



2022 National Oral Health Conference Poster Abstracts

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(1) Mommy and Me Project of Monroe County, New York

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ABSTRACT:

Objectives: a) To assess the knowledge, attitude, and practice of Community Health Workers (CHWs) regarding oral health care during pregnancy by conducting focus groups (FGs) (baseline) and one follow up session (after 3 months) using self-administered pre- and post-test surveys. b) To educate the CHWs using the Maternal and Infant Community Health Collaborative (MICHC) Oral Health Manual and Toolkit 1 and the training of trainers (ToT) 2 model. Methods: This is a single-center, prospective mixed-methods study. Two FGs were conducted among 10 perinatal CHWs. Pre-test surveys were administered. The study adopted the ToT model and used the MICHC toolkit to educate the CHWs about oral health during pregnancy. Post-test surveys and evaluation of the training were completed. All the training sessions were recorded using Zoom. The recordings were professionally transcribed. Data analysis using grounded theory led to the development of specific themes and quotes 3. The study team developed operational definitions of codes and assigned codes to all quotes. Two independent, trained coders coded the transcripts to increase inter-coder reliability. Results: The surveys determined an increase in the CHWs' knowledge, attitude, and practice about oral health during pregnancy. The FGs generated themes, quotes and recommendations for assessing, assisting, and addressing oral health needs of pregnant women in Monroe County. Conclusion: This innovative project engaged non-dental and culturally competent perinatal workforce to improve oral health outcomes among pregnant women. The CHWs may facilitate behaviors that support positive oral health and pregnancy outcomes that benefit both mothers and infants. Keywords: #pregnancy #CHW#trainingoftrainers

SOURCE OF FUNDING: The American Academy of Public Health Dentistry (AAPHD) Foundation.

(2) Impact of ACA's Medicaid Expansion on Dental Out-of-pocket Spending Among Extensive Benefits States

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ABSTRACT:

Objective To examine the impact of states' Medicaid expansions on out-of-pocket dental care spending for states that provided extensive adult dental benefits as compared to non-expansion states that mostly provided limited or emergency-only benefits. Methods Restricted data for years 2011-2017 were obtained from the Medical Expenditure Panel Survey. Sample included income-eligible (138% Federal Poverty Level) adults aged 21-64 years with at least one annual dental visit. Outcome was annual out-of-pocket dental care spending (\$). Difference-in-difference (DID) study design with two-part modeling approach was utilized to analyze post-expansion year-by-year changes (for 2014, 2015, 2016, 2017) in: a) probability of incurring any out-of-pocket dental spending, and b) amount of out-of-pocket spending, between expansion states with extensive benefits and non-expansion states, relative to pre-expansion period (2011-2013). Results On average, a greater proportion of adults in expansion states with extensive dental benefits (58%;2011-2017) reported zero dollars in out-of-pocket dental care spending, compared to those in non-expansion states (31%;2011-2017). Our DID analysis found that, compared to non-expansion states, adults residing in states that provided extensive adult dental benefits and expanded Medicaid were significantly less likely to incur any out-of-pocket spending in the first two years of implementing the expansion (2014 and 2015). Conclusion Comprehensive dental benefits in Medicaid adult dental programs appears to be protective against incurring any out-of-pocket expense for utilizing dental care. Thus, states that expand Medicaid eligibility and provide comprehensive coverage can effectively reduce cost barriers to dental care for low-income adults who don't have the means to pay out of pocket.

SOURCE OF FUNDING: Funding for this project included: (i) a seed grant from the Central Plains Research Data Center at the University of Nebraska, and research Grant from the University of Iowa Graduate and Professional Student Senate".

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(3) Cost-Related Barriers and Dental Utilization among Older Adults: Scoping Review and Content Analysis

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ABSTRACT:

Objective: The objective of this analysis is to examine the evidence of the impact of financial barriers on dental care for older adults aged 65 years and above. **Methods:** Our study included US-based studies from January 2000 to December 2021 focusing on adults 65 years and older. Using pre-specified terms, we searched multiple databases (Pub-Med, Embase, Web of Science) and manually filtered articles based on our inclusion-exclusion criteria. Descriptive and thematic analyses were conducted. **Results:** The final review included 20 studies. The majority of studies were cross-sectional and focused on common key barriers to dental service use. Non-Hispanic Whites, aged 65-79 years, those with better educated with higher incomes had higher dental care utilization. Older adults living in urban or metropolitan areas, those who perceive to be in good health, and those with dental insurance are more likely to visit dentists. Older adults with insurance are more likely to use preventive dental care and less likely to undergo more expensive treatments. Our review revealed that lack of resources to pay for dental services, either through dental coverage or out-of-pocket, is a key predictor of utilization, particularly for low-income older adults. There are significant gaps in our understanding of alternative mechanisms of increasing coverage. **Conclusion:** As expected, social determinants of health play a major role in determining access to dental care. Our analyses of the evidence and gaps in evidence will provide insights for policymakers and dental providers to make dental care access more equitable for older adults.

SOURCE OF FUNDING: None

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(4) Oral Health Literacy Education and Practice in US Dental Hygiene Programs: A National Survey

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ABSTRACT:

Purpose/Objectives: Studies have shown a significant relationship between low oral health literacy (OHL) and poor oral health outcomes. National calls for action include better training of dental providers to meet the needs of the low OHL public. The purpose of this research was to determine the extent OHL education is being included in US dental hygiene (DH) education programs. Methods: A 20-item digital survey was sent to 321 CODA accredited DH schools in the US. Results: Survey generated 90 eligible responses (28%). Respondents reported that OHL education is being included in DH curricula to some degree. Communication strategies (82.4%) were the most likely OHL concept to be taught. Subject areas included community health (89%), cultural competency (78%), and special populations (78%). Less than half of respondents rated graduates competent in understanding language as a determinant of health (45.8%) and linking low OHL to poor health outcomes (44.6%). Respondents ranked lack of assessment instrument, lack of concrete activities, lack of clear understanding of OHL, and difficulty in implementing OHL concepts as the top barriers to incorporating OHL education in the DH curriculum. Conclusion(s): OHL is an established determinant of oral health. As prevention and patient education experts, dental hygienists play an important role in improving patient OHL. More fully integrating OHL into DH curricula would provide future DHs with the training needed to improve oral health outcomes and would better align DH education programs with national OHL initiatives. Key Words: oral health literacy, dental hygiene curricula, oral hygiene, dental

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(5) Evaluation of a School Based Dental Program in Rochester, NY

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ABSTRACT:

Objective: To evaluate a school-based dental program in Rochester, NY to ensure sustainability of the program as part of continuous quality improvement process. Method: The Centers for Disease Control and Prevention framework for evaluation was used as a guide to carry out a baseline evaluation. Reports from the electronic health records system were used for patient demographics and outcomes in 2018-19 school year. Feedback from key stakeholders was obtained using a self-administered survey. The financial reports were used for comparing the operational costs of the program comprising of mobile vans (2 trailer types- SMILEmobile#3, #4 and 1 drivable- SMILEmobile #5 and 1 fixed school based (DMJF) dental clinic. Results: The program provided comprehensive dental services to 1650 children from 19 schools in Rochester, NY; including 2205 diagnostic, 2328 preventive and 513 restorative services. Both revenue and cost per visit were highest for SMILEmobile #4. DMJF dental clinic was operating at a marginal profit and the SMILEmobile at a loss. Among the staff who responded to the survey, 90% reported adequacy for the clinic appearance, condition, equipment, and dental supplies and inadequacy with the number of dental assistants, clerical support, and dentists. More than 90% enjoyed working at the clinic and 33% reported not feeling safe due to violence in the surrounding neighborhoods. Conclusion: Key focus areas identified for program improvement were collaboration, safety, and staff retention. Efforts are needed to develop strategies to meet the operating cost for the SMILEmobile to continue rendering comprehensive dental services to children in Rochester.

SOURCE OF FUNDING: None

Affiliations: University of Rochester

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(6) Association between dental caries and employment among U.S. Adults with substance use disorder

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ABSTRACT:

Objectives: The purpose of this study is to evaluate the relationship between dental caries and employment among people who have used cocaine/heroin/methamphetamine in the past year and those before the past year. **Methods:** The study used National Health and Nutrition Examination Survey 2015-2018 data. The dependent variable was severe caries (DMFT \geq 14) and the independent variable was employment status. The total population was subdivided into three groups: never used drugs, used in the past year, and used before the past year. Age, Education, Race, Gender, Smoking, Diabetes, Ratio of family income to the federal poverty level, and Health Insurance status were included in the analysis as covariates. Logistic regression and appropriate survey weights were used for statistical analysis. **Results:** The study included a total of 5476 participants, who were nationally representative of 131,848,604 US adults aged 18-59 years. Among the people who used drugs in the past year, people aged 18-30 years, males and non-Hispanic whites were most common. Mean DMFT and severe caries were highest among people who used drugs before the past year and untreated caries and severe caries were highest among past-year users. Among adults who used drugs in the past year, those who have severe caries were 2.6 times (95% CI: 1.13-5.90, p-value:0.025) more likely to be unemployed than those who do not have severe caries. **Conclusions:** Among US adults who used cocaine/heroin/methamphetamine in the past year those who have severe caries are more likely to be unemployed than those who do not have severe caries.

SOURCE OF FUNDING: None

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(7) Parental Psychosocial Correlates of Oral Hygiene Among Children in Low-Income Families

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ABSTRACT:

Background: There is an increasing acknowledgment that a child's oral health is shaped by broader psychosocial, economic, and environmental conditions. Aim: To assess the correlation of psychosocial factors on the oral hygiene of children by examining the parental self-efficacy and motivation. Methods: Methods: Structured interviews were conducted with mothers of children under 4 years old who participated in the BEhavioral EConomics for Oral health iNnovation (BEECON) trial. Oral screenings were performed in accordance with the Association of State and Territorial Dental Directors' (ASTDD's) Basic Screening Survey (BSS). A modification of the Debris Index of the Simplified Oral Hygiene Index¹ using only maxillary incisors (OHI-MIS) was used to measure the plaque levels. The least absolute shrinkage and selection operator (LASSO) tool was used to identify correlates of plaque in a multiple linear regression model. Results: A total of 267 child-caregiver dyads participated in this study and the mean (\pm SD) plaque scores for the participating children was 2.09 ± 0.68 . The mean plaque score was negatively correlated with caregiver's attitude towards snacking, attitude towards brushing and self-efficacy. Motivation towards oral hygiene was positively correlated with the mean plaque scores. In the final model a statistically significant association was observed between brushing frequency and the mean plaque score (95% CI = -0.38, -0.05; P = 0.011). Conclusion: This study presents evidences that highlight the complex interaction of the individual and family level factors on oral hygiene of the child.

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(8) Effects of Acculturation on Oral Health Across Racial/Ethnic Groups in U.S. Adults: NHANES 2011-2018

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ABSTRACT:

Objective: To examine how acculturation influences adults' clinical oral health status in various racial/ethnic groups. **Methods:** Four cycles of NHANES 2011-2018 were utilized (n=37,399). Multivariate logistic regression and chi-square analysis examined the relationship between acculturation and oral health status. Two proxy variables were used to measure acculturation: time spent in the U.S., and language spoken at home. A dental professional clinically measured poor oral health status, defined as need for immediate dental care. Analysis by cycle was completed to compare oral health status over time. **Results:** The acculturation proxy 'time in the U.S.' showed a statistically significant increase in odds of needing immediate dental care for individuals living less than 19 years in the U.S. Individuals who spoke Spanish/Other at home had a statistically significant decrease in odds (OR=0.74) of needing immediate dental care. Health insurance and being Mexican American demonstrated the strongest association with clinical oral health status-having double the odds of recommendation for immediate dental care. An increase in insurance coverage was noted in the 2015-2016 and 2017-2018 cycles, corresponding with cycles where recommendation for immediate dental care dropped. **Conclusions:** Acculturation is multidimensional, and this study showed that living less time in the U.S resulted in poorer oral health status. More time spent living in the U.S. may lead to adoption of western health standards leading individuals to seek medical care, resulting in better overall health and oral health outcomes. More research is needed to develop a universal acculturation scale.

SOURCE OF FUNDING: None

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(9) Incidence Of Dental Caries and Associated Factors in Young Adults

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ABSTRACT:

Objectives: To assess the caries incidence from late adolescence to early adulthood and to identify the factors associated with caries incidence during this period. **Methods:** This is a secondary analysis of longitudinal caries data of young adults aged 17 to 23 from the Iowa Fluoride Study cohort. The inclusion criteria required completion of dental exams at both ages 17 and 23, and having cumulative exposure (AUC) variables data for at least 8 out of the 11 time periods between age 17 and 23. Mean imputation was used to handle the missing explanatory variable data. Negative binomial regression was used to assess the effects of sociodemographic and behavioral/dietary variables on the age 17 to 23 net cavitated caries (D2+MFS) increment (NCI17 to 23). The final model was selected based on the Akaike Information Criterion (AIC) using backward selection and the net effects calculated. **Results:** Forty-six percent of participants had a positive NCI17 to 23. The mean NCI17 to 23 was 1.70 surfaces. The net effect (main effect plus interactions) of higher composite SES, higher combined daily fluoride intake, higher frequency of milk intake, higher amount of sugar-sweetened beverages intake, lower 100% juice intake and lower age 17 dental caries counts were associated with lower age 17 to 23 NCI count. **Conclusion:** The incidence of caries from age 17 to 23 was moderate. This study shows the need to explore new caries preventive strategies beyond fluoride use, like encouraging milk intake and discouraging too much 100% juice intake.

