

OPHA 2023 ANNUAL CONFERENCE

RESEARCH AGENDA



POSTER PRESENTATIONS

ORAL PRESENTATIONS

- Nutrition Promotion Efforts
- Programs & Current Research
- Oral Healthcare & Access

Sunday, September 24th, 2023

Public health professionals from across Oklahoma will present their research, program evaluations, and works-in-progress during the OPHA 2023 Annual Public Health Conference at the Poster Presentations or Oral Presentations in Oklahoma City on September 24th, 2023.

RESEARCH AGENDA

TYPE: POSTER PRESENTATIONS - GAYLORD ROOM

(1) Whole blood vs. component therapy resuscitation among seriously injured patients treated at a level I trauma center: Is there a difference in short-term mortality?

- Pawan Acharya, MSc; Tabitha Garwe, PhD; & Amanda Celii, MD

(2) Examining epidemiologic disparity across SARS-CoV-2 variant-dominant periods in Oklahoma County, Oklahoma (March 12, 2020-February 28, 2022).

- Jessica Beetch; Kapil Khadka, PhD; Michael Clark, MS; Kunle Adesigbin, MPH; Katrin Kuhn, PhD; & Aaron Wendelboe, PhD

(3) Building and assessing a holistic health training for resident advisors as a large public university

- Katherine Qualls Fay, MS, CHES & Gracie Pearcy, MPH

(4) Identifying risk profiles for marijuana vaping among U.S. young adults based on classification model in machine learning by recreational marijuana legalization status

- Hanxia Li & Sixia Chen, PhD

(5) Community resources, context, and preventable hospital inpatient stays related to autism in Oklahoma, 2019

- DJ McMaughan, PhD; Tracy Freudenthaler, PhD; Abby Mulcahy; Amy McGehee, PhD; & Elliot Parker

(6) Inpatient hospital admissions in Oklahoma in 2019

- DJ McMaughan, PhD; Tracy Freudenthaler, PhD; Abby Mulcahy; Amy McGehee, PhD; & Elliot Parker

(7) Tick-borne diseases: Assessing the knowledge, attitudes, and behaviors of a rural population in Oklahoma

Wendi K. Middleton, PhD, CHES

TYPE: POSTER PRESENTATIONS - O'DONOGHUE ROOM

- (1) Building Health Literacy in the Rare Disease Patient Caregiver: an evaluation of health literacy and educational programs of the Global Foundation for Peroxisomal Disorders
 - Daniel Billingsley, Melissa Bryce, & Chris Ostertag

- (2) Identify rural Oklahoma residents' barriers to the use of Mobile Wellness Units (MWUs): An interview study among MWU staff and supervisors
 - Xuwei Chen, PhD; Rose Wangari Njoroge; & Tao Hu, PhD

- (3) Barriers and facilitators to fruit and vegetable consumption following exposure to a hybrid food and resource center and community garden.
 - Sarah Corcoran, BS; Rachael Condley, MS, RD/LD; Rachel A. Liebe, PhD, MPH; Jill Joyce, PhD, RD; Deana Hildebrand, PhD, RD; & Ashlea C. Braun, PhD, RD

- (4) Challenges faced by Home Health Agencies during the COVID-19 Pandemic
 - Deepthi Padakandla, MD; Ganisher Davlyatov, PhD; & Aizhan Karabukayeva, PhD

- (5) Automation of the Oklahoma Senior Farmers Market Nutrition Program (SFMNP): Integrating technology as a facilitator to increase program enrollment and utilization
 - Stephanie DeBerry, Meredith Scott-Kaliki, & Catherine Oberpriller

- (6) Providing health insurance education to improve health insurance literacy and increase health insurance enrollment for college students at large public university
 - Katherine Qualls Fay, MS, CHES & Gracie Pearcy, MPH

- (7) Oklahoma unpaid Alzheimer's Disease and Related Dementias caregiver needs and experiences survey highlights burden of caregiver stress, gaps in resource education and access in 2022
 - Anne Kapka, MPH & Morgan Hamilton, MPH

- (8) Exploring the Dynamics of Nurse Staffing Variability in Oklahoma Skilled Nursing Facilities
 - Aizhan Karabukayeva, PhD & Ganisher Davlyatov, PhD

- (9) What to do with the needs identified: Fulfilling the Needs of a Needs Assessment
 - Diana Prieto, Bayleigh Acosta, Meredith Scott-Kaliki, & Michael Clark

- (10) Quality or Cost-efficiency? An Analysis of Nurse Wages in Skilled Nursing Facilities
 - Michael Tirado & Ganisher Davlyatov, PhD

TYPE: ORAL (TRACK #1: NUTRITION PROMOTION EFFORTS)

(1) Nutrition Incentives in Oklahoma: The Double-Up Oklahoma Program

- Leslie Young; Richard Comeau, MPA; Ahmed Omar; Cari Berlin; Marianna Wetherill, PhD, RD; & Mary Williams, PhD

(2) Evaluating the implementation of the Double Up Oklahoma program in farmers markets: The development of a process evaluation plan.

- Meredith Scott-Kaliki, Leslie Young, Alexia Davila, Diana Prieto, Cari Berlin, & Ahmed Omar

(3) How was Double-Up Oklahoma implemented in grocery stores? A process evaluation of a nutrition incentive program in Oklahoma grocery stores.

- Christopher Moghaddami, MPH, MHA; Mary Williams, PhD; Jentri Sinor, MA, RD; Karla Cornwell, MSW; Osa Omoregie, MBBS, MPH; Richard Comeau, MPA; Leslie Young; & Marianna Wetherill, PhD, RD

(4) Assessing the Impact of the Double-Up Oklahoma Grocery Store Pilot Program using Sales Data: The DUO Outcomes Evaluation

- Mary Williams, PhD; Ana Lusk; Leslie Young; Richard Comeau, MPA; & Marianna Wetherill, PhD, RD

(5) Double Up Oklahoma (DUO) for Health: Program Wins and Lessons Learned Following Pilot Launch of a Healthcare Partner Initiative

- Marianna Wetherill, PhD, RD; Margarita Driscoll; Valarie Carter; Leslie Young; Osariemen Omoregie, MBBS, MPH; Mary Williams, PhD; & Richard Comeau, MPA

