornberg School of Dentistry

Author Tzi-Cha Wang, Maurice H Kornberg School of Dentistry; Author Jamie Mojica, Maurice H. Kornberg School of Dentistry; Presenting Author: Vaidehi Shah, Maurice H Kornberg School of Dentistry
Title: Community Health Needs Assessments and Oral Health in Pennsylvania

Objectives: Community Health Needs Assessments (CHNAs) are reports created by tax exempt charitable hospitals every 3 years in accordance with the 2010 Affordable Care Act. CHNAs are intended to identify unmet healthcare needs in local communities. The goal of this project was to explore the state of oral health in Pennsylvania as it is represented in CHNAs.

Methods: In this report 42 CHNAs were analyzed encompassing 82 hospitals throughout Pennsylvania. The CHNAs were examined in terms of composition, inconsistencies, and data sources. The representation of oral health was compared between assessments, with special care being taken when considering the financial constraints of rural hospitals.

Results: In their current condition, CHNAs are too varied in content, layout, and focus to make comparisons in healthcare status across the state. While CHNAs are crucial for connecting local hospitals to their communities and identifying areas of improvement, they could serve a larger purpose. Standardizations between CHNAs would allow researchers to identify local healthcare gaps across the state and make recommendations to policy makers for legislative action that would better focus on these disparities.

Conclusions: To address this gap, the Pennsylvania Coalition for Oral Health (PCOH) has created a list of oral health questions to be recommended for CHNAs throughout Pennsylvania. Pennsylvania currently lacks universal data sets regarding oral health. These changes may allow the PCOH to identify areas in the state with the most need in the future.

Source of Funding: None

Presenting Author: Lee Rodems, University of Pittsburgh School of Dental Medicine
Poster Number: 94

Title: The Effects of Racial and Socioeconomic Infrastructure on Health Professional Shortage Area Rankings

Objective: The objective of this study is to evaluate the association between income, education level, racial demographic and the number of dental HPSAs in counties in New York State.

Methods: The socio-demographic attributes of the eight counties was obtained from the HRSA website. The New York State Education Department database was used to obtain information about dentists in the counties. The counties were classified as rural or urban using U.S. Department of Agriculture classification system. SPSS was used to investigate any differences in the demographics in the underserved counties and the non-underserved counties.

Results: Counties with greater dental HPSAs tend to have larger populations and slightly younger individuals. While the populations of the dentally underserved areas tend to have lower household income, they tend to have higher rent and mortgages. Percentages of people below the poverty levels are greater in the dentally underserved areas. There was no significant relationship between the number of dental HPSAs and median county salary \( r = -0.439, p = 0.277 \) or an education level \( r = -0.611, p = 0.108 \). There was significant negative association between percentage of whites and number of dental HPSAs \( r = -0.713, p = 0.047 \) among certain counties in New York.

Conclusions: Counties with a higher proportion of whites have fewer dental HPSAs. While there is no significant relationship between the number of dental HPSAs and median salary or the level of education attainment, trends show that counties with higher median salary and education attainment levels had fewer dental HPSAs.

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Presenting Author: Jodie Smith, CWRU; Author Jodie Smith, CWRU