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(11) Diabetes Treatment Costs Decrease after Periodontal Therapy: Medicaid and Commercial Claims Data

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ABSTRACT:

Objective: Periodontal disease and diabetes mellitus have a suggested bidirectional relationship based on systemic inflammation. The aim of this study was to examine the relationship between periodontal treatment and cost of diabetic care in both Medicaid and commercial claims data. Methods: This study included overall outpatient, inpatient, and drug costs in 2019 for patients diagnosed with diabetes mellitus between 2013-2019 from the IBM Watson MarketScan Medicaid and commercial databases. Using dental claims data and Current Dental Terminology (CDT) codes, we identified whether individuals received periodontal treatment in 2017 or 2018. Generalized linear modeling with a gamma error distribution and a log-link function was used to examine the association between overall healthcare costs per patient by utilization of periodontal therapy services. An average treatment effect on treated (ATET) was calculated by propensity score matching using a logistic model for periodontal therapy on covariates. Results: In the Medicaid data, enrollees with diabetes who had a periodontal treatment in 2017-18 showed a 16% decrease in average overall healthcare costs compared to individuals with diabetes without periodontal treatment during the same period (\$14,795 versus \$17,181; ATET=-2917.84 (SE=223.29); $p<0.001$). Similarly, in the commercial claims database, periodontal treatment reduced overall healthcare costs by 13% compared to no periodontal therapy (\$13,915 versus \$15,739; ATET=-2498.20 (SE=285.21); $p<0.001$). Conclusions: Receiving periodontal therapy reduced overall healthcare costs for patients with diabetes in both Medicaid and commercial claims data. Expanding Medicaid and Medicare coverage to include comprehensive periodontal treatment has the potential to reduce overall healthcare costs for individuals with diabetes.

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(12) Medical Dental Integration to Increase Tdap, MCV4, and HPV9 Vaccinations for Children Ages 9-17.

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ABSTRACT:

Objectives: The purpose of this project was to create a collaborative process between dentistry and medicine to increase overall vaccination rates of Tdap, MCV4, and HPV9 by 5% in patients ages 9-17 through vaccination during dental visits or assisted follow-up scheduling. **Methods:** The project was conducted at a large Federally Qualified Healthcare Center with three pilot dental clinics that were co-located within medical clinics. Data was collected from 5/24/21-10/29/21. Reports were run daily to identify patients ages 9-17 who were overdue for vaccinations, vaccine reminders were added to the electronic medical record, and large colorful flags were placed in patient charts as a visual cue for providers. Patients were offered same-day vaccines or the opportunity to schedule a follow-up visit with their medical clinic. Chart review was conducted to determine if vaccines were administered the same day or within 30-days of the dental visit. **Results:** Across all clinics during the 5-month period, 3.4% (N=119) of all patients vaccinated were due to medical dental integration (MDI). Montbello Clinic was particularly successful, with 7.3% of patients vaccinated in the 5-month period being due to MDI. Factors for success were buy-in from clinic staff, visual cues in charts and in the office, and an in-clinic MDI champion. **Conclusions:** Patients were receptive to discussing and receiving vaccinations during dental visits. This highlights the benefits of MDI and that dental providers can play an influential role in pediatric disease prevention by promoting and actively participating in vaccination.

SOURCE OF FUNDING: HRSA Promoting Pediatric Primary Prevention (P4) Challenge.

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(13) Oral Health Professionals' Opinions About the COVID-19 Vaccine and their Professional Responsibility

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ABSTRACT:

Objectives: The purpose of this study was to assess the factors and opinions associated with oral health professionals' (OHPs) responsibility to recommend and administer COVID-19 vaccine during the current public health crisis. **Methods:** A survey was administered anonymously to faculty, students, and residents at the University of Missouri-Kansas City (UMKC) School of Dentistry. The survey assessed vaccination training, immunization behaviors, COVID-19 opinions, and scope of practice beliefs. **Results:** A total of 150 surveys were returned (response rate = 20.6%). Nearly all respondents reported being vaccinated against COVID-19 (95.6%) at the submission of this survey and the majority reported being vaccinated prior to the university-system mandate (80.9%). Personal acceptance of the COVID-19 vaccine was a strong predictor of an OHP's belief that it was their responsibility to recommend and administer vaccinations to their patients. Of the respondents, 77.2% agreed it was their responsibility to learn about the COVID-19 vaccination, 61.0% agreed it was their responsibility to recommend the vaccination, and 33.8% agreed it was their responsibility to administer the vaccination. Those who received formal COVID-19 vaccination training were significantly more likely ($p < 0.04$) to agree it was their responsibility to administer COVID-19 vaccine (44.4%) compared to those who did not receive formal training (26.4%). **Conclusions:** Personal acceptance of the COVID-19 vaccine and formal vaccination training were factors associated with the likelihood of OHPs belief that it is within their scope of practice to recommend and administer the COVID-19 vaccination to their patients.

SOURCE OF FUNDING: Jackson County: Our Healthy KC Eastside Grant

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(14) Use of Teledentistry to Increase Access to Oral Health Services During the COVID-19 Pandemic

Authors

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ABSTRACT:

OBJECTIVE: To examine the trends of teledentistry use to meet emergent patient needs during the COVID-19 pandemic. **METHODS:** An environmental scan of state and federal regulations and a literature review were conducted to describe the immediate and long-term impacts of the COVID-19 pandemic on the dental delivery system, including the provision of teledentistry. The literature was consolidated and analyzed using Dedoose software. Information on access to oral health care using teledentistry during the pandemic was also collected through a web-based survey of a nationally representative sample of US consumers conducted in June 2020. **RESULTS:** Virtual technology was used to reach patients during the COVID-19 pandemic. Rates of teledentistry use were highest (60 times pre-pandemic levels) in April 2020. Teledentistry utilization decreased after the end of the shelter-in-place period but remained nearly 13 times higher in the last week of August 2020. Consumer survey findings showed that 68.4% of respondents who used teledentistry in the past year (n=1,021) reported doing so for the first time during the pandemic. Email (74.2%) and mobile apps (73.9%) were more commonly used during the pandemic, followed by video (68.7%), text (66.5%), and telephone (58.5%) communication. **CONCLUSION:** Teledentistry has the potential to improve access to care for populations, particularly for consultation, monitoring, and pre- and post-operative care. The COVID-19 pandemic demonstrated that widespread adoption of teledentistry is possible and practical and should continue beyond the pandemic.

SOURCE OF FUNDING: This project is supported by a grant from HRSA

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(15) Using Case Studies to Teach Dental Public Health Competencies

Authors

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ABSTRACT:

Objectives: Dental Public Health (DPH) is one of the ten recognized specialties of Dentistry by the American Dental Association. DPH is “the science and art of preventing and controlling dental diseases and promoting dental health through organized community efforts.” The aim of this project was to assign dental students a dental public health competency and instill in them the ability to interpret current DPH issues critically and creatively. This assignment was used in place of attending external public health rotations due to COVID-19. **Methods:** A 5-member self-directed group assignment was distributed to first- and second-year dental students. The exercise was built on topics previously taught in dental public health lectures. The learners were instructed to read the article, New Competencies for the 21st Century Dental Public Health Specialist (2016). Each group used a 7-step outline, applying one of the ten DPH competencies, to address a current public health problem. **Results:** A total of 200 students participated in the assignment and 40 evidence based case studies were developed. Examples of case studies included: Expanding Medicare to Cover Dental Procedures; Breaking Down Barriers to Oral Health Services; How COVID-19 has Affected Community Oral Health Programs; The Opioid Epidemic; and Ethics Regarding Language Barriers. Students provided positive feedback and recommended the assignment be incorporated into the curriculum for future cohorts. **Conclusions:** Case studies were an extremely useful tool to develop an understanding of dental public health issues. Through this exercise students demonstrated the ability to apply DPH concepts to real-world scenarios.

SOURCE OF FUNDING: Health Resources and Services Administration, Postdoctoral Training in General, Pediatric and Public Health Dentistry and Dental Hygiene Grant D88HP37558

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(16) Synchronous Teledentistry in a University Pediatric Dentistry Clinic: Impact on Access to Care

Authors

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ABSTRACT:

Objectives: Teledentistry is a care modality suggested to enhance access to dental care for vulnerable children, but few studies have evaluated the impact of teledentistry on access to dental care. This study examined the impact of new patient synchronous teledentistry visits for children referred to a university dental setting and assessed whether having a new patient teledentistry visit improves access to care compared to referred patients seen only via in-person visits. **Methods:** A retrospective chart review was conducted for new patients in the Department of Pediatric Dentistry at The University of Iowa between July 1st, 2020, and March 31st, 2021. Treatment completion, subsequent on-site appointment completion, and a change in treatment modality (i.e., no sedation, sedation, general anesthesia) were compared between patients seen on-site and those seen via teledentistry. Multivariable logistic regression models were used to compare treatment completion between the on-site and teledentistry cohorts after adjusting for potential confounders, including patient's age, distance traveled, insurance status, treatment modality chosen, and treatment complexity. **Results:** Out of approximately 450 total patients who were referred to the pediatric dentistry clinic during the study time frame, approximately 82 had a new patient teledentistry visit. Preliminary results suggest that teledentistry is a viable means of facilitating new patient visits for pediatric patients. Further analyses will fully compare outcomes of those with teledentistry visits vs. traditional visits. **Conclusion:** The findings provide insight on the impact of teledentistry on access to dental care for vulnerable pediatric patients and effectively supplements in-person exams.

SOURCE OF FUNDING: None

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(17) Oral Health Integration at a Teen and Pregnancy Clinic

Authors

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ABSTRACT:

Objective: The purpose of the Integration of Oral Health into Prenatal Care Program is to demonstrate the ability of non-profit primary health care facilities to integrate oral health into their prenatal services. **Methods:** We implemented a demonstration project aimed at integrating oral health into prenatal services at a hospital-based Teen and Pregnancy (TaP) clinic serving at-risk, low-income adolescents in Ohio. Utilizing the Institute for Healthcare Model for Improvement, we developed a key driver diagram aimed at increasing the percent of patients who received an oral health assessment, education, and case management for dental care as part of prenatal visits. Key drivers identified included provider knowledge/buy-in, effective clinic workflow, patient receptibility, changes in electronic health record templates, and a dental referral process. Prenatal providers were trained using the Smiles for Life Pregnancy and Women's Oral Health Curriculum; a process map was developed outlining clinic workflow with an oral health-integrated model; and dental templates were built for the TaP clinic EHR dashboard and embedded in the provider visit documentation workflow. In addition to oral health assessments, providers engaged in delivering prenatal/infant oral health education and dental referrals. **Results:** Since program implementation (5 months), 149 oral health assessments have been completed. Of those, 82 resulted in a dental referral; 2% for urgent, 60% for early, and 40% for routine care. **Conclusions:** It appears that oral health assessment, case management and education can be integrated into prenatal care. Challenges with case-management activities included unreachable patient phone numbers and long wait time for dental appointments.

SOURCE OF FUNDING: Federal MCH Block Grant (Title V)

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(18) Exploring Connections to Value-Based Care in Dental Education

AUTHORS

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**Rebekah Mathews, MPA - CareQuest Institute for Oral Health*

ABSTRACT:

OBJECTIVE: Value-based care (VBC) in dentistry is an emerging model of both care delivery and financing that focuses on oral health outcomes vs. specific services provided. This transformation can create improvements in patient health and wellbeing along with demonstrated cost savings. Dental schools have the opportunity to shift the mindset of new clinicians toward value-based approaches while also embracing VBC in patient clinics as a financial model of sustainability. **METHODS:** A survey was disseminated to clinical deans from all 68 US dental schools evaluating their current approaches to value-based designs both in educational frameworks and clinical patient care. Respondents were asked to assess the future state of clinical competency while offering their perspectives on facilitators and barriers to value-based care within their institutions. **RESULTS:** Of the dental schools surveyed, 65% acknowledged that VBC was not currently included in the didactic curriculum. Almost 25% of schools are considering VBC in their school's dental clinic. Improving oral health and overall health were reported priority areas for both education and care delivery. More than 30% of respondents reported student requirements as the biggest drivers of change.

CONCLUSIONS: While VBC is not yet broadly adopted within dental schools, many acknowledge the opportunity to align with VBC concepts when considering patient care and student experience. VBC remains an area of exploration for schools of dentistry both through financial clinical care and influencing didactic curriculum.

SOURCE OF FUNDING: None

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(19) Innovative Approaches to Pre-doctoral Dental Public Health Education

AUTHORS

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ABSTRACT:

Objectives: Public health competency has been recognized as a critical component of pre-doctoral dental curriculum by Commission of Dental Accreditation standards. However, it remains unclear whether pre-doctoral curricula are adequately preparing dental health professionals to address public health issues. This study evaluated pre-doctoral Dental Public Health (DPH) curriculum among US dental schools, exploring pedagogical methodologies and student assessment. Methods: In spring of 2021, researchers requested syllabi of introductory DPH curricula from 68 US dental schools. A content analysis was performed to determine how students are taught and assessed on DPH concepts. Descriptive data, including pedagogical methods and type of assessments were collected in REDCap. A qualitative content analysis was completed in Excel to contextually evaluate syllabi. A code book was developed using 23 topics acknowledged by DPH specialists as essential for pre-doctoral DPH education. A deductive approach was employed, and emergent themes were noted. Results: A total of 34 pre-doctoral schools submitted DPH-related syllabi. Several instructional modalities were used, with 23 schools reporting the use of multiple modalities including didactic/lecture, group work, and service-learning. Innovative components were noted in 22 syllabi, including interviewing community stakeholders and participation in Lobby days, Poverty Simulations, and conferences. Many provide pre-doctoral DPH-related content in a “blended” approach, incorporating clinical rotations and clinically relevant didactic material. Clinical-based components include interprofessional education and community-based experiences. Class participation (68%) and examinations (60%) were most common forms of assessment. Conclusions: Most pre-doctoral schools present DPH-related content didactically. However, over 30% have taken innovative approaches to strengthen DPH concepts.