TYPE: ORAL (TRACK #2: PROGRAMS & CURRENT RESEARCH)

- (1) Launching the Tulsa chapter of the National Cervical Cancer Coalition (NCCC): Why Oklahoma needs to talk about HPV
 - Tracy Freudenthaler, PhD, MPH & Krista Schumacher, PhD

- (2) Outcomes of sexual education quantity and type on attitudes towards sexual consent and sexual assault: A quantitative study of college students
 - Julie Sisler

- (3) Oklahoma university student HPV narratives: many underestimate their risk and do not know HPV risk factors
 - Tracy Freudenthaler, PhD, MPH; Krista Schumacher, PhD; Cynthia Lamon, PhD; & Danielle Manship, DO

- (4) Advocating for the Advocates: Building a Professional Community to Support Community Health Workers Connecting Communities to Health and Social Services in Oklahoma
 - Kerstin M. Reinschmidt, PhD, MPH; Marshan Oliver-Marick, DrPH, MPH; Randa L Real, RN, CHW; La'Keira D. W-Jallow, MS; Cathy Billings, MPA; & Taylor Holland, MS, CHES

TYPE: ORAL (TRACK #3: ORAL HEALTHCARE & ACCESS)

- (1) Assessing Oklahoma's Oral Health: A statewide report card.
 - Terrisa Singleton, MHSA; Leon Bragg, DDS; Lisa S. Pendarvis, MPH; PMP, PCMH CCE; & Nicki Largent

- (2) Assessing Oklahoma's Oral Health: A survey of 3rd Grade school children.
 - Jana Winfree, DDS, MPH & Nicole Reynolds, DDS

- (3) Expanding the Oral Health Workforce: A Dental Therapy Toolkit for Oklahoma
 - Alexandria Holt, MPH, CPH & Julie Seward, RDH, MEd

- (4) Meeting the needs of Oklahomans: Food Insecurity and Community Clinical Linkages
 - Lauran Larson, MPS; Keeley White, MPH; Colleen Almeida Smith; Lindsey Diel, CPHQ; Candace Pape-Macedo; Houa Xiong; & Greg Marshment, MS, CHES

POSTER PRESENTATIONS

Title: Whole blood vs. component therapy resuscitation among seriously injured patients treated at a level I trauma center: Is there a difference in short-term mortality?

Author(s): Pawan Acharya, MSc; Tabitha Garwe, PhD; & Amanda Celii, MD

Background: Massive transfusion protocol (MTP), which entails whole blood (WB) or component therapy (CT) transfusion, is critical in managing traumatic hemorrhage. WB has been shown to have superior outcomes in the military population. However, whether this translates to the civilian population remains understudied.

Objective(s): We sought to analyze the association between transfusion type (WB vs. CT) and in-hospital mortality among MTP-activated trauma patients.

Methods: This was a retrospective cohort, single-center study. Using OU Health (the only level I trauma center in Oklahoma) trauma registry data collected between January 1, 2021, and December 31, 2022, we compared in-hospital mortality between WB and CT transfusions. Propensity score matching (1:1) was performed based on gender, age, race, injury severity score (ISS), injury type, helicopter transport, and the number of comorbidities.

Results: Of 729 MTP-activated patients, 287 WB and 287 CT recipients (n=574) were matched. Among 574 patients, 175 (30.5%) had penetrating injuries. The matching balanced the distribution of variables included in the PS model among the WB and CT recipients. There was an interaction ($p=0.001$) between transfusion type and injury type. Among the patients with penetrating injuries, WB recipients had a significantly lower risk of death (HR=0.53, 95% CI: 0.39-0.75) than CT recipients. However, among the patients with non-penetrating injuries, the mortality risk was not significantly associated with transfusion type.

Conclusion: Preliminary findings suggest that WB has a comparative advantage over CT in MTP resuscitation in lowering in-hospital mortality among patients with penetrating injuries.

Title: Examining epidemiologic disparity across SARS-CoV-2 variant-dominant periods in Oklahoma County, Oklahoma (March 12, 2020-February 28, 2022).

Author(s): Jessica Beetch; Kapil Khadka, PhD; Michael Clark, MS; Kunle Adesigbin, MPH; Katrin Kuhn, PhD; & Aaron Wendelboe, PhD

Background: While it is well-known that age and race/ethnicity have been associated with poor COVID-19-related outcomes, it is less clear if vulnerable populations consistently experienced higher rates of poor outcomes over time.

Objective(s): Our study compared COVID-19-related outcomes by age group and racial/ethnic group across variant-dominant periods to assess how poor outcomes were experienced over time in Oklahoma County.

Methods: We used OSDH surveillance data to compare COVID-19 average daily case, hospitalization, and case fatality rates across three time periods—each dominated by different SARS-CoV-2 variants in Oklahoma County.

Results: When comparing across variant-dominant time periods, with respect to age, we observed that people age 65+ years consistently had the highest average daily rates of COVID-19-related hospitalization and death. With respect to race/ethnicity, we observed that American Indian/Alaska Natives consistently experienced the highest case rate, that Black people experienced high rates of hospitalization during the pre-Delta- and Delta-dominant time periods, and White people consistently experienced the highest rate of death. Hispanic people experienced the first surge of cases in the pandemic and subsequently had relatively low rates of COVID-19-related outcomes.

Conclusion: There is little evidence to suggest that once a segment of the population experiences high rates of COVID-19-related outcomes that they will benefit from lower rates of outcomes in subsequent variant-dominant time periods.

Title: **Building Health Literacy in the Rare Disease Patient Caregiver: an evaluation of health literacy and educational programs of the Global Foundation for Peroxisomal Disorders**

Author(s): **Daniel Billingsley, Melissa Bryce, & Chris Ostertag**

Background: When parents or caretakers receive a diagnosis of a peroxisomal disorder from a physician, it will set off events that can lead to long, emotional, and frustrating clinical journeys. The diagnosis can come with grim prognosis, exacerbating the challenges faced by patient families. Even when diagnosed early through newborn screening or symptomology, families have little information about the disorder, its comorbidities, or resources and clinical services available to them. Because higher health literacy is tied directly to more positive health outcomes, the Global Foundation for Peroxisomal Disorders (The GFPD) (Tulsa, Okla.) prioritizes increasing that literacy in all caretakers and families affected by peroxisomal disorders (approximately 700 patients worldwide).