SOURCE OF FUNDING: None

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(20) A Texas Collaboration to Address Oral Health Equity and Diversity

Authors

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ABSTRACT:

Introduction: There is a need to advance oral health equity and diversity among the Oral Health profession. The Texas Recruits and Retains (TRR) Project, funded by a Health Resources and Services Administration grant, partnered three dental schools and the Texas Department of State Health Services to enhance the dental public health workforce. In Texas, health disparities vary among urban and rural areas, which are being addressed by the TRR project. The geographical distribution of the three dental schools also lends itself to serving a diverse population. Methods: TRR aimed to recruit diverse cohorts of students to participate in the activities and instruction. TRR trainees conducted research on SDH and issues related to Access to Care, Dental Public Health Shortage Areas, Cultural Competency Training, and Interprofessional Education Models. Additionally, trainees participated in in-person or virtual poverty simulations. Results: Among TRR trainees, 84% were female, with 32% of Hispanic/Latino ethnicity. Forty-four percent of TRR trainees were from disadvantaged backgrounds with 46% from non-disadvantaged, 10% non-reported. To date, 15 research products including posters, abstracts, and seminars were completed. Presentations included statewide and national virtual meetings and webinars. Conclusion: The complex issues of race, diversity, inclusion and health equity in the U.S. impacts daily interactions with others, especially when encountering persons of diverse backgrounds. To overcome these barriers, the TRR Project developed culturally competent instruction and programs to increase open-minded attitudes, beliefs, and perceptions of future oral health providers.

SOURCE OF FUNDING: Health Resources and Services Administration

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(21) Oral Cancer Screening Among Adults 30 Years and Older in the US, NHANES, 2013-2018

AUTHORS

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ABSTRACT:

OBJECTIVE: It is estimated that in 2021 there will be 10,850 oral cavity cancer deaths in the US. These deaths are more prevalent among racial/ethnic minorities than among non-Hispanic White adults. This study examines prevalence of self-reported oral cancer screening (OCS) and variation by race/ethnicity among adults, 30 years and older. **METHODS:** We used nationally representative data from the National Health and Nutrition Examination Survey (2013-2018) for adults ≥ 30 years of age. Respondents were asked if they ever had an oral cancer exam where a doctor or dentist pulled on the tongue, with a gauze or felt under the tongue and inside the cheeks. We estimated prevalence and racial/ethnic variation in prevalence of self-reported OCS and the last time an OCS was received. We used t-tests to determine statistical significance ($p < 0.05$). **RESULTS:** The analytic sample included 13,701 adults, representing 190 million individuals. Overall, 28.9% of adults reported receiving an OCS. Prevalence of OCS was higher among Non-Hispanic White adults (37.3%) than among non-Hispanic Black (14.2%) and Mexican American (7.2%) adults. Among adults with an OCS, 66.8% were screened within the past year and 19.6% within one to three years ago; having a past-year OCS was higher among non-Hispanic Whites (67.9%) than among non-Hispanic Black (57.9%) adults. **CONCLUSIONS:** Less than one-third of US adults 30 years and older reported ever having an OCS, with racial/ethnic minorities having lower prevalence. Increasing OCS among minority and high-risk subgroups may contribute to early detection of oral cancers.

SOURCE OF FUNDING: None

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(22) Dental Service Utilization and Costs for Medicare Beneficiaries in 2018: A Rural-Urban Comparison

Authors

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Rashmita Basu, Ph.D - East Carolina University

Ford T. Grant, DMD - East Carolina University

ABSTRACT:

Objectives To assess the rural-urban differences in dental service utilization, dental procedures, and financial burdens for Medicare beneficiaries. **Methods** Data were from the 2018 Medicare Current Beneficiary Survey (MCBS) Cost and Use Files. Outcome variables examined in this study were: 1) Dental visits (Yes/No)—whether the respondent had at least one dental visit (Yes/No); 2) Dental procedures: preventive (Yes/No), restorative (Yes/No), and surgery procedures (Yes/No)—whether the beneficiary had the procedure in a dental visit; 3) Financial burden was measured by the ratio of out-of-pocket payment to total dental expenses, categorized as low, medium, and high. The independent variable was residence location (rural vs urban). Both binary and ordinal logistic regression models were used in data analysis. We accounted for the survey design of MCBS. The analytical sample included 7,745 respondents aged 65+. **Results** About 57.3% (95% CI: 55.4-59.2) of Medicare beneficiaries in urban and 46.6% (95% CI: 42.0-51.1) in rural communities had a dental visit in 2018. Rural beneficiaries were less likely to have preventive procedures (AOR=0.57), but more likely to have restorative procedures (AOR=1.26), and more likely to pay a larger share of the dental expenses out of pocket (AOR=1.38). **Conclusions** These study findings reveal significant disparities in access to dental services for Medicare beneficiaries in rural communities. They were less likely to have preventive procedures but more likely to have restorative procedures, suggesting poor oral health status among them. Policy changes are needed to improve access to dental care for Medicare beneficiaries in rural communities.

SOURCE OF FUNDING: Supported by HRSA Grant D88 HP37544.

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(24) Enhancing Dental Residents Primary Care Skills to Serve Rural Populations

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ABSTRACT:

Objective: To enhance Primary Care Dentistry Residents' (PCDRs) capacity to confidently incorporate high-priority primary care skills into oral health care for rural populations. **Methods:** During an education workshop for residents, an expert faculty team conducted seminars on primary care skills pertinent to rural health including obesity, vaping, opioid and tobacco counseling, dental trauma management, recognition and reporting of physical abuse in adults and children, and assessment of nutritional deficits. An online survey was administered to 26 PCDRs before and after the workshop to assess changes in confidence, intention to incorporate targeted primary care skills into clinical practice, and elicit residents' perception of program quality. Pre to post changes in confidence and intentions were analyzed by two-tailed t-tests with significance at 0.05. **Results:** 96% of 26 PCDRs completed pre and post-assessments using a 5-point Likert scale format with the following response range and point values: Strongly Disagree (1), Somewhat Disagree (2) Neither Agree nor Disagree (3), Somewhat Agree (4) and Strongly Agree (5). PCDRs' confidence ratings for targeted primary care skills increased significantly from 3.53 on the pre-assessment to 4.43 after training. PCDRs' pre and post intentions to use primary care skills increased significantly from 4.06 to 4.43. PCDRs' evaluation of the workshop across 5 quality dimensions averaged 4.45, also measured with a 5-point Likert scale. **Conclusion:** A workshop based on PCDRs' perceptions of training needs to enhance dental care for rural communities was well received by residents and resulted in confidence and implementation intention enhancements.

SOURCE OF FUNDING: "This program is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$3.25 million with 0% financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS or the U.S. Government."

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(25) Effect of Marijuana on Relationship Between Periodontitis and Diabetes in Adults: NHANES 2009-2014

AUTHORS

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ABSTRACT:

Objectives: To describe the prevalence of periodontitis and DM among marijuana users and examine the effect of marijuana on the relationship between periodontitis and DM status in US adults aged 30-59 years. **Methods:** Pooled data from the National Health and Nutrition Examination Survey (NHANES) 2009-2014 were analyzed. The primary binary outcome was self-reported diabetes mellitus (DM). Exposure of interest (periodontitis) was defined using the Centers for Disease Control and Prevention/American Academy of Periodontology classification. Regular marijuana users were those who had ever smoked marijuana at least once a month for more than one year. Bivariate and multivariable binary logistic regression models were performed to examine the effect of marijuana on the relationship between periodontitis and DM. **Results:** Of 3,179 non-pregnant participants with available periodontitis, DM, and marijuana use, 85.5% were regular marijuana users. Moderate (OR 2.07; 1.65, 2.61) and severe (OR 3.24; 2.48, 4.24) periodontitis was significantly associated with marijuana use. No statistically significant difference between the prevalence of DM among marijuana users ($P=0.14$). Bivariate analysis revealed a positive association between periodontitis and DM irrespective of marijuana use. The fitted multivariable model retained this association. The increasing age, being non-Hispanic whites (aOR 0.36; 0.19, 0.67), having Medicaid (aOR 3.04; 1.52, 6.10), and Medicare insurance (aOR 3.87; 2.00, 7.49) significantly predicts DM. **Conclusions:** Moderate and severe periodontitis is associated with marijuana use. Periodontitis is associated with DM in both Marijuana users and non-users. However, readers should use the results of this study with caution, and further high-quality longitudinal studies are required to elucidate the effect of marijuana on the relationship between periodontitis and DM.

SOURCE OF FUNDING: None

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(26) What is the Impact of Different Social Determinants of Health on Tooth Loss?

Authors

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ABSTRACT:

Objectives: Since it is well known that social determinants of health (SDOH) affect oral health, this study aimed to describe and analyze the impact of various SDOH on tooth loss. **Methods:** In a partnership with CareQuest Institute for Oral health, this cross-sectional study utilized data from the 2021 Survey of National Oral Health Equity (n=5,320). The outcome variable is self-reported tooth loss due to tooth decay or gum disease. The primary independent variables are various SDOH. Bivariate analysis and six separate multivariable logistic regression models were conducted. **Results:** Bivariate analysis revealed that a higher proportion of adults with tooth loss relative to adults without tooth loss experienced food insecurity (30.70% vs 21.50%, P value < .001) and lack of transportation (14.60% vs 8.10%, P value < .001). However, a statistically significant lower proportion of adults with tooth loss relative to adults without tooth loss reported having dental insurance (66.70% vs 73.00%, P-value < .001). In the adjusted multivariable logistic regression models, adults who reported racial discrimination (aOR= 1.35, 95% CI: [1.17,1.56]), food insecurity (aOR= 1.78, 95% CI: [1.51,2.08]), housing instability (aOR= 1.37, 95% CI: [1.14,1.56]), and lack of transportation (aOR= 1.72, 95% CI: [1.39,2.14]) were more likely to have at least one tooth extracted because of tooth decay or gum disease. **Conclusions:** The results of this study reaffirm that SDOH have an impact on oral health. Future studies should focus on how to eliminate discrimination and how to improve people's access to food, stable housing, transportation, and dental insurance.

SOURCE OF FUNDING: Health Resources and Services Administration Grant: T12HP31894

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(27) Oral Health, Mental Health, and Substance Use Treatment; A Framework for Increased Integration

Authors

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ABSTRACT:

Oral health, mental health and substance use challenges have historically been undertreated in the U.S., often with stark disparities in access to care. A paper published in October 2020 by The National Council for Mental Wellbeing, “Environmental Scan of Oral Health and Behavioral Health Integration Models,” explored the specific associations between oral health, mental health and substance use challenges and highlighted the bi-directional nature of the relationship between these conditions. In other words, having a mental health condition such as depression or anxiety or a substance use disorder can negatively impact one’s oral health, and vice versa; poor oral health can create or exacerbate challenges associated with mental health, cognitive health and/or substance use. Although more integrated oral health, mental health, and substance use treatment services hold promise to increase access to care, improve patient outcomes, and potentially reduce health care costs, no comprehensive set of resources previously existed to support organizations interested in advancing the integration of these services. This toolkit seeks to help oral and behavioral health providers increase integration by offering practical suggestions, resources, and on-the-ground examples for implementing new care models across a continuum. In reviewing this poster, participants will be able to:

- Understand the rationale for increased integration between oral health and behavioral health services and the opportunities to address health equity and racial disparities.
- Describe different models of integration across oral and behavioral health services.
- Explain positive outcomes that could result from increasing integration across oral and behavioral health systems.

SOURCE OF FUNDING: Center of Excellence for Integrated Health Solutions, a Training and Technical Assistance Center funded by the Substance Abuse and Mental Health Administration, and run through the National Council for Mental Wellbeing. Website is here: <https://www.thenationalcouncil.org/integrated-health-coe/>

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(28) Oral Health Content Lacking on Non-Dental Safety Net Clinic Websites

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ABSTRACT:

Introduction In North Carolina (NC) 98/100 counties are classified as Dental Health Professional Shortage Areas. Safety Net Clinics (SNC) are health service centers that deliver healthcare to vulnerable populations. SNC websites are an important source of information for patients and providers. **Objective** Our goals in the first phase of a multi-phase project were to 1) assess the presence and type of oral health information on non-dental SNC websites in NC and 2) identify characteristics of the counties where sites were located. **Methods** Of the 320 SNCs, a list of the 92 that do not provide dental services was provided by the North Carolina Oral Health Collaborative. Their websites were viewed to determine any presence of oral health education or information about the county's available dental services. Each website's search function was used with lay dental terms. **Results** Of the 92 non-dental NC SNCs in 65 counties, 100% of the websites lacked oral health educational information. Only 15% had information about the closest dental provider. Compared to the state overall, of the counties with non-dental SNCs, 77% had a worse dentist:population ratio; 80% were more rural, 66% met or exceeded the poor health outcomes average. **Conclusion** The availability of oral health education and nearby dental providers on non-dental SNC websites was limited. Our findings suggest an opportunity exists to add this information to increase the availability of oral health resources in these underserved areas. A future goal is to provide SNCs resources to enhance the oral health content of their websites.

SOURCE OF FUNDING: None.