Objective(s): Understand the direct effects on access to care for caretakers of peroxisomal patients through increased health literacy from resources and programs provided by the GFPD.

Methods: The GFPD has completed qualitative outcomes measurement on the efficacy of the programs through questionnaires and two listening sessions with 15 caretakers of peroxisomal patients, including:

- Intake and Case Management with peer-to-peer leadership and expertise
- Medically reviewed treatment guidelines
- Electronic information focused on health education/treatment guidelines
- Conferences and other en vivo programs

Results/Conclusion:

- Caretakers have access to health information, medical and scientific specialists, and peer specialists to increase clinical outcomes for patients.
- Caretakers indicate faster recognition of symptoms needing medical attention (acute, urgent, emergency, long-term, or palliative).
- Direct expedited communication with physicians and other clinicians to access specialist care.
- Increased understanding of severity of disorder, progression, and necessary interventions

Title: Identify rural Oklahoma residents' barriers to the use of Mobile Wellness Units (MWUs): An interview study among MWU staff and supervisors

Author(s): Xuwei Chen, PhD; Rose Wangari Njoroge; & Tao Hu, PhD

Background: Mobile Wellness Units (MWUs) are being delivered to all nine of Oklahoma's Public Health Districts. However, one major challenge facing MWUs in rural Oklahoma is underutilization.

Objective(s): The purpose of this work-in-progress study is to identify the barriers preventing rural residents from using MWUs in Oklahoma.

Methods: We sent email invitations to MWU staff and supervisors working for the Oklahoma State Department of Health (OSDH), Tribal owned MWUs, or privately owned MWUs in Oklahoma to participate in our 20-30-minute one-on-one interview study. Since March 2023, we have interviewed five MWU staff and supervisors.

Results: Four participants work for OSDH, and one works for a Tribal clinic. We identified significant barriers that prevent rural residents from using MWUs: difficulties in advertising, prevailing misconceptions, restrictive business hours, and issues of trust. First, it is challenging to advertise and disseminate information about the MWU and the health service it provides. Many residents are unaware of the MWU or do not know what the MWU could offer. Second, low-income residents deny health services, assuming they cannot afford them; however, many MWUs provide free service or a sliding scale for patients in financial need. Only being able to provide service within working hours and building trust among the local community were another two barriers to the use of MWUs.

Conclusion: Intervention strategies reducing these identified barriers (e.g., raising rural residents' awareness of the services provided by MWUs) should be developed to increase the use of MWUs in rural Oklahoma effectively.

Title: Barriers and facilitators to fruit and vegetable consumption following exposure to a hybrid food and resource center and community garden.

Author(s): Sarah Corcoran, BS; Rachael Condley, MS, RD/LD; Rachel A. Liebe, PhD, MPH; Jill Joyce, PhD, RD; Deana Hildebrand, PhD, RD; & Ashlea C. Braun, PhD, RD

Background: Despite programming targeting fruit and vegetable (FV) intake, consumption remains suboptimal, including in under-resourced populations.

Objective(s): Describe barriers and facilitators to improved FV consumption following exposure to a hybrid food and resource center.

Methods: This mixed-methods study enrolled patrons of Our Daily Bread, a food and resource center integrating a food pantry and community garden. Participants completed a survey and skin carotenoid measurement (Veggie Meter), early (June) and late (September) in the harvesting season. Following data collection, participants were invited to complete semi-structured interviews (SSIs) based on skin carotenoid change (responders vs. non-responders) to determine barriers and facilitators. Wilcoxon signed-rank tests were used to examine differences in skin carotenoids, while deductive coding was used to analyze interviews.

Results: Participants (n=30) were primarily white (63.3%) women (73.3%), with a household income \leq \$15,000 (66.7%). Skin carotenoids remained stable from early (median=249.5) to late (median=248.5) in the harvesting season (P=0.5). Salient facilitators reported by responders included an inherent preference for FV established during childhood, previous home gardening, and the produce from Our Daily Bread. Salient barriers among non-responders included competing insurmountable challenges (e.g., depression), ubiquity of competing foods (e.g., sweets), and inferior quality of FV available at retail locations.

Conclusion: Competing challenges exist for individuals utilizing programs designed to improve FV consumption, limiting uptake and behavior change. These data point to the need for multi-pronged, supportive strategies to better meet the needs of targeted populations."

Title: Challenges faced by Home Health Agencies during the COVID-19 Pandemic
Author(s): Deepthi Padakandla, MD; Ganisher Davlyatov, PhD; & Aizhan Karabukayeva, PhD

Background: The COVID-19 pandemic placed enormous strain on healthcare systems worldwide, with Home Health Agencies (HHAs) shouldering a unique burden. Confronted with issues both novel and exacerbated by the pandemic, HHAs grappled with problems such as procuring vital equipment and supplies, implementing remote healthcare delivery, and handling acute staffing shortages.

Objective(s): This review consolidates existing research on the myriad challenges faced by HHAs during the COVID-19 pandemic, providing a comprehensive exploration of the obstacles encountered and the strategies employed to overcome them.

Methods: A systematic search across various academic databases was conducted, with a focus on studies detailing the experiences and challenges of HHAs during the pandemic period.

Results: The review revealed a spectrum of issues, with staffing shortages, intensified by difficulties in recruitment and retention, limited opportunities for training and career progression, and subpar pay and benefits, emerging as a significant concern. Government bodies at state and federal levels implemented changes to policies, regulations, and guidance to alleviate some of these issues. These changes encompassed increased Medicaid rates for HHAs to procure personal protective equipment and pay bonuses, modifications to staff training and employment requirements, and enhanced flexibilities for the use of telehealth and other virtual training and service provision methods.

Conclusion: The insights gleaned from this study underline the crucial need for robust pandemic planning within HHAs, including strategies for resource management, staff mental health support, and enhanced telehealth infrastructure. Future research should continue to explore these issues and devise comprehensive solutions to better equip HHAs for future health emergencies.