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(29) Assessing the Effectiveness of Web-based Modules on HPV among Dental and Dental Hygiene Students

Authors

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ABSTRACT:

OBJECTIVES: To improve preventive care practices against oropharyngeal cancers (OPC) associated with Human Papillomavirus (HPV), the role of dental professionals has evolved to aid in the dissemination of knowledge and awareness regarding HPV and HPV-induced carcinogenesis, and in vaccine administration in some states. The objective of this study is to assess the effectiveness of an online learning tool in educating current dental and dental hygiene students about HPV and its implications with OPC. **METHODS:** We developed a three-section web-based learning module focused on improving knowledge and comfort levels of dental and dental hygiene students on HPV. Descriptive 24-item pre-survey and 18-item post-survey questionnaires were offered to the participants to assess their change in knowledge about HPV and its relevance to OPC, post intervention. **RESULTS:** Despite some knowledge deficits, most study participants had some basic understanding of the topic prior to accessing the modules. There was a definite improvement in the understanding of diseases prevented by HPV vaccines, post intervention. There was also a statistically significant increase in the proportion of respondents who identified OPC ($p=0.01$), vaginal (0.02), vulvar (0.04), penile (0.01) as associated with HPV. 95% of study participants reported the information provided in the modules were easy to understand, and more than 90% thought the information was valuable. **CONCLUSIONS:** Post intervention, there was an increase in understanding of the topic among the participants. With the ever-changing dynamics of this topic, online modules could prove to be very useful for distance learning, continuing education, and curricular enhancement.

SOURCE OF FUNDING: Indiana Immunization Coalition Center for Service & Learning IUPUI

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(30) Caries Incidence on Primary Molars Following Glass Ionomer Sealant Placement

AUTHORS

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ABSTRACT:

Purpose: This study sought to estimate the cumulative incidence of decay on primary molars treated with glass ionomer (GI) sealants in a community-based prevention program for preschool children in a primarily seasonal farmworker community. **Methods:** We conducted a retrospective cohort study by using data from University of Florida Sealant Outreach Program in Guadalupe Center in Immokalee, FL. A chart review was conducted for 56 schoolchildren ages 2–5 years in 2018–2019 who received Fuji sealants on primary molars. We included all children who had ≥ 1 recall visit after sealant placement. **Results:** Participants included 26 male and 30 female preschool children. Mean (\pm SD) age of the participants was 3.57 ± 0.66 years, and mean follow up time for sealant check was 162.87 ± 71.50 days. There were 72 decayed primary molars at the initial visit, a mean of 1.29 ± 1.89 per child. 367 GI sealants were placed on non-carious/non-restored primary molars, an average of 6.55 ± 1.97 sealants per child. At the follow up, there was a total of 10 newly decayed primary molars among the 367 teeth that had been sealed, a mean of 0.23 ± 0.66 newly decayed teeth per child. Cumulative incidence (CI) of decay among all sealed teeth was 2.7%, with highest CI on primary mandibular second molars (#K = 7.3%; #T = 6.8%). **Conclusions:** CI of caries was very low among sealed primary molars in this high caries risk population. GI sealants may be an effective prevention strategy for primary molars among young children at high caries risk.

SOURCE OF FUNDING: Research supported by the Naples Children and Education Foundation (NCEF)

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(31) Barriers and Facilitators for Dental and Mental Health Referrals in Patients with HIV/AIDS

AUTHORS

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Sucharu Ghosh, BDS, MPH - University of Rochester
**Sangeeta Gajendra, DDS, MPH, MS - URM*

ABSTRACT:

Objective: To examine linkage factors as perceived by HIV/AIDS program directors and /or other key staff (using key informant interviews (KII)), including barriers to successful dental and mental health referrals and factors that affect patient motivation. Method: The present study was a qualitative research study using KII. A KII guide developed from prior literature was used. The study participants included 8-12 program directors and other key staff from New York State HIV programs recruited using the purposive sampling technique and networking. Interviews were audio and video recorded via the University secure Zoom account and later transcribed professionally. Data was analyzed qualitatively using grounded theory. Open coding thematic analysis was applied, with two independent coders to increase inter-rater consistency. Result: Nine key informants, with experience ranging from 3-22yrs were interviewed. They mainly served in organizations with varying medical integration models. The qualitative analysis resulted in 13 final themes. Participants were more knowledgeable about barriers to referral to mental healthcare than to dental healthcare. The most significant barriers identified were stigma around treatment for mental health and HIV status exposure, housing, transportation, fear, anxiety, feeling of disconnect, inability to see the same dentist, and their unavailability. Facilitators identified to overcome these barriers included proper case management with sufficient care coordinators, social workers, and case managers, integrated one-stop-shop care, and interprofessional awareness and collaboration. Conclusion: HIV clinicians and administrators need to use specific strategies, including care coordination and interprofessional collaboration to increase success in dental and mental health referrals for better outcomes.

SOURCE OF FUNDING: Funding: Department of Public Health Sciences pilot grant, URM Rochester, NY

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(32) Characteristics of Children with SHCN at Their First Dental Visit

AUTHORS

Jennifer D. Chung, Ph.D. - Nova Southeastern University

*Marilyn Taylor

ABSTRACT:

OBJECTIVE The goal of this study is to report the characteristics of children with special healthcare needs (SHCN) receiving care for the first time at a special needs clinic. In addition, we wish to examine potential associations between patient characteristics and prior dental experience with a different provider. **METHODS** Caregivers of patients attending a special needs clinic complete a pretreatment form collecting demographics (i.e. age, gender, ethnicity), health information (i.e. services received, co-morbidities, dental needs), behavior (i.e. ability to communicate, level of cooperation), and previous dental experience. Descriptive statistics were calculated (N=309), and bivariate regression analysis was used to examine the association between patient demographic, health, and behavior characteristics on the primary outcome variable: previous experience with a different dental provider. **RESULTS** Most patients were male (80%), and 39% reported visiting another dentist. Patients most frequently received speech therapy (54.7%), followed by occupational therapy (47%); 32% of had speech delay, and 20% endorsed developmental delay. Most patients were coming in for a routine exam (80%) or a cleaning (52%). Patients needing a cleaning had significantly higher odds of a prior dental visit (OR 1.74; [95% CI 1.09, 2.78]; $p=0.02$). Parents reporting the use of a neurologist as a source of information for SHCN also had significantly higher odds of a previous dental visit with a different provider (OR 2.21; [95% CI 1.04, 4.67]; $p=0.04$). **CONCLUSION** Our findings can assist pediatric practitioners as well as specialized pediatric dentists in understanding the treatment needs of this underserved population.

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 D88HP20126 and titled, "Postdoctoral 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."

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(33) Predictors of Completion of Dental Treatment Among Children with Urgent Dental Needs

Authors

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ABSTRACT:

Objective: The study sought to identify predictors of dental treatment completion among children with urgent dental needs (UDN). **Methods:** This prospective cohort study included 3rd graders in 33 Collier County schools who participated in NCEF Community Outreach Program's Basic Dental Screening Survey at beginning of the 2019–2020 school year. 219 children were identified as having UDN. Caregivers of children with UDN received mailed notification that their child had UDN as well as follow-up phone calls. Caregivers were requested to return letters to the Program once dental care was initiated to confirm the child's status. Caregivers were called on the day of screening, after 1 month, after 3 months, and at the end of the school year. Program staff collected information on demographics, dental needs, and dental history. Multiple logistic regression modeling was used to identify factors independently associated with receiving dental care for UDN. **Results:** Of 219 children with UDN, 99 (45%) had dental treatment completed or in progress. Receiving dental care was significantly associated with having an established dentist (odds ratio [OR] = 13.19; 95% confidence interval [CI]: 5.55 – 31.34) relative to not having a dentist, and having Medicaid coverage (OR = 2.66; 95% CI: 1.26 – 5.61) relative to being dentally uninsured. **Conclusions:** A large proportion of schoolchildren with UDN in Collier County, FL may not receive needed care. Efforts to establish dental homes and provide coverage for treatment may help reduce the prevalence of unmet needs for urgent dental care.

SOURCE OF FUNDING: Research supported by the Naples Children and Education Foundation (NCEF)

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(34) Association Between Dental Prophylaxis and Myocardial Infarction in Kentucky Medicaid Beneficiaries

Authors

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Michael Goldsby, PhD - University of Louisville
Md Yasin Ali Parh, MS - University of Louisville
Seyed Karimi, PhD - University of Louisville
Pin Chuang Lai, DDS, PhD - University of Louisville
Guo-Liang Cheng, DDS, MSD - University of Louisville

ABSTRACT:

Objectives: The objective of this study was to analyze the association between dental prophylaxis (DP) use and myocardial infarction (MI) risk among adult Kentucky Medicaid beneficiaries with and without type 2 diabetes mellitus (T2DM). **Methods:** Kentucky Medicaid 2014-2018 claims data were used in this study. The longitudinal component included 943,657 beneficiaries aged ≥ 21 years. The incidence rates (IRs) of MI during four-year follow-up periods by DP were analyzed. Cox regression was used to analyze the effects of DP on the incidence of MI among beneficiaries with and without T2DM. **Results:** The IRs of MI among beneficiaries with and without DP were 0.31%/year (95% confidence interval (CI), 0.30 – 0.32) and 0.89 (95% CI, 0.88 – 0.90) %/year, respectively. Cox regression analysis showed that beneficiaries who used DP had lower risk of MI than those who did not use DP (adjusted hazard ratio (HR) = 0.50; 95% CI, 0.48 – 0.51; $p < 0.001$), controlling for age, sex, race, urban/rural residence, tooth extraction, T2DM, and other co-morbidities (e.g., kidney disease, atrial fibrillation, hypertension, dyslipidemia, peripheral vascular disease). Adjusting for other covariates, beneficiaries with T2DM were more likely to have an MI than non-T2DM individuals (adjusted HR = 1.18; 95% CI, 1.15 – 1.21; $p < 0.001$). **Conclusions:** DP was associated with decreased risk of MI among Kentucky Medicaid beneficiaries with and without T2DM. US health policy officials should adopt benefits policies to provide regular dental check-ups and DP for Medicaid beneficiaries with T2DM to reduce the risk of MI.

SOURCE OF FUNDING: This study has received financial support from the State University Partnerships between Kentucky Cabinet for Health and Family Services and University of Louisville. The **AUTHORS** declare no conflicts of interests.

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(35) Patient Experiences and Willingness to Use Teledentistry in Emergency Departments

Authors

*^SKatelyn Kleutsch, n/a - AT Still University - Arizona School of Dentistry and Oral Health

Ann Spolarich, RDH, PhD, FSCDH - AT Still University - Arizona School of Dentistry and Oral Health

ABSTRACT:

Objective: This qualitative descriptive study explored patient experiences seeking dental care in hospital emergency departments (EDs) during COVID-19 and their willingness to use teledentistry to address dental needs in EDs. Methods: This IRB-approved qualitative study was implemented using purposeful sampling. Eligible patients were at least age 18, fluent in English and reported seeking care in EDs within the past six months prior to coming to an academic dental clinic for definitive care. Data were collected using semi-structured telephone interviews. Content validity of the interview questions was established, and an interview guide was sent to participants prior to the interview. Verbal informed consent was obtained and Interviews were audio-recorded and transcribed. Respondent validation verified accuracy of transcripts. A grounded theory approach to data analysis was used. Open coding deconstructed the data into short phrases. Axial coding combined open codes into categories. Two examiners coded each interview independently, then compared and discussed findings to reach consensus. Results: 9 participants were interviewed. Seven categories emerged: lack of definitive diagnosis; prescribing and referral patterns; value for oral systemic health relationships; habitual use of EDs; access to telehealth; unfamiliarity with teledentistry; and distrust of dentists' ability to accurately diagnose using teledentistry. Subjects were prescribed medications and referred for dental care. ED visits were habitual but reinforced negative consequences of poor oral health. Most felt that dentists could not definitively diagnose without in-person visits. Conclusions: Subjects seeking care in EDs question the value of a teledentistry model in this setting. IRB approval: ATSU IRB Exempt #2020-287

SOURCE OF FUNDING: American Association of Public Health Dentistry

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(36) Protecting Tiny Teeth: A Prenatal Oral Health Quality Improvement Project

Authors

*Kera Beskin, MPH, MBA - American Academy of Pediatrics

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Hollis Russinof, MUPP, MUPP - American Academy of Pediatrics

Larone Barone, MPH - American Academy of Pediatrics

ABSTRACT:

Objective: Poor oral health during pregnancy is associated with poor health outcomes for both mother and baby. The objective of this quality improvement project was to measure 8 prenatal practices' ability to integrate oral health screening, education, and referral into routine prenatal care by utilizing the Protect Tiny Teeth toolkit. Methods: Eight prenatal sites were selected in August 2020. Practices were tasked with integrating oral health into their prenatal workflow. A kickoff call taught participating participants the Model for Improvement as a framework for their quality improvement efforts. Three check-in calls allowed participants to share challenges and successes. Data was collected monthly from November 2020 to April 2021. At the conclusion of the project, qualitative interviews were conducted to collect oral health integration best practices. Results: At project baseline (August 2020), 42% of pregnant patients were receiving any oral health education, referral, and/or screening. By project end (April 2021), 100% of pregnant patients at the participating sites were receiving some aspect of oral health care. Practices shared inventive ways they utilized the tools. One practice created a small reference tool with oral health assessment questions and dental referral number under their badge. Another clinic began emailing all oral health brochures due to the pandemic creating more telehealth visits. Conclusions: Collecting an oral health history and providing oral health education increased markedly during this project. Use of Protect Tiny Teeth tools proved effective in helping prenatal care settings provide preventive oral health services to their pregnant patients.