Title: **Automation of the Oklahoma Senior Farmers Market Nutrition Program (SFMNP): Integrating technology as a facilitator to increase program enrollment and utilization**

Author(s): **Stephanie DeBerry, Meredith Scott-Kaliki, & Catherine Oberpriller**

Background: The Senior Farmers Market Nutrition Program (SFMNP) is designed to serve income eligible seniors by providing a \$50 EBT card to shop at participating farmers markets. The Oklahoma SFMNP application was automated by the ONIE Project and OKDHS in 2021. Formative and process research informed application development. A human-centered approach guided all phases of the design process to ensure program satisfaction.

Objective(s): Assess user experiences, identify barriers and opportunities for improvement related to process, layout, and communication to innovate the program without creating barriers to access and achieve at least an 80% redemption rate.

Methods: A telephone survey was conducted from December 2021 to February 2022 using a telephone survey with 2021 SFMNP participants (n=320). Questions covered technology access, use and self efficacy, transportation and market shopping logistics, and program satisfaction. A follow up survey was conducted after the 2022 market season.

Results: Overall 66% of participants own a smartphone and report internet access. 76% reported completing the application alone. Key program value and satisfaction messaging include quality of food, extension of budget, improved diet, friendly market atmosphere, and supporting local vendors. Additionally, 62% of seniors report visiting the market with someone.

Conclusion: A majority of participants have technology access, but recruiter support is needed for those without. Program marketing should highlight food quality, friendly atmosphere, and supporting local vendors. Marketing should include messaging about local enrollment assistance and benefits expiration dates to achieve a higher program utilization rate necessary for program expansion.

Title: Providing health insurance education to improve health insurance literacy and increase health insurance enrollment for college students at large public university

Author(s): Katherine Qualls Fay, MS, CHES & Gracie Percy, MPH

Background: Despite a large percentage of college students being insured, there is a low degree of health insurance literacy among young adults.

Objective(s): This intervention aimed to improve health insurance literacy and increase enrollment in the Student Health Plan (SHP) should students want or need to.

Methods: This intervention was offered through in-person and virtual education sessions. A presentation was developed and piloted with peer health educators during the fall 2022 semester. The presentation was offered for two in-person and two virtual sessions during the open enrollment period for the spring 2023 academic term. The sessions were promoted on social media and through word-of-mouth through peer educators.

Results: The sessions received positive feedback through participant evaluation. Most students who attended the health insurance webinar were undergraduate, international students. Results of this presentation were very positive. 80% of the evaluators gave the presentation 5 out of 5 stars and 20% gave the presentation 4 stars. Students appreciated the terms and definitions they were given. Unfortunately, the sessions had low attendance due to campus weather closures and loss of internet access on one occasion.

Conclusion: This intervention should continue each semester during open enrollment for the SHP, but it could be improved the following ways: 1) promote specifically to international and graduate students through Canvas or other universal campus web portal, 2) offer in a computer lab for instant adoption, and 3) follow up with participants to learn their insurance enrollment status.

Title: Building and assessing a holistic health training for resident advisors as a large public university

Author(s): Katherine Qualls Fay, MS, CHES & Gracie Pearcy, MPH

Background: Resident advisors hold a unique position on campus; not only are they peers but they are also the first point of contact for students for personal health and safety needs.

Objective(s): This intervention provided education and support to resident advisors at a large public institution. It also used health behavior theory to build self-efficacy of resident advisors during interpersonal health-related conversations. This intervention was offered through a 1-hour in-person session during resident advisors' pre-semester training.

Methods: A presentation was developed and presented to the resident advisor during the fall 2022 semester. The content was developed using a needs assessment sent to the resident advisors. Items on needs assessment measured comfortability responding to four types of health need: 1) a physical or mental health concern, 2) a sexual health concern, 3) a mental health emergency, or 4) a physical health emergency. The resident advisors were assessed pre-training and post-training for changes in self-efficacy.

Results: There was an increase in comfortability, intention, and ability to refer, educate, or respond in all four topic areas.

Conclusion: This intervention should continue each semester, but it could be improved the following ways: 1) provide a more "hands-on" approach such as roleplaying or first-aid kit making and 2) building a focus group to pilot and receive feedback before training.

Title: Oklahoma unpaid Alzheimer’s Disease and Related Dementias caregiver needs and experiences survey highlights burden of caregiver stress, gaps in resource education and access in 2022

Author(s): Anne Kapka, MPH & Morgan Hamilton, MPH

Background: With Alzheimer’s Disease and Related Dementias (ADRD) prevalence on the rise in Oklahoma, there is a pressing need to identify missing resources and support for vital yet uncompensated, often overlooked, caregivers.

Objective(s): Learn about unpaid ADRD caregiver experiences and assess knowledge of existing resources. Results were shared with Oklahoma Healthy Brain Initiative (OHBI) Coalition workgroups to update the ADRD state plan, developing education on existing resource access, and further developing resource infrastructure.

Methods: The OHBI conducted a Community Needs Assessment: Unpaid Caregiver Survey in 2022 to assess ADRD caregiver experiences with quantitative and qualitative analyses. 235 current and previous unpaid ADRD caregivers responded. Overall negative and positive themes were developed for caregiving experiences and preliminary summary statistics were calculated.

Results: The most commonly reported negative theme for the unpaid ADRD caregiving experience was “overwhelming, frustrating, or hard” in 57.7% of respondents (n=71), and 30.9% had a “lack of resources” (n=38). Positive themes indicated unpaid caregiving was “a blessing, did not mind the work” in 22% of respondents (n=27). Among those with positive views on their unpaid experiences, 70.4% also reported a negative theme (n=19). The experiences of “loss of free time” (n=155), “exhaustion” (n=128), and “neglect of self and/or others” (n=118) were reported. Financial stress was reported by 85% of respondents (n=158), and 98% experienced emotional stress (n=188).

Conclusion: Caregiver stress was highly prevalent among unpaid Oklahoma ADRD caregivers. Increasing access to requested community resources can help relieve burdens on uncompensated caregivers.

Title: Exploring the Dynamics of Nurse Staffing Variability in Oklahoma Skilled Nursing Facilities

Author(s): Aizhan Karabukayeva, PhD & Ganisher Davlyatov, PhD

Background: Ensuring appropriate nurse staffing in skilled nursing facilities (SNFs) is paramount to achieving high-quality patient care and efficient operations. A growing body of research suggests that not only the level of staffing, but also the consistency and variability in staffing, can significantly influence patient outcomes and SNF performance.