SOURCE OF FUNDING: This project was supported by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS). The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by American Academy of Pediatrics, CDC/HHS, or the U.S. Government.

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(37) Effect of the COVID-19 Pandemic on Dental Service Utilization among Medicaid Enrollees in Michigan

Authors

**Prudence Kunyangna, MS - Michigan Department of Health and Human Services*

Beth Anderson, MPH - Michigan Department of Health and Human Services

ABSTRACT:

Background: Dental offices in Michigan temporarily postponed all non-essential procedures due to an Executive Order (No. 2020-17) in March 2020. In Michigan, 22% of the population, two million people, is covered by Medicaid/Children's Health Insurance Program. Methods: 2016-2020 Medicaid data was used. The population was restricted to those with three or more months of continuous Medicaid enrollment in each calendar year. Rates of dental service utilization for children (0-18 years) and adults (19-64) were calculated for: one or more dental visits, two or more dental visits, one or more preventive dental visits. Results: In 2019, the rates of one or more dental visits were 49.4% among children and 24.0% among adults. In 2020, the rates dropped to 38.7% and 19.4% among children and adults respectively, a 27.6% drop among children and 23.7% drop among adults. In 2019, 29.2% of children and 14.5% of adults under Medicaid had two or more dental visits. These rates dropped to 19.8% among children and 10.2% among adults in 2020, a decline of 47.5% among children and 42.2% among adults. Rates of one or more preventive dental visits dropped from 45.3% in 2019 to 34.5% in 2020 among children and 13.4% in 2019 to 9.4% in 2020 among adults. Conclusion: There was a decline in the rates of dental service utilization among Medicaid enrollees in 2020. This decline could be associated with the Executive Order and other COVID-19 related challenges such as personal protective equipment shortage, staff shortage, new infection control guidance and patient fears.

SOURCE OF FUNDING: None

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(38) Dental Health Visits among College Students : Findings from the National College Health Assessment

Authors

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ABSTRACT:

Objective: To examine the utilization of professional dental care among U.S. college students. Methods: Data were requested from the American College Health Association, National College Health Assessment (ACHA-NCHA II and III) on dental visits (exam/cleanings) in the last year and demographic questions. Chi-square tests were used to examine the distribution of dental visits by demographic characteristics. Results: The total number of students surveyed from fall 2015 to spring 2021 was 618,283. Nearly 72% of the total students surveyed reported dental visit in the last 12 months. However, dental visits decreased significantly from first (79.7%) to fifth year (60%) undergraduates ($\chi^2=15172.9$; $p=.000$). Female students (72.7%) reported a higher percentage of dental visits than males (68.5%) and other gender identities ($\chi^2=1909.1$; $p=.000$). Only 54.3% of international students had dental visit in the last year ($\chi^2=8606.7$; $p=0.00$). Students at 4 year schools (71.4%) had a higher percentage of dental visits compared to 2-year schools (66.4%) ($\chi^2=336.6$; $p=.000$). At Hispanic serving institutions, 63.3% of student visited the dentist. White students reported the highest percentage of dental visits (75.9%) followed by 65.5% American Indian, 64.1% Asian/Pacific Islander, 63.8% Hispanic/Latinos and 61% black students, the differences being statistically significant. Conclusion: The average percentage of dental visits (72%) in the last six years has dropped compared to the average of 76.6% in 2000-2013 ACHA-NCHA survey. Dental visits before and during COVID-19 stayed relatively steady. Dental care disparities in minority groups indicate the need for educational programs that inform students on the importance of preventative dental care.

SOURCE OF FUNDING: None

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(39) Diabetes and Dental Caries in US Adults

AUTHORS

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Guo-Liang Cheng, DDS, MSD - University of Louisville

ABSTRACT:

Objectives: Association between diabetes and dental caries has been studied using small samples of convenience in other countries, but the United States. The purpose of this study was to analyze the relationship between diabetes and dental caries among US adults participating in the 2011-2018 National Health and Nutrition Examination Survey (NHANES). **Methods:** The NHANES was a cross-sectional study including clinical assessments, laboratory analysis, and interviews. The sample included 16,635 participants aged 20 years and older that represent 187,596,215 individuals in the US in a probability weighted sample. Outcome variables included overall total caries score (or number of decayed, missing, filled permanent teeth – DMFT index) and the presence of caries. Bivariate analysis, Poisson regression for total caries score, logistic regression for the presence of caries were used for analysis. **Results:** Controlling for covariates, multiple Poisson regression revealed that total DMFT caries scores were associated with diabetes status (adjusted relative risk ratio (RR) controlled diabetes = 1.13, RR uncontrolled diabetes = 1.18; $p < 0.001$), no college education, female sex, white race, elderly (≥ 65 years), cigarette smoking, obesity, yearly dental visits, seeing a dentist only for treatment. Similarly, multiple logistic regression shows that the odds of adults with diabetes status having dental caries were higher than among those without diabetes (adjusted risk ratio (OR) controlled diabetes = 1.84, OR uncontrolled diabetes = 1.87; $p < 0.05$). **Conclusions:** Diabetes was associated with a higher caries score and an increased risk for dental caries among US adults.

SOURCE OF FUNDING: This study has no financial support. The **AUTHORS** declare no conflicts of interests.

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(40) Innovative State Oral Health Models: A Qualitative Analysis

Authors

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Burton Edelstein, DDS MPH - Columbia University College of Dental Medicine

ABSTRACT:

OBJECTIVE: The purpose of this study is to conduct a qualitative analysis of oral health-related, CMS-facilitated demonstration programs to identify and compare 1) themes in model design, testing, and implementation and 2) facilitators and barriers to implementation. **METHODS:** Based on a predetermined set of inclusion criteria, 10 demonstration programs were identified. Online queries using targeted search terms were conducted for each program. A set of 12 programmatic characteristics was identified to create standardized comparison criteria and a conceptual framework was developed to represent the relationships between these characteristics. Resulting data was compiled into individual reports for each demonstration program and a semi-structured interview guide was developed for use in key informant interviews with one representative from each of 10 demonstration programs. Representatives are asked to review, clarify, and expound upon data presented in the relevant reports. Interviews and information will be analyzed qualitatively and process and implementation themes will be identified and refined. **RESULTS:** 12 characteristics were adapted into a conceptual framework that includes 6 domains: 1) Grant/Technical Assistance, 2) Stakeholders, 3) Inner (Care) Setting, 4) Outer (Contextual) Setting, 5) Intervention, and 6) Outcomes. Expected themes include: 1) Extending providers' scope of practice, 2) Non-traditional settings of care, 3) Community-based and inter-organizational partnerships, and 4) CMS funding and technical assistance. **CONCLUSIONS:** Pending, key informant interviews will add additional perspective and information not provided by online queries; the additional insight and data will help finalize programmatic and implementation themes. Barriers and facilitators to implementation will also be identified post interviews.

SOURCE OF FUNDING: Columbia University, College of Dental Medicine. 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 D88HP37554 "Postdoctoral Training in General, Pediatric, and Public Health Dentistry and Dental Hygiene" for the amount of \$3,286,676. 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.

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(41) Dental and Nursing Interprofessional Education: A Scoping Review

Authors

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ABSTRACT:

Objectives This scoping review aims to describe and assess interprofessional educational (IPE) programs including predoctoral dental students (PDS) and graduate advanced nursing students (GANS) previously described in the literature. **Methods** This scoping review was reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines. PubMed and EBSCOhost were searched to identify articles written in English from January 1, 2000 through February 18, 2021 about U.S. IPE programs involving PDS and GANS students. Each IPE program was assessed in three areas: development, implementation, and evaluation methodologies. **Results** Of the 277 articles identified, 14 met the inclusion criteria. Of these, 9 programs (64%) also involved other healthcare specialties such as medicine, pharmacy, and social work. Various approaches were used to develop IPE curricula, including help from experienced faculty (86%, n=12), modification of existing IPE frameworks (50%, n=7), literature reviews (14%, n=2), and combined strategies (50%, n=7). 8 IPE programs (57%) utilized more than one delivery format, such as clinical (29%, n=4), experiential (57%, n=8), and active learning (57%, n=8). Students were evaluated in all 14 studies for satisfaction, self-reported knowledge/attitudes, objective knowledge, or behavioral change using post-surveys/evaluations, and 13 (93%) showed an improvement in at least one evaluated outcome. **Conclusion** This review provides insights into the development, implementation, and evaluation strategies of IPE programs in the fields of nursing and dentistry. The review also adds to the current body of knowledge and can help educators plan for future curricular decisions.

SOURCE OF FUNDING: Columbia University's 2021-2022 Summer Research Fellowship for first year dental students awarded to Min Jae Kang

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(42) Decay Experience Cut by One-Third Among Head Start Enrolled Survey Participants

AUTHORS

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ABSTRACT:

Objectives: Complete an open-mouth survey using I-Smile™ program resources (1) to acquire an understanding of dental disease prevalence among children ages 3-5 enrolled in Iowa Head Start; and (2) to evaluate dental disease prevalence among Head Start survey participants in comparison with previous Head Start oral health surveys and the potential impact of I-Smile™. Methods: Dental hygienists and nurses who would provide dental screenings at Head Start classrooms through the I-Smile™ program during the prescribed timeframe (2/1/2021-6/1/2021) were required to participate in a webinar calibration training and complete a follow-up quiz. Results: Screenings were provided to 2,360 Head Start-enrolled children 3 through 5 years of age. Survey participants are diverse in race, ethnicity, and gender. Only 30 percent presented with either suspected or treated decay, which is 30% less than that identified in 2015 (43%). However, significant disparities across race and ethnicity exist, with black participants having decay (27%) at two times the rate of white participants (13%). Additionally, rates of the child having a dental visit in the past 12 months declined from 2015, where 90% percent of participants had a dental visit in the last 12 months, compared to 83 percent in 2021. Conclusion: Consistent oral health surveillance is important in understanding oral health status and oral disease prevalence among a designated population, especially those believed to be in highest need. A statewide infrastructure to provide preventive services, like I-Smile, helps children access dental care, understand its importance, and has likely improved oral health outcomes among Iowa children.

SOURCE OF FUNDING: None.

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(43) The Impact of Clinical Observation of Patients with SHCN on General Dentistry Students

Authors

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ABSTRACT:

OBJECTIVE The goal of this study is to report the characteristics of children with special healthcare needs (SHCN) receiving care for the first time at a special needs clinic. In addition, we wish to examine potential associations between patient characteristics and prior dental experience with a different provider. **METHODS** Caregivers of patients attending a special needs clinic complete a pretreatment form collecting demographics (i.e. age, gender, ethnicity), health information (i.e. services received, co-morbidities, dental needs), behavior (i.e. ability to communicate, level of cooperation), and previous dental experience. Descriptive statistics were calculated (N=309), and bivariate regression analysis was used to examine the association between patient demographic, health, and behavior characteristics on the primary outcome variable: previous experience with a different dental provider. **RESULTS** Most patients were male (80%), and 39% reported visiting another dentist. Patients most frequently received speech therapy (54.7%), followed by occupational therapy (47%); 32% of had speech delay, and 20% endorsed developmental delay. Most patients were coming in for a routine exam (80%) or a cleaning (52%). Patients needing a cleaning had significantly higher odds of a prior dental visit (OR 1.74; [95% CI 1.09, 2.78]; $p=0.02$). Parents reporting the use of a neurologist as a source of information for SHCN also had significantly higher odds of a previous dental visit with a different provider (OR 2.21; [95% CI 1.04, 4.67]; $p=0.04$). **CONCLUSION** Our findings can assist pediatric practitioners as well as specialized pediatric dentists in understanding the treatment needs of this underserved population.

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”. 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.”

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(44) A Pilot Study of Medical-Dental Integration to Improve Perinatal Oral Health

AUTHORS

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Lindsay Sailor, MPH - Michigan Primary Care Association

ABSTRACT:

OBJECTIVE: The purpose of the medical –dental integration project was to increase access to oral health care, and improve health outcomes for at risk pregnant women and infants in Michigan. **METHODS:** The grant-funded effort began as a one year pilot project at six Federally Qualified Health Center (FQHCs) sites and grew to include eleven geographically diverse FQHC sites across Michigan for a total over three years. Preventive oral health care was provided by a dental hygienist in an OB/GYN clinic and referrals were made to a dental clinic on site for follow up care. Medicaid claims data for women with live birth deliveries between April 2018 and December 2020 and enrolled in a Medicaid plan with dental benefits for at least 6 of 9 months prior to delivery were include in the evaluation. **RESULTS:** In general, women receiving prenatal care at a FQHC have nearly double the rate as those receiving prenatal care at non-FQHC sites and nearly quadruple the rate as those with no prenatal care. Overall, FQHC sites which participated in the integration project have higher rates of prenatal dental care than those which were not a part of the pilot project. **CONCLUSIONS:** The medical-dental integration pilot project was successful in increasing access to dental care for at risk pregnant women in Michigan.

SOURCE OF FUNDING: Michigan Department of Health and Human Services and Delta Dental Foundation of Michigan.