Objective(s): To investigate the associations between nurse staffing variability and several key aspects of SNF operations and outcomes, including quality of care, operating margin, nurse wage, ownership status, payer mix, and competition.

Methods: A longitudinal analysis of nurse staffing data from SNFs in Oklahoma from 2018 to 2022 was conducted. In addition, generalized estimating equations (GEEs) with robust standard errors clustered at the facility level were used to examine the associations between nurse staffing variability and the independent variables in Oklahoma from 2018 to 2022. All models controlled for year fixed effects.

Results: While no associations were found for registered nurses, significant associations were found for licensed practical nurses (LPN) and certified nursing assistants (CNA). Our findings suggest that variability in staffing levels of different nursing levels appears to significantly impact SNF characteristics.

Conclusion: Targeted strategies could potentially help reduce staffing variability and improve care quality and operational outcomes in SNFs. For example, increasing nurse wages, particularly for LPNs and CNAs, might reduce staffing variability. This could, in turn, lead to improvements in care continuity and patient outcomes. It may also help address workforce challenges, particularly in rural areas, which our study found to be associated with greater LPN staffing variability.

Title: Identifying risk profiles for marijuana vaping among U.S. young adults based on classification model in machine learning by recreational marijuana legalization status

Author(s): Hanxia Li & Sixia Chen, PhD

Background: This study aims to determine the risk profile of marijuana use based on state recreational marijuana legalization (RML) status among young adults (YA) in the United States.

Methods: I employed machine learning algorithms including logistic regression, regression tree, random forest, support vector machine, and deep neural networks to predict marijuana vaping initiation at Wave 5 with predictors measured at Wave 4.

Results: Among young adults who had never vaped marijuana at Wave 4, 19% of those who lived in the states with RML and 15% of those who lived in the states without RML reported marijuana vaping at Wave 5. Substance-use-related predictors were rarely found as leading predictors in the states with RML. In the states without RML, substance use behaviors, including Self-perception of place on social ladder relative to other people in the United States, Amount of time spent watching TV, were a bully or threatened other people, electronic nicotine delivery systems and smokeless tobacco use, and the presence of externalizing symptoms emerged as predictors for marijuana vaping. Results also revealed interactions between the predictors of marijuana vaping.

Conclusion: Machine learning appears to be a promising analytic approach to identify complex interactions between factors when predicting emerging risk behaviors such as marijuana use. And among these methods, random forest has the highest accuracy of 85%.

Title: Community resources, context, and preventable hospital inpatient stays related to autism in Oklahoma, 2019

Author(s): DJ McMaughan, PhD; Tracy Freudenthaler, PhD; Abby Mulcahy; Amy McGehee, PhD; & Elliot Parker

Background: Preventable hospitalizations can be costly, represent a gap in care, stressful for autistic people and increase the risk of suicide. The drivers of inpatient utilization among autistic people are not well understood.

Objective(s): Estimate the prevalence and reasons for hospitalizations related to autism and the impact of contextual factors in Oklahoma.

Methods: Using data from the 2019 Oklahoma Public Use Data File, all non-maternal, non-infant hospitalizations (n=400,594) were modeled using descriptive statistics and adjusted logistic regression. Hospitalizations related to autism were identified using ICD-10 CM codes F840, F845, and F849. Reason for hospitalization was identified through aggregating the primary diagnosis ICD-10 CM codes using the Clinical Classification Software, Refined (HCUP, 2022).

Results: 959 hospitalizations were related to autism. The majority were for White (78%/756) males (75%/721) between the ages of 15-19 (22%/217) and 10-14 (20%/195). 30%(296) were rural. Focusing on the top 15 reasons for hospitalizations 30% were for potentially preventable conditions, including mental health issues/suicidality. Focusing on all hospitalizations, 30% of the hospitalizations related to autism were for mental health issues, compared to 4% for people without autism. Hospitalizations related to autism were 7 times more likely due to a mental health issue compared to people without autism (OR 6.99, 95%CI 6.08-8.05). Future analysis will include costs and availability of community resources.

Conclusions: Preventable hospitalizations accounted for most hospitalizations related to autism. Oklahoma needs better community mental health and ambulatory care for autistic people.

Title: Inpatient hospital admissions in Oklahoma in 2019
Author(s): DJ McMaughan, PhD; Tracy Freudenthaler, PhD; Abby Mulcahy; Amy McGehee, PhD; & Elliot Parker

Background: Rates of hospitalization can be used to estimate a population's public health burden and provide information on the quality of primary care. Identifying prominent preventable conditions may guide health systems in efforts to improve community based care and quality outpatient services for these conditions, preventing hospitalizations.

Objective(s): To examine the current top reasons for hospitalizations in Oklahoma.

Methods: Using data from the 2019 Oklahoma Public Use Data File, all non-maternal, non-infant hospitalizations in short term acute care hospitals (n=373,324) were modeled using descriptive statistics. Reason for hospitalization was identified through aggregating the primary diagnosis ICD-10 CM codes using the Clinical Classification Software, Refined (HCUP, 2022).

Results: Among hospitalized patients, 35% were from rural areas. Most patients were girls and women (57%) and were White (78%). Just under half (44%) were older adults. Medicare (50%) and Medicaid (14%) paid for most of the hospitalizations. The top 15 reasons for hospitalization account for 44% of all stays, and included heart disease, infections (like septicemia), pneumonia, mental health issues, substance use disorders, arthritis, COPD, UTI, and stroke. Of these top reasons, 42% were potentially preventable.

Conclusion: Preventable hospitalizations were present, which is concerning given the rurality and number of older patients. Avoiding preventable admissions is complex; therefore, Oklahoma communities need to examine improving quality outpatient and community-based care.

Title: Tick-borne diseases: Assessing the knowledge, attitudes, and behaviors of a rural population in Oklahoma

Author(s): Wendi K. Middleton, PhD, CHES

Background: Tick populations have been increasing since the 1990's (Garcia-Marti, I. et al., 2017). Global environmental changes have allowed ticks, and the diseases they carry, to survive in new regions; thereby expanding their geographical distribution (Boman, A. & Slunge, D., 2018). Tick-borne diseases are endemic in Oklahoma, especially in regions where the tick populations are the most abundant such as in the eastern portion of the state.

Objective(s): The aim of this study is to assess community members' knowledge, attitudes, and associated behaviors regarding tick-borne diseases. Once identified, this information could lead to the development of effective prevention campaigns geared towards increasing the use of tick repellents when people are in outdoor areas in which ticks are known to occur.

Methods: This research utilized a cross-sectional research design and was conducted during the Spring of 2023 in Tahlequah Oklahoma. A self-administered, paper-based survey was used. Individuals were randomly approached and asked to complete the survey. After completing the consent form, the participants filled out the tick-born disease questionnaire.

Results: Information collected will allow researchers to determine whether or not a person's knowledge and perceptions of TBIs have an influence on their prevention practices. It is expected that individuals with a poor understanding of TBDs will not utilize correct prevention strategies.

Conclusions: The ability to identify diseases as being vector borne can be a critical step in prevention of these types of diseases. Additionally, knowledge of the prevalence of TBDs is important for determining proper risk reduction methods.

Title: **What to do with the needs identified: Fulfilling the Needs of a Needs Assessment**

Author(s): **Diana Prieto, Bayleigh Acosta, Meredith Scott-Kaliki, & Michael Clark**

Background: Needs assessments influence programming in substantial ways. Upon evaluation of Oklahoma Local Ag Summit and ONIE’s Farmers Markets (FM), needs assessments were performed with FM managers & producers. Their purpose was to identify potential growth opportunities and gaps of resources in the agricultural community.

Objective(s): The Oklahoma Local Ag Collaborative (OLAC) was created to address the findings, filling the demand for support and resources in Oklahoma’s local food system.

Methods: There were five components to developing OLAC influenced by the needs assessment findings. First OLAC identified partners and established an advisory board consisting of diverse members from across the state that guided the organization and ensured all goals were being addressed and met. Next, OLAC designed a digital resource hub, provided virtual and in-person regional training, developed technical resources for business expansion, and created a membership platform for farmers and producers.

Results: Results have surpassed expectations of a membership count of at least 300 members to join within three years and within the first year over 752 members have joined. Among those members there is representation in all four regions of the state. These members have engaged in at least one OLAC sponsored program, 13 blog posts, 59 online resources, and/or regional meetings.

Conclusion: Effective programming must start with a thorough assessment from the community to be served. Foundational knowledge gained will ensure programming will have a stronger impact and create a necessary buy-in. Throughout OLAC’s establishment addressing the needs of Oklahoma producers has been imperative to the success demonstrated.

Title: Quality or Cost-efficiency? An Analysis of Nurse Wages in Skilled Nursing Facilities

Author(s): Michael Tirado & Ganisher Davlyatov, PhD

Background: The factors determining nurse wages in nursing homes are essential to comprehend, given their implications for staff recruitment, retention, satisfaction, and quality of patient care. Understanding these dynamics is vital for shaping policies and practices.

Objective(s): This study had three objectives: 1) To conduct a descriptive trend analysis showing the evolution of nurse wages over the past five years, 2) To explore the differences in wages between employee and contract nurses, revealing the existence of potential wage disparities, and 3) To delve into the organizational and community factors that predict higher wages, highlighting the forces that may contribute to wage enhancements.

Methods: We used a robust retrospective observational design to scrutinize data from a large sample of 12,814 unique skilled nursing facilities (SNFs) spanning the years from 2017 to 2021. We employed sophisticated random effects generalized least squares regression models to better understand the factors affecting wages.

Results: Our analysis revealed significant wage differences among registered nurses, licensed practical nurses, and certified nurse assistants based on SNFs' quality star ratings. Interestingly, while quality star rating was positively associated with nurse hourly wages, the financial performance of SNFs showed a negative correlation with nurse wages.

Conclusion: These findings suggest that quality star ratings are a significant predictor of nurse wages, whereas better financial performance of SNFs paradoxically aligns with lower wages, potentially indicating a preference for cost-efficiency over higher wages. The implications of this trade-off warrant further research, as it impacts nursing staff dynamics and the quality of patient care.

ORAL PRESENTATIONS

Title: Nutrition Incentives in Oklahoma: The Double-Up Oklahoma Program
Author(s): Leslie Young; Richard Comeau, MPA; Ahmed Omar; Cari Berlin; Marianna Wetherill, PhD, RD; & Mary Williams, PhD
Track: **TRACK #1: NUTRITION PROMOTION EFFORTS**

Background: Food insecurity and low fruit and vegetable (F/V) intake are associated with nutrition-related chronic diseases. One in seven Oklahomans are food insecure and few meet F/V intake guidelines. Nutrition incentive (NI) programs can reduce cost barriers by increasing the purchasing capacity of Supplemental Nutrition Assistance Program (SNAP) benefits for F/Vs. Double-Up Oklahoma (DUO), Oklahoma's NI program, is administered by Hunger Free Oklahoma (HFO). In this session, HFO will present a DUO program overview followed by related sessions.

Methods: HFO received its first USDA NI grant in 2020 to administer DUO in farmers markets, and then expanded to a grocery store pilot programs and a mobile market. DUO provides SNAP consumers with nutrition incentives matched 1:1 on SNAP purchases, up to \$20 per day. Although the DUO incentive process differs in farmers markets (tokens) and grocery stores (vouchers or loyalty card credits), DUO can be used for F/V purchases at DUO sites.

Results: To administer DUO, HFO engages retailers in low-income, low-access areas and ensures they can meet program requirements. Additionally, HFO partners with OUHSC HCOPH to evaluate the DUO program. By October 2022, HFO was implementing DUO in 18 farmers markets, one mobile market, and 10 grocery stores.

Conclusion: HFO has successfully implemented the DUO program in farmers markets, grocery stores, and one mobile market with expansion plans over the next four years.

Title: Evaluating the implementation of the Double Up Oklahoma program in farmers markets: The development of a process evaluation plan.

Author(s): Meredith Scott-Kaliki, Leslie Young, Alexia Davila, Diana Prieto, Cari Berlin, & Ahmed Omar

Track: ***TRACK #1: NUTRITION PROMOTION EFFORTS***

Background: Process evaluation provides real-time data on the quality of a program’s implementation. The ONIE Project, partnering with Hunger Free Oklahoma (HFO), designed a process evaluation plan for the Double Up Oklahoma (DUO) program at participating farmers markets (FMs), characterized by distinct management plans. DUO is a nutrition incentive (NI) program that provides a 1:1 match up to \$20 per day in incentive tokens for Supplemental Nutrition Assistance Program (SNAP) benefits at the FM.