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(46) Hypertension Screening in the Dental Setting and Impact on Overall Health

Authors

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ABSTRACT:

OBJECTIVE: The North Dakota Department of Health Oral Health Program (ND OHP) is dedicated to improving all North Dakotans' oral health through prevention and education. Because oral health and overall health are interconnected, a greater emphasis is being placed on increasing coordination between dental and medical providers. **METHODS:** The ND OHP partnered with dental providers to provide blood pressure screenings for adult patients and conduct bidirectional referrals. All dental offices participating in the project received training on best practices for screening patients' blood pressures, utilizing a standardized protocol. Dental offices tracked the number of screenings provided, the number detected to have high blood pressure, the number referred to a medical practice, and the number receiving follow-up on their referral. Partner dental offices included Federally Qualified Health Centers, nonprofit dental clinics, Indian Health Service clinics, and private practices. **RESULTS:** A total of 12 dental practices with 14 office locations provided blood pressure screenings and referrals. Sixty-five dental providers were trained on blood pressure measurement and referral protocols. Dental providers conducted over 25,682 blood pressure screenings during Year 3 of the project. Dental providers detected over 3,861 high blood pressure readings, made over 492 referrals to medical providers, and received follow-up information on over 155 referrals. **CONCLUSIONS:** Blood pressure screening in the dental setting has evidenced positive outcomes and increased coordination of care between dental and medical providers. Future recommendations focus on the continuation and improvement of current practices in the areas of evaluation, implementation, data collection, and sustainability.

SOURCE OF FUNDING: The project is funded by the Centers for Disease Control and Prevention (CDC) through the State Actions to Improve Oral Health (DP18-1810) Component 2 cooperative agreement.

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(47) The State of Youth's Smoking Cessation in the Arab World

Authors

^{*S}Dania Bahdila, BDS, MSD, CAGS - Harvard School of Dental Medicine

ABSTRACT:

Objectives: Little is known about Arab youth smoking cessation (SC) behaviors and their interplay with cessation help. We aimed to (1) describe SC behaviors including quit intention, quit attempts and future continuity and (2) test whether being exposed to either professional or social help has a larger effect size on SC behaviors than the receipt of neither. **Methods:** We used data from the Global Youth Tobacco Survey (2010-2018). Using surveys from 15 Arab countries of schoolchildren aged 12 to 16, we calculated prevalence of SC behaviors and cessation help. We used a multilevel model to estimate the association between SC behaviors and cessation help, adjusted for sex, age, household smoke exposure, cigarettes smoked per day, perceived difficulty of quitting, being taught the dangers of tobacco in school, survey year, and year of WHO FCTC ratification. **Results:** 69.6% of children want to quit smoking and 59.5% tried to quit the past year. However, 48.3% expressed the decision to continue smoking. Most smokers received help to quit from social circles (56.7%) and 13.3% received professional help. Overall, the strength of the association for quit intention was larger for receiving professional help (OR 3.18, 95%CI 1.83-5.52) than social circles (OR 1.80, 95%CI 1.37-2.40). Receiving both, professional and social help demonstrated a larger association with quit attempts than receiving social help only. **Conclusion:** Receiving SC help from either professional sources or social circles were associated with positive SC behaviors. Healthcare providers and caregivers should engage in youth SC counseling to facilitate a successful quit.

SOURCE OF FUNDING: None

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(48) The Association Between Dental Caries and Body Mass Index Among Adults: A Cross-Sectional Study

Authors

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ABSTRACT:

Objectives: To investigate the relationship between body mass index (BMI) and dental caries among adults using National Health and Nutrition Examination Survey (NHANES) data from (2013-2014, 2015-2016, and 2017-2018). **Methods:** This cross-sectional study uses the NHANES data based on 29,400 adults who participated in the survey. The NHANES survey is a representative sample of the population within the United States. The survey included demographic, socioeconomic, health, and oral health-related questions. Exploratory descriptive analyses and Chi-square tests were conducted to study the relationship between BMI and dental caries, followed by logistic regression to understand the strength of association between the variables in this study. **Results:** The preliminary data analysis indicated that individuals in higher BMI categories; BMI 25.0 to 29.9 (overweight), and BMI > 30 (obese), demonstrated higher Decayed, Missing, Filling (DMF) scores and an overall increase in dental caries prevalence compared to the healthy groups of lower BMI (BMI of 18.5-24.9). Covariates such as depression and sleep apnea may lead to xerostomia in overweight/obese patients, which may have contributed to the increase in dental caries prevalence. **Conclusions:** A higher prevalence of dental caries was observed in the participants who were overweight/obese. Future studies should focus on understanding the relationship of covariates such as sleep apnea and depression and their influence on the prevalence of dental caries in the overweight/obese population.

SOURCE OF FUNDING: None

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(49) Review of U.S. Predoctoral Dental Public Health Curricula: Topics and Competencies

AUTHORS

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Anh Dang, n/a - University of Washington School of Dentistry

Haley A. Holland, BA - University of Washington

ABSTRACT:

Objective: CODA Standards and AAPHD-suggested competencies for dental public health (DPH) have been developed to guide predoctoral course curriculum. However, it is not clear how these competencies are being taught and if the existing instruction is adequate to prepare future dentists to address the dental public health issues and oral health disparities of today. The objective of this study was to analyze how and to what extent predoctoral course content satisfy DPH competencies. Methods: Predoctoral DPH course syllabi were requested from dental school faculty and administrators and collected via email. We analyzed the first course in each school's curriculum. Descriptive data extraction was completed using REDcap. We performed qualitative content analysis of lecture titles, course learning objectives, and competencies. Course content was mapped to CODA Standards and DPH competencies. Results: We received syllabi from 34 of 66 dental schools. Approximately one-third (n=11) of schools included specific competencies from Standard 2. Most courses (n=30) provided classroom didactic instruction; 5 schools incorporated online modules. Each of the 23 dental public health topics identified by experts within the AAPHD was covered by at least one school. The most common topics included: Social and health-care systems (access to care) (79% of syllabi) and Principles of DPH (79%). Less frequently covered topics included: Motivational Interviewing (9%), Lifelong Learning (12%), and Service Learning (15%). Conclusions: Dental students learn DPH content by a variety of methods and course structures. Specific dental public health topics related to CODA competencies are addressed more often in course curricula.

SOURCE OF FUNDING: None

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(51) Communicating Health Equity and Value-Based Care in Dental Education: An Environmental Scan

Authors

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Annaliese Cothron, DHSc, MS, CPH - The American Institute of Dental Public Health

Rebekah Mathews, MPA - CareQuest Institute for Oral Health

ABSTRACT:

OBJECTIVE: Dental education programs develop effective future practitioners by educating students in the most innovative approaches to patient care delivery. As the dental workforce steadily grows, dental schools should be visible in communicating how both didactic education and patient care experiences align with that growth. **METHODS:** An environmental scan was completed using websites of all 68 dental schools measuring 24 data points assessing how dental schools communicate educational approaches and organizational commitment to health equity, care integration, public health, and value-based care (VBC). Data were analyzed to evaluate differences based on size, type of school, geographic location and organizational infrastructure. **RESULTS:** The US currently has 25,995 students enrolled in predoctoral dental education programs. Of the 68 accredited dental schools, 41 are public institutions, 23 are private and 4 are private-state related. Fifteen (23%) schools have a dental public health program and nine (13%) offer continuing education on VBC. This number is higher in public schools (17%) compared to private schools (4%). Over 60% advertised diversity, equity, and inclusion for dentistry and one fifth (21%) listed equity in the school's mission, vision or objective. **CONCLUSIONS:** Websites are the primary source of information for students and patients to learn about dental schools. Few schools communicated a focus in VBC in either educational approach or patient care. While some schools listed diversity within their values or mission statement, few dental schools integrated health equity into their mission statement or patient care philosophy. Most dental schools communicated an investment in integrated patient care.

SOURCE OF FUNDING: None

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(52) Examining Leadership and Capacity Building in Oral Health Professionals

Authors

*Annaliese Cothron, DHSc, MS, CPH - The American Institute of Dental Public Health

Stacey Chazin, MPH - American Network of Oral Health Coalitions

ABSTRACT:

OBJECTIVE: Public health professionals are often in places of leadership, a critical need made even clearer in a COVID-impacted environment. Evidence from the Public Health Leadership Competencies Project establishes the need for effective communication, evidence-based decision-making, and strong collaboration. While some research exists supporting leadership competencies needed for public health professionals to be effective leaders, these competencies have not been assessed within dental public health, leaving a clear knowledge gap. **METHODS:** The American Institute of Dental Public Health (AIDPH) disseminated a survey to oral health professionals, targeting dental residents, residency directors, established public health professionals, educators, nonprofit professionals, and researchers. This needs assessment explored the leadership development needs, preferences, and experiences of respondents, as well as their views on the leadership competencies most critical to the dental public health profession. **RESULTS:** Survey responses highlight differences in desired leadership skills based on professional career focus. Increased leadership development both formal and informal in nature is needed within the oral health community. Responses identified a variety of skills both in public health and general leadership as necessary for effective leadership in dental public health. **CONCLUSION:** Building from the results of the survey, programming should be developed to support the emerging needs of oral health professionals at all stages of leadership. Mixing profession-specific topics (e.g., medical-dental integration) with general leadership topics (e.g., communications and systems thinking) is key to equipping future oral health leaders.

SOURCE OF FUNDING: None

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(53) Moving Patterns of Iowa Private Practice Dentists, 2000-2019

Authors

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ABSTRACT:

Objectives: This study examined dentists' moving patterns in Iowa from 2000 to 2019 in order to identify potential trends in movement between urban and rural areas. **Methods:** The source of data was the Iowa Dentist Tracking System (IDTS). All active dentists in Iowa in 2000 (n=1424) were used as a baseline. The final sample (n=616) included dentists who remained in private practice in Iowa during the study period. From the final sample, movers were identified based on a change in the year 2000 street address as of 2019. Urbanicity of practice locations was measured at the county level using the 2013 Rural-Urban Continuum Codes (RUCC). Multivariable logistic regression was used to identify characteristics associated with relocation over the study period. **Results:** Among dentists who remained in private practice in Iowa during the study period, 77.8% remained in the same practice location. Among dentists who moved (n=137), 74.5% did not change the urbanicity of their practice locations, 13.9% moved to more urban areas and 11.7% moved to more rural areas. Among those who did not change the urbanicity of practice locations (n=102), 80.4% or 82 relocated from one metro (RUCC codes 1-3) location to another metro location. **Conclusions:** Only 22.2% of the final sample moved during the study period. Nearly 3/4 of the movers kept the same urbanicity. A few more dentists relocated to more urbanized areas than rural areas. Overall, dentists who moved showed a preference toward metro areas over non-metro areas.

SOURCE OF FUNDING: None

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(54) Denial of Operating Room Access for Pediatric Dental Treatment: An Ongoing National Survey

Authors

**Robin Wright, PhD - American Academy of Pediatric Dentistry*

ABSTRACT:

Objective: U.S. pediatric dentists require access to hospital operating rooms (ORs) to deliver safe and effective dental care to children. Denial of access to ORs for general anesthesia (GA) creates long waiting times, deferral of medically necessary dental care, and unmeasured pain and anxiety for patients. This study extends an initial 2020 study to examine the extent, trajectory, and possible underlying causes of operating room access denial, including the impacts of the pandemic. Methods: Public policy advocates (PPAs) of the American Academy of Pediatric Dentistry completed an electronic questionnaire about state-specific OR denials in March, 2020, and are completing quarterly surveys starting in Fall, 2021. Results: Responses from 50 states and the District of Columbia showed 34 PPAs (67 percent) acknowledging OR access problems, with 14 out of 34 (41 percent) reporting a moderate or major problem. Western district PPAs reported the fewest states affected (four out of 11; 36 percent). Hospitals and reimbursement emerged as frequent foci for denials in comment analysis. Ongoing surveys in 2021 suggest OR access has continued to decrease since the onset of the COVID-19 pandemic. Conclusions: Operating room access denial is a problem for pediatric dentists in the majority of U.S. states and D.C.. in those states reporting it as a problem, it was considered moderate or major in significance by almost half. OR access denial is expected to exacerbate as an effect of the COVID-19 pandemic.

SOURCE OF FUNDING: None

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(55) Impact of Prenatal Health Conditions in Pregnant Women on Orofacial Clefts in Infants

Authors

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Suman N Challa, BDS, MSPH - UT Health San Antonio School of Dentistry

ABSTRACT:

Objective: To assess both individual and interactive effects of prenatal conditions such as prenatal depression and diabetes and health behaviors like smoking during pregnancy on infant birth defects while focusing on orofacial clefts (OFCs). Methods: The data for this research study were collected by the Pregnancy Risk Assessment Monitoring System (PRAMS) in 2018. Birth certificate records were used in each participating jurisdiction to select a sample representative of all women who delivered a live-born infant. PRAMS used mixed-mode mail and telephone survey for data collection procedures. The total sample size of the CDC-PRAMS data for 2018 was 89,839. Complex sampling weights were used to analyze the data with a weighted sample size of 4,536,867. Descriptive statistics were performed to explore the frequencies of variables. Bivariate and multivariable analyses were conducted to examine associations among the independent and dependent variables. Results: The results indicate a significant interaction between smoking and depression (OR= 3.17; p-value= <0.001) and depression and diabetes (OR= 3.13; p-value= <0.001). Depression during pregnancy was found to be significantly associated with delivering an infant with a birth defect (OR= 1.31, p-value < 0.001). Conclusion: Depression during pregnancy and its interaction with smoking and diabetes are vital in determining birth defects in infants. Increasing awareness regarding the negative impact of depression in pregnant women and efforts focused on both individual and population levels to reduce depression during pregnancy can lower birth defects in the United States.