Objective(s)/Methods: The process evaluation plan involved several key steps. First, an assessment of current program resources and trainings to identify education gaps and provide tools for success. Next, a comprehensive training day for FM managers was organized to demonstrate DUO program implementation and verify the required knowledge and skills. Custom scorecards, administered by an ONIE team member, are used to assess FM DUO program challenges and adherence throughout market season. Results of the process evaluation are currently being collected for the 2023 season.

Results: A custom assessment and monitoring tool was created, using Smartsheet, to outline process indicators and data collection methods that are realistic for a busy market day. This captures both qualitative and quantitative data. Data collection began in May 2023 and will be collected for four months. Preliminary results will be presented in this session.

Conclusion: Developing a process evaluation plan provides quality assurance on program implementation, allows for timely resolution to barriers, and results in evidence-based practice.

Title: How was Double-Up Oklahoma implemented in grocery stores? A process evaluation of a nutrition incentive program in Oklahoma grocery stores.

Author(s): Christopher Moghaddami, MPH, MHA; Mary Williams, PhD; Jentri Sinor, MA, RD; Karla Cornwell, MSW; Osa Omoregie, MBBS, MPH; Richard Comeau, MPA; Leslie Young; & Marianna Wetherill, PhD, RD

Track: *TRACK #1: NUTRITION PROMOTION EFFORTS*

Background: Nutrition incentive (NI) programs can reduce cost barriers to purchasing fresh produce among Supplemental Nutrition Assistance Program (SNAP) consumers. The 2018 Farm Bill introduced funding to expand NI programs into grocery stores. Hunger Free Oklahoma administers the Double-Up Oklahoma (DUO) NI program and initiated DUO in grocery stores in November 2020. DUO provides incentives matched 1:1 on SNAP purchases, up to \$20 per day. In this session, we present the DUO grocery process evaluation and resulting program improvements.

Methods: We used a rapid-cycle quality improvement process evaluation to assess DUO implementation fidelity, including on-site observations and key personnel interviews. Observations included evaluating signage, produce quality and availability, and cashier-consumer interactions during SNAP/DUO transactions. Semi-structured interviews with key store personnel were used to understand store and customer response to the DUO program, as well as challenges and successes.

Results: The DUO grocery pilot began in one store, then expanded to ten DUO stores by October 2021. Through October 2022, evaluators conducted 239 bi-weekly site visits across 10 primarily rural grocery stores in Oklahoma. Analysis of site evaluation data identified difficulties in voucher redemption, transactional malfunctions between DUO and certain payment methods, and inconsistent display of promotional materials. Produce restocking issues would improve from Year 1 (7.8% of visits) to Year 2 (6.4%).

Conclusion: Rapid cycle process evaluation of NI programs suggests there were implementation challenges; however, regular on-site visits provided valuable feedback for program improvements. Future research will include identifying characteristics of successful NI programs.

Title: Assessing the Impact of the Double-Up Oklahoma Grocery Store Pilot Program using Sales Data: The DUO Outcomes Evaluation

Author(s): Mary Williams, PhD; Ana Lusk; Leslie Young; Richard Comeau, MPA; & Marianna Wetherill, PhD, RD

Track: ***TRACK #1: NUTRITION PROMOTION EFFORTS***

Background: Nutrition incentive programs increase Supplemental Nutrition Assistance Program (SNAP) benefits purchasing capacity for fruits and vegetables (F/Vs) to encourage F/V consumption. Hunger Free Oklahoma (HFO) administers the Double-Up Oklahoma (DUO) program that provides F/V incentives matched 1:1 on SNAP purchases, up to \$20 per day. In November 2020, HFO piloted DUO in grocery stores. In this session, we present the DUO outcomes evaluation methods and results using sales data.

Methods: HFO partnered with a grocery-store chain to pilot DUO in nine predominantly rural low-income, low-access Oklahoma communities. The grocery partner provided stores' sales data for the outcome evaluation. Evaluators used this data to estimate users, voucher issuance and redemption, redemption rates, and compared seasonally-adjusted produce sales in DUO-stores to matched non-DUO stores. Analyses were performed in R v4.1.0 and SAS v9.4.

Results: Over 2 years, more than 800,000 vouchers were issued to 82,827 SNAP consumers across nine DUO stores and monthly voucher redemption rates grew from 27.9% to 43.9%. SNAP produce sales increased by 357% across DUO stores compared to 22% in matched non-DUO stores. UPC analysis revealed slightly more vegetables (53.3%) than fruits (46.7%) and 17.8% of produce purchased were ready-to-eat. Purchased vegetables represented all USDA vegetable categories: 11.0% red/orange, 9.7% dark green, 7.3% starchy, and 25.3% other non-starchy.

Conclusion: Nutrition incentive programs, like DUO, can increase F/V sales in participating grocery stores.

Title: Double Up Oklahoma (DUO) for Health: Program Wins and Lessons Learned Following Pilot Launch of a Healthcare Partner Initiative

Author(s): Marianna Wetherill, PhD, RD; Margarita Driscoll; Valarie Carter; Leslie Young; Osariemen Omoregie, MBBS, MPH; Mary Williams, PhD; & Richard Comeau, MPA

Track: **TRACK #1: NUTRITION PROMOTION EFFORTS**

Background: Nutrition prescriptions for diabetes and hypertension include regular consumption of vegetables and fruits (F/Vs) for disease prevention and management. However, few Oklahoma adults (< 5%) with these conditions meet F/V intake guidelines. Physician endorsement of F/Vs can prompt patients to initiate health behavior change. The Double Up Oklahoma (DUO) for Health program equips Oklahoma primary healthcare providers with nutrition education materials to raise patient awareness of F/V health benefits and accessing the DUO program.

Methods: We developed DUO for Health patient-education brochures and medically-tailored recipe cards, which were designed by the OU Culinary Medicine program to reinforce nutrition prescriptions for diabetes and hypertension emphasizing DUO-eligible ingredients. We conducted outreach to providers practicing in eight rural Oklahoma communities with a DUO-participating grocery store. Invited providers enrolled as DUO for Health partners through brief practice-level and provider-level surveys then received DUO for Health materials for patient distribution.

Results: Within the first year, 29 providers in 11 practices from seven communities enrolled in DUO for Health, covering all but one targeted community. These partners, including physicians, mid-level practitioners, nurses, and registered dietitians, distributed over 4500 brochures to patients. Most providers (80%) reported the program positively influenced their ability to give dietary advice.

Conclusion: During the first pilot year the DUO for Health program achieved reasonable reach within target communities, primarily due to non-physician healthcare providers' participation.

Title: Launching the Tulsa chapter of the National Cervical Cancer Coalition (NCCC): Why Oklahoma needs to talk about HPV

Author(s): Tracy Freudenthaler, PhD, MPH & Krista Schumacher, PhD

Track: *TRACK #2: PROGRAMS & CURRENT RESEARCH*

Background: The National Cervical Cancer Coalition (NCCC) has a new chapter in Tulsa (reaching some surrounding areas). The NCCC (a program of the American Sexual Health Association) is a nonprofit that aims to help women, family members, and caregivers battle cervical cancer and advocate for cervical health by promoting prevention through education about early vaccination and regular screening. This presentation will 1) introduce the NCCC mission, 2) provide tangible and virtual HPV educational materials, and 3) provide avenues for NCCC involvement.

Methods: The presenters will discuss Oklahoma's cervical cancer incidence and low HPV vaccination uptake, describing the need for advocacy and awareness. They will introduce NCCC and how to become involved. Then, they will briefly present 6-month goals of the Tulsa NCCC chapter, which includes educational outreach to several Oklahoma universities and primary data collection (via surveys and other methods) to further examine HPV vaccine hesitancy and barriers in Oklahoma.

Results: The presenters recognized the need to start an NCCC chapter in Tulsa based on personal and professional experiences, as well as collaborative research projects that indicate university students lack HPV knowledge. Because this is a new work in progress, outreach evaluation measures are still being developed.

Conclusion: Oklahoma's HPV vaccination falls behind the rest of the nation, and outcomes such as cervical cancer may be preventable. The Tulsa NCCC chapter hopes to become a resource for individuals facing HPV and cervical cancer diagnoses, and to raise HPV awareness among various populations, from public health professionals to our university students.

Title: Outcomes of sexual education quantity and type on attitudes towards sexual consent and sexual assault: A quantitative study of college students

Author(s): Julie Sisler

Track: *TRACK #2: PROGRAMS & CURRENT RESEARCH*

Background: Sexual education remains heavily debated, but is further muddled by the difficulty of effectively addressing taboo topics like sexual assault. Such topics have garnered additional attention due to their influence on public health outcomes, warranting further examination.

Objective(s): This study examined relationships between sexual education, consent, and assault to answer:

RQ1: How does the type of sexual education received affect college students' consent behaviors?

RQ2: How does the type of sexual education affect college students' rape myth acceptance (RMA)?

Methods: 445 college students from a Southern university were surveyed using the Updated Rape Myth Acceptance Scale, Sexual Consent Scale, Affirmative Sexual Consent Situational Knowledge Scale, and sexual education questionnaire. Data was analyzed with bivariate and multivariate correlations, ANOVA, and post hoc tests according to Hayes (2015).

Results:

RQ1: Sexual education type did not have significant effects on consent behaviors, but having sexual education from two or more of these sources correlated with higher consent behaviors.

RQ2: There was a significant effect of different types of sexual education on RMA for the conditions, with participants that received sexual education from multiple types of sources having lower RMA.

Conclusion: Results may indicate less importance of the source of sexual education, and greater importance of receiving having multiple sources. This may normalize sexual topics, such as consent, thus increasing awareness and decreasing RMA. This highlights the need to assess and change current sexual education standards, as there are demonstrated connections between sexual education and public health related issues, such as sexual assault.

Title: Oklahoma university student HPV narratives: many underestimate their risk and do not know HPV risk factors

Author(s): Tracy Freudenthaler, PhD, MPH; Krista Schumacher, PhD; Cynthia Lamon, PhD; & Danielle Manship, DO

Track: *TRACK #2: PROGRAMS & CURRENT RESEARCH*

Background: University students are disproportionately impacted by human papillomavirus (HPV) infections and HPV knowledge is lacking. Today's students (18-24 years old) HPV vaccine eligible since childhood. However, uptake in Oklahoma is among the lowest in the nation, with additional vaccination gaps found among rural adolescents and certain racial groups.

Objective(s): This study examined Oklahoma student perceptions of HPV risk factors.

Methods: We combined two online studies with university student participants from 2020 and 2021 and analyzed a data subset. Quantitative data examined vaccine status and participants provided their judgement of their personal HPV risk. An exploratory question asked: "What factors would influence your chance of getting HPV?" We used thematic coding to classify risk factors (i.e. protective, and/or risk, or I don't know).

Results: Regardless of vaccine status, 70.3% rated their risk below average. One third of students (33.5%) either did not know risk factors (17.1%), or provided erroneous answers 16.4% (i.e. smoking, birth control). Other students identified protective factors (i.e. celibacy, monogamy) (31.5%) or risk factors (i.e. unprotected sex) (30%); yet conveyed a dismissive attitude the vaccine did not apply to themselves.

Conclusion: HPV is the most common sexually transmitted infection, without preventative vaccination, most sexually active individuals will become infected. In this study, a sizeable group could not identify HPV risk factors, and many did not view themselves as vaccine candidates. All genders would benefit from HPV education and vaccination which provides protection from multiple health conditions, including various cancers.

- Title:** **Advocating for the Advocates: Building a Professional Community to Support Community Health Workers Connecting Communities to Health and Social Services in Oklahoma**
- Author(s):** **Kerstin M. Reinschmidt, PhD, MPH; Marshan Oliver-Marick, DrPH, MPH; Randa L Real, RN, CHW; La’Keira D. W-Jallow, MS; Cathy Billings, MPA; & Taylor Holland, MS, CHES**
- Track:** ***TRACK #2: PROGRAMS & CURRENT RESEARCH***

Background: The Community Health Worker (CHW) workforce in Oklahoma keeps growing. It is imperative to advocate for these advocates in collaboration with CHWs to build a sustainable infrastructure that empowers Oklahomans to achieve their optimal states of health and well-being.

Objective