SOURCE OF FUNDING: None

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(57) Interpretation of Ambiguous Dental Scenarios by Severity of Dental Anxiety

AUTHORS

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Brian G. Leroux, PhD - University of Washington School of Dentistry

Douglas S. Ramsay, DMD, PhD, MSD - University of Washington School of Dentistry

ABSTRACT:

Objective: Interpretational bias is the tendency for individuals with anxiety to interpret anxiety-relevant ambiguous situations in a negative way. The goal of this study was to examine how dentally anxious individuals interpret ambiguous dental scenarios compared to those with lower dental anxiety. Methods: United States adults were recruited through national Craigslist advertisements to provide qualitative explanations of ambiguous dental scenarios and complete the Modified Dental Anxiety Scale (MDAS). We examined descriptions of 5 interpersonal scenarios between those high in dental anxiety (MDAS>19) compared to the rest of the sample and calculated the number of various emotionally valenced terms as a ratio of each group's total number of words. Results: Participants (N=402; mean age=40.0 (sd=14.4), range 18-85; 65.2% female) completed the survey. The mean MDAS score was 16.6 (sd=5.6, range=5-25); 42.5% reported high dental anxiety. Dentally anxious respondents used fewer words (2711) across fewer (148) interpretative statements compared to the rest of the sample (3693 words across 170 interpretations). As a proportion of the total number of words, dentally anxious participants used terms like "nervous", "anxious", "worried", and "scared" more often (range=0.26-0.66%) than other respondents (range=0.05-0.38%). Less anxious respondents, meanwhile, used the terms "money" (0.14%) and "cost" (0.35%) more often than dentally anxious individuals (0.07% and 0.18%, respectively). Conclusions: Dentally anxious respondents used words related to anxiety as a greater proportion of their overall words, while less anxious individuals more often described concerns about the cost of treatment. Dentists should tailor their communication to each patient's specific sources of concern.

SOURCE OF FUNDING: This research was funded by the Dr. Douglass L. Morell Dentistry Research Fund at the University of Washington School of Dentistry.

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(58) Impact of COVID-19 on Community Health Centers in Iowa

AUTHORS

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Julie C. Reynolds, DDS, MS - University of Iowa

ABSTRACT:

Objectives: Community Health Centers (CHCs) have faced various challenges due to COVID-19, yet there is a paucity of research examining the impact of COVID on CHC dental clinics. The aim of this study was to explore the impact of COVID-19 on CHC dental clinics in Iowa. **Methods:** In July-August 2021, an online survey was sent to dental directors at all CHC dental clinics in Iowa (n=16). Survey topics included impacts on patient volume, operations, staff recruitment, and referrals. The survey was pretested by six FQHC staff dentists, as well as several other stakeholders, and consisted of close-ended and open-ended items. Descriptive results were generated for all survey items and open-ended item responses were summarized for common themes. **Results:** There were a total of 9 (53%) respondents. The results showed CHCs are having more difficulty recruiting staff members and referring to specialists than before COVID-19. All 9 respondents reported it was more difficult to refer to a specialist than before COVID, and all 3 CHCs recruiting dental hygienists found it more difficult than before COVID-19. In open-ended comments, several respondents noted that a decline in area dentists accepting Medicaid has caused an increase in demand at their clinic. Compared to pre-COVID, wait times for new patients increased in 7 CHCs. **Conclusions:** CHC dental clinics reported several lingering effects of COVID-19 over a year after the pandemic began. The longer wait times and difficulty making specialist referrals among other issues have the potential to decrease dental-care access within a high-need population.

SOURCE OF FUNDING: Iowa Dental Research Grant

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(59) Oral Health of Texas Children: National Survey of Children's Health, 2019

Authors

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ABSTRACT:

Objectives The Oral Health Improvement Program (OHIP) strives to provide quality oral health data on a variety of populations. To find this data, OHIP continually analyzes new data sets from multiple local and national surveys. The purpose of this survey is to assess the oral health of Texas children. State level data is analyzed from the National Survey of Children's Health (NSCH). **Methods** NSCH is a weighted national survey with questions on many aspects of a child's life including oral health. This data is used to determine oral health trends and needs. NSCH is also OHIP's only source of data for children with special healthcare needs. Data were analyzed from the NSCH for combined years 2016 to 2019 using SAS (v. 9.4) to account for the sampling design. Comparisons were made between state and national level results. Some estimates need to be interpreted with caution because the estimate has a 95% confidence interval width exceeding 20 percentage points or 1.2 times the estimate and may not be reliable. These unstable estimates are notated in the results section. **Results** Children with adequate and consistent healthcare insurance were more likely to visit the dentist, have no cavities, and have excellent or very good teeth compared to those without insurance coverage. Children from low income families, with special healthcare needs and those of Hispanic or multiracial descent were more likely to have cavities. **Conclusions** Notable disparities are found between Texas children based on income, race, and insurance coverage.

SOURCE OF FUNDING: Analysis funded by Title V grant.

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(60) Cost-Related Delayed or Forgone Dental Care by Race/Ethnicity, US Working-Age Adults 2019

AUTHORS

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Shahdokht Boroumand, DMD MPH - Centers for Disease Control and Prevention

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ABSTRACT:

OBJECTIVE: To identify racial/ethnic differences in cost-related delayed or forgone dental care among US adults ages 18 to 64 years. **METHODS:** Data from the 2019 National Health Interview Survey, a nationally representative cross-sectional household interview survey, were used. Using logistic regression models that controlled for sex and age, we examined racial/ethnic differences in having no dental visit, delayed dental care because of cost, or forgone needed dental care because of cost. All analyses accounted for the complex sample design of the survey and used sample population weights. Adjusted odds ratios (aOR) are significant at $p < 0.05$. **RESULTS:** Thirty-five percent of adults had no past-year dental visit (31.7% for Non-Hispanic Whites [NHW], 38.9% for Non-Hispanic Blacks [NHB], and 41.3% for Hispanics). Twenty-three percent of adults delayed dental care due to cost (21.1% for NHW, 25.1% for NHB, and 32.5% for Hispanics). Nineteen percent of adults forwent needed dental care due to cost (16.2% for NHW, 22.1% for NHB, 26.1% for Hispanics). From logistic models, compared to NHW, NHB and Hispanics were more likely to have no past-year dental visit (aOR: 1.40, 95% CI [1.25, 1.57]; 1.53, 95% CI [1.39, 1.69], respectively), delayed dental care due to cost (aOR: 1.25, [1.11, 1.42]; 1.84 [1.66, 2.05], respectively), or forgone needed dental care due to cost (aOR: 1.49, [1.30, 1.71]; 1.91, [1.71, 2.41], respectively). **CONCLUSIONS:** Among working-age adults, forgoing or delaying dental care due to cost appears to be greater among racial/ethnic minorities compared to NHW adults.

SOURCE OF FUNDING: None

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(62) Assessing Oral Health Status, Practices, and Access to Care among Refugees in San Antonio, Texas

Authors

**Rami Saadeh, PhD - Jordan University of Science and Technology*

ABSTRACT:

Objectives Refugees encounter several health disparities including oral health problems. This study evaluated the self-reported oral health status, practices, and access to care of adult refugees living in San Antonio, Texas, United States. **Materials and Methods** Adult refugees (n = 207) who accessed services from two centers in San Antonio, completed this survey. Multivariate logistic regression was used to examine the relationship of the refugees' demographics with oral health status, practices, and access to care. **Results:** Oral pain in the previous 12 months was common among refugees having been reported by almost 58.9% of the survey participants; 43% reported pain as the reason for their last dental visit. Approximately half of the participants reported both the condition to their teeth and gums as being good: 42.5 and 54.6%, respectively. Most participants (84%) reported brushing their teeth one or two times a day, and around 78% reported they never smoked. Fifty-two percent reported needing dental care in the past 12 months, but not being able to receive it; while 45.9% reported not having dental insurance, 41.5% reported not having money to pay a dentist. Fifteen percent reported never visiting a dentist. Arabic speakers, moving to the United States more recently, and lower level of education were associated with a poor oral health status and practices. **Conclusion** Refugees in this study encountered limited access to dental care. Their inability to seek dental care could affect their oral and general health, and weaken efforts of preventing oral health diseases.

SOURCE OF FUNDING: None

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(63) Promoting Prenatal Oral Health Through Social Media: Lessons Learned and Metric Analysis

Authors

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ABSTRACT:

Objective: Share results of two social media awareness campaigns focused on the importance of dental care during pregnancy and infancy. **Methods:** Metrics were gathered from social media and program website statistics before, during and after campaigns. The first campaign used Facebook targeting options while third-party contextual audiences were used in the second campaign. The second campaign started with placing only the top performing ads from the first campaign. Additional creative assets were added later to avoid audience fatigue. Metrics from both campaigns compared performance of both the English and Spanish ads. **Results:** The two social media campaigns generated over 8 million impressions and nearly 23,000 clicks to our Smiles for Moms and Babies website. The social media influencer campaign yielded engagement rates 22 times higher than the industry average and 3.7 times higher click-through-rates on boosted Facebook posts. Motion graphics garnered click-through-rates higher than non-motion graphics. **Conclusions:** The use of third-party contextual audiences in our second campaign allowed for more targeted messaging. Programmatic ads used in the second campaign expanded reach to individuals who may not use social media. Moving forward, using additional ads with motion graphics may increase click through-rates further.

SOURCE OF FUNDING: Initial funding through a Perinatal and Infant Oral Health Quality Improvement (PIOHQI) grant provided by the Health Resources Service Administration (HRSA) of the U. S. Department of Health and Human Services under grant number H47MC29820. The second social media campaign was funded by the Department of State Health Services.

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(64) The Knowledge, Attitude, and Confidence of Caregivers and Staff towards the Oral Health of Residents

Authors

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ABSTRACT:

Objective- To assess the knowledge, attitude, and confidence of caregivers and staff towards providing oral health care to nursing home residents in San Antonio, Texas. Methods - A semi-structured interview guide was used to conduct face-to-face interviews with 20 caregivers and staff from nursing homes in San Antonio. A convenient sampling method was used to select the participants. Two different survey instruments were used for both the caregivers and staff. Each instrument contained questions regarding the knowledge, attitude, and confidence of caregivers and staff towards providing oral health care to nursing home residents. Responses to the open-ended questions were digitally recorded, transcribed, and hand-coded to form themes by one member of the team, and a qualitative data management software technology MAXQDA was used to code and generate themes by another individual for interrater reliability. Results- The preliminary analysis suggests that caregivers and staff exhibited basic knowledge, attitude, and confidence towards providing oral health care to residents. The results indicate gaps in knowledge which can affect their confidence and the oral healthcare delivered to the residents. Conclusion – Nursing home administrators and managers must ensure that caregivers and staff receive routine training to improve their knowledge, attitude, and confidence so they can adequately care for the oral health of residents. Another suggested approach using the results of the study is to identify a dental champion within the nursing homes who can coordinate the oral healthcare for residents.

SOURCE OF FUNDING: None

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(65) Variations in Oral Cancer Screening by Age and Race/Ethnicity in the US Population: NHANES 2015-2018

AUTHORS

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ABSTRACT:

OBJECTIVE: Oral cancer (OC), including oropharyngeal cancer, is among the top ten cancers worldwide. While the American Academy of Oral Medicine recommends oral screenings to detect oral cancers in its early stages, studies suggest potential racial/ethnic and age disparities. This study examines whether oral cancer screenings (OCS) differ by age and race/ethnicities. **METHODS:** Self-reported data of participants 18 years and older with a dental examination at the NHANES 2015-2018 was included to determine if they ever had an oral cancer screening, where the dentist felt under their tongue and inside their cheeks. Variables included demographics, alcohol/smoking status, healthcare professional recommendation to quit smoking, and the importance of cancer screening. SAS V.9.4 analysis used survey procedures to account for the NHANES complex survey design. Descriptive analysis, bivariate and multivariate logistic regression analyses were performed to determine odds of oral cancer screenings by age and race/ethnicity. **RESULTS:** OCS reports were lower in those under 65. Non-Hispanic whites, those with annual incomes >\$100,000, and college graduates were more likely to be screened for OC. OCS was only slightly more likely in current/former smokers than in non-smokers. OCS was 5 times more likely in those who were informed of the importance of checking for cancer than those who were not. **CONCLUSIONS:** Informing individuals about the importance of OCS increases the odds of being screened for this deadly cancer. Targeting younger ages, Mexican Americans/other Hispanic, lower income and less educated individuals in their routine dental check-ups may impact early detection of OC.

SOURCE OF FUNDING: None

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(66) Oral Health and HIV: Dental Students Knowledge, Attitudes, and Experiences

AUTHORS

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ABSTRACT:

Background. Provider knowledge and attitudes pertaining to providing care to vulnerable populations impacts the oral care of patient living with HIV (PLWH), but oral health providers often have inadequate knowledge or stigmatized attitudes towards PLWH. **Objective.** Assess the impact of dental students participating in a lecture on medical management, oral health for persons living with HIV, and HIV prevention. **Methods.** During the 2019-20 and 2020-21 school years, third year dental students at the University of Colorado School of Dental Medicine participated in a lecture presented by a provider at the Colorado and Mountain-West AIDS Education and Training Centers. Students completed pre- and post-intervention surveys which examined their HIV-related knowledge, attitudes and stigma, and educational experience. **Results.** Our results of the pre-intervention survey included 113 respondents between the ages of 23-45 with an average knowledge score of 8.93 points out of 12. The post-intervention survey included 92 respondents between the ages of 24-45 reporting an average knowledge score of 9.05 points out of 12. A paired-samples t-test was conducted to compare knowledge scores in the pre- and post-educational seminar. There was a significant difference in the scores for pre-intervention ($M=8.25$, $SD=1.42$) and post-intervention ($M=8.88$, $SD=1.46$) conditions; $t=2.50$, $p=0.014$. Preliminary analyses indicate students became less concerned about contracting HIV from patients and more confident in their knowledge regarding treating PLWH. **Conclusions.** The addition of an educational session on treating PLWH not only increases knowledge about treating PLWH, but also has the potential to reduce stigmatizing attitudes and beliefs surrounding PLWH.

SOURCE OF FUNDING: This project is supported by the Health Resources and Services Administration (HRSA) Ryan White HIV/AIDS Program, Part F: Community-Based Dental Partnership Program (CBDPP)

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(67) Depression and its Association with Patient's Willingness to Visit the Dentist

AUTHORS

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ABSTRACT:

Objectives: Depression is the leading cause of disability in the world and its association with oral health is not fully established. The purpose of this study was to examine the associations between depression and the patient's willingness to go to the dentist on their own and time since the last dental visit. **Methods:** This is a secondary data analysis of National Health and Nutrition Examination Survey (NHANES) data from 2011 to 2018. Study participants were classified into two categories of having either none to mild depression or moderate to severe depression by utilizing the DSM-IV depression diagnostic criteria. Associations between depression, reason and the time of last dental visit were analyzed with multiple logistic regression models adjusting for age, gender, ethnicity, marital status and levels of income and education. **Results:** A sample size of 17,330 participants was used in the analysis. After adjusting for potential confounders: we found that people with moderate to severe depression were 0.7 times as likely to visit the dentist on their own (OR 0.7, CI 0.6 – 0.8) as compared to patients with none to mild depression. People with moderate to severe depression had 1.2 times the odds of having visited the dentist more than 2 years ago as compared to people with none to mild depression (OR 1.23, CI 1.08 -1.4). **Conclusions:** Our results suggest that people with moderate to severe depression tend to avoid dental visits for regular checkups and cleanings and are more likely to delay their visit for more than two years.

SOURCE OF FUNDING: None

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(68) Tooth Loss and Uncontrolled Diabetes Among US Adults

AUTHORS

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ABSTRACT:

Objectives: The objective of this study was to analyze the association between tooth loss and uncontrolled diabetes among US adults. **Methods:** National Health and Nutrition Examination Survey 2011-2018 data were used in this study. The sample included 16,635 participants aged 20 years and older that represent 187,596,215 individuals in the US in a probability weighted sample. Bivariate analysis and multiple regressions were used to analyze factors associated with edentulism and number of missing teeth. **Results:** Multiple logistic regression model significantly predicted edentulism using diabetes status (adjusted odds ratio (OR) controlled diabetes=1.44, 95% CI 1.12–1.86; OR uncontrolled diabetes=2.26, 95% CI 1.33–3.85), missing annual dental visits, seeing a dentist only for treatment, family income below 200% Federal Poverty Guidelines (FPG), female sex, being older ≥65 years, tobacco smoking, and no college education. After controlling for the same covariates, multiple Poisson regression analysis shows that dentate adults with controlled and uncontrolled diabetes had higher relative risk (RR) of tooth loss than those without diabetes (adjusted risk ratio (RR) controlled diabetes=1.52, 95% CI 1.35–1.71; RR uncontrolled diabetes=1.57, 95% CI 1.35–1.83). **Conclusions:** US adults with uncontrolled (HbA1c ≥9%) and controlled diabetes (HbA1c <9%) were more likely to be edentulous and experience tooth loss compared to adults without diabetes. US health policy officials should adopt benefits policies to provide regular dental check-ups for individuals with diabetes, low income (<200% FPG), or aged ≥65 years to reduce tooth loss and improve their quality of life. Dentists should work with physicians to help patients control glycemic levels.

SOURCE OF FUNDING: This study has no financial support. The **AUTHORS** declare no conflicts of interests.

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(69) Access to Care: Federally Qualified Health Centers and Transportation in North Texas

Authors

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ABSTRACT:

Objective: Access to care, a social determinant of health (SDH), is essential for health improvement. Federally Qualified Health Centers (FQHCs), and transportation to them, affect access to care. This study aims to describe the FQHCs in North Texas (NT), and available transportation to them. Methods: Identification of the counties and FQHCs present in NT (rural/urban) involved a web-based search. Information concerning: types of professional and transportation services provided, funding source, and operational hours were collected via online search and phone interviews. Data was recorded using Excel. Data analysis was performed in SPSS. Results: In the thirty counties (sixteen rural, fourteen urban) of NT, there are forty-five FQHCs (five rural, forty urban). Out of sixteen rural counties, two have at least one FQHC. Out of fourteen urban counties, eight have at least one FQHC. Public transportation is the most common in rural and urban FQHCs (100% and 92.5% respectively). Two urban FQHCs offer no transportation. The main funding source is federal (73.3%). The majority of FQHCs operate during 8am-5pm (33.3%). Dentistry is the fourth most common provided service in rural and urban FQHCs (20% vs 35%). The association between county location and having at least one FQHC present was statistically significant ($p < 0.05$). Conclusion: In NT, many rural counties do not have FQHCs. The majority of FQHCs offer some type of transportation. To improve access to care, advocacy efforts need to increase for a greater number of FQHCs -especially in rural areas- and available transportation services.

SOURCE OF FUNDING: None

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(70) Dental Visits and Oral Health Conditions on Children and Youth with Special Health Care Needs

Authors

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ABSTRACT:

Objectives: Compare preventive dental visits, cavities, and teeth conditions in children with and without special health care needs. **Methods:** Data from the 2020 National Survey of Children's Health (NSCH) were analyzed for 2-17 years old (N=39,738). Outcome variables were dental visits, teeth conditions and cavities in the past year (reported by parents/guardians) CYSHCN was reported by parents or guardians. Covariates included were age, sex, race, family income, parents/guardian's highest education level, insurance type, nativity. Bivariate analysis and multiple logistic regression were performed using Stata 16 and accounted for the survey design of NSCH. **Results:** The prevalence of preventive dental visits for CYSHCN was 95.5% (95% CI: 94.3-96.4) vs 96.0% (95% CI: 95.4-96.6) (p=0.37). The prevalence of dental cavities was 16.7% (95%CI: 15.0-18.6%) in CYSHCN vs. 11.5% (95% CI: 10.6-12.5%) in other children (p<0.001). The poor teeth condition was 11.6% (95% 10.0-13.4) for CYSHCN vs. 4.9% (95% CI:4.3-5.7) (p<0.001). Multiple logistic regression model results do not show difference (AOR=0.94, p=0.55) in preventive dental visits between CYSHCN and other children; CYSHCN were more likely to have cavities (AOR=1.41, 96% CI; 1.18-1.69), and more likely to have poor teeth condition (AOR=2.41, 96% CI; 1.89-3.07) than children without special care needs. **Conclusion:** The 2020 NSCH data showed that children with special needs reported poorer oral health status (cavities and teeth condition) than their counterparts, but they did not have more preventive dental visits. Additional efforts to reduce the barriers to dental care for this special group are needed to improve their oral health status.

SOURCE OF FUNDING: None

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(71) Factors Associated with Differences in Incomes of Dentists in the US

AUTHORS

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ABSTRACT:

OBJECTIVE: To evaluate the impact of dentists' gender, age, and other demographic and household characteristics on personal annual income from wages and/or self-employment. **METHODS:** The analytic dataset (n=148,878 dentists who worked >40 weeks/year, >350 hours/year) was drawn from the 2014-2018 American Community Survey. Data were weighted to be representative of the US population. Descriptive statistics and multilevel Poisson regressions (Prevalence Ratios [PR], 95% Confidence Intervals [95% CI]) were conducted to estimate associations between dentists' annual income ($\leq \$100,000$ vs $> \$100,000$) and their sociodemographic and family factors, adjusting for employment characteristics. **RESULTS:** Female dentists (31.1%) had a significantly lower average annual income than male dentists (\$157,509 vs \$210,097) and were proportionally more likely to earn $< \$100,000$ yearly (37.3% vs 25.4%). Female dentists aged 35+ were more likely to earn lower incomes than their male counterparts (PR=1.70, 95% CI=1.38-2.10). Black African American dentists (PR=1.39, 95% CI=1.11-1.73) were more likely to earn lower incomes than White non-Hispanic dentists. Dentists having >3 children and/or a non-dentist spouse/partner were less likely to have lower incomes than those without children and/or spouse/partner. Presence of older dependent(s) in the household was predictive of lower incomes (PR=1.25, 95% CI=1.10-1.42). **CONCLUSIONS:** Dentists' gender, age, and racial disparities contribute to the likelihood of earning a lower income. These findings are similar to results from studies on dentistry and other professions. As dentistry continues to diversify and practice patterns undergo change, it is important to monitor these disparities and potentially identify strategies to reduce them.

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(75) ROHC 'n ROHS: Oral Public Health Models for Innovation and Collaboration

Authors

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ABSTRACT:

OBJECTIVE Medical-dental-behavioral health integration strategies require creativity and dedication. Colorado and Maryland have approached integration through a model of established regional oral health experts. This session will offer strategies and lessons learned from the Colorado Regional Oral Health Specialist (ROHS) and Maryland Regional Oral Health Coordinator (ROHC) models. **METHODS** The ROHS/ROHC models have been implementing core oral public health functions for over ten years. ROHS/ROHCs serve as oral health liaisons throughout the state. They develop critical partnerships and implement both innovative and evidence-based programs to improve oral health outcomes and decrease disparities in communities. ROHS/ROHCs collaborate with clinical and safety-net partners to overcome barriers experienced in underserved communities, engage diverse organizations, conduct educational outreach, deliver and/or link individuals to services, and disseminate oral hygiene supplies to persons in need. **RESULTS** ROHCs/ROHS have successfully implemented ongoing medical-dental-behavioral health integration strategies, raised oral health awareness, and improved the oral health of their regions. The ROHC/ROHS model continues to identify available services, determine oral health needs, and integrate oral health prevention into existing community programs. By implementing evidence-based and innovative approaches to increase access to disease prevention/management activities, these models support systems change locally and statewide to improve oral health outcomes. **CONCLUSIONS** States have the opportunity to deliver tailored approaches to comprehensive interventions by establishing oral public health experts in geographically underserved regions. ROHC/ROHS models expand chronic disease prevention/management strategies that serve to decrease health disparities and improve oral health outcomes in communities.

SOURCE OF FUNDING: Colorado: CDC, HRSA, and State General Funds Maryland: HRSA and State General Funds

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(76) Dental Caries, Obesity, and Asthma During Childhood: A Qualitative Case Study to Guide Collaboration

AUTHORS

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ABSTRACT:

Dental caries, obesity, and asthma episodes often co-occur among children in the United States and share many risk factors, yet these conditions are preventable. There is a need to address dental caries, obesity, and asthma more collaboratively through prevention efforts; however, research lacks coordinated community-based prevention strategies for these three health conditions. Traditionally, community-based approaches to prevent dental caries, obesity, and asthma during childhood are more siloed. The objective of this multiple case study was to identify barriers and successful commonalities among community-based prevention strategies aligning with the Spectrum of Prevention theoretical framework to collaboratively address dental caries, obesity, and asthma episodes during childhood. This study included a multi-faceted examination involving parents, community health program staff, medical and dental care providers, and community stakeholders using an overarching research question and four primary research questions—one primary question for each case. Methods included interviews, observations, and document review. After completing a within-case framework analysis and a cross-case thematic analysis, the results of this study discovered an overlap among strategies concerning communication methods with families and the community, meeting basic needs, trust and relationship building, and provider and organizational education. Conclusions from this study provide several implications to coordinate community-based prevention strategies contending to childhood dental caries, obesity, and asthma. In concurrence with the implications for program staff, medical and dental providers, and community stakeholders, this presentation will provide recommendations to support collaborative strategies among these groups for addressing dental caries, obesity, and asthma with children and families.

SOURCE OF FUNDING: None

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(77) Obstructive Sleep Apnea Surveillance and Oral Appliance Therapy Evaluation, U.S. Army, 2014-2019

AUTHORS

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ABSTRACT:

Obstructive sleep apnea (OSA) is a common and concerning sleep disorder. Objective: To examine the incidence of OSA among active Army Soldiers from 2014 through 2019 and assess self-reported impacts of both the disorder and one of its treatment methods - oral appliance therapy. Methods: Surveillance data were obtained from the Armed Forces Health Surveillance Division; remaining data were self-reported through an electronic survey administered to Soldiers diagnosed with OSA during the surveillance period. Results: There were 87,404 cases of OSA during this period; yearly incidence rates ranged from 274.3 to 330.3 cases per 10,000 person-years (p-yrs). Male incidence rates (from 294.3 to 355.9/10,000 p-yrs) exceeded that of females (from 155.2 to 189.2/10,000 p-yrs). Soldiers >40 years old had the highest incidence rates of any other age group (from 820.1 to 973.2/10,000 p-yrs). Of the 8,740 survey respondents, the vast majority reported positive airway pressure (PAP) therapy as their current treatment method; 9 percent (n=795) reported treatment with oral appliance therapy. Comparing pre-to-post treatment periods, respondents treated with the oral appliance reported statistically significant improvements in sleep quality and duration, daily performance, cognition, alertness, physical activity, fatigue, and daytime sleepiness. Conclusions: OSA is a prevalent disorder associated with numerous health risks. Oral appliance therapy is an effective treatment that can be used as an alternative to, or in conjunction with, PAP therapy. The oral appliance is small, lightweight, and requires no electricity. Evaluation of long-term oral appliance therapy outcomes and cost-savings analyses may benefit the military and Soldiers with OSA.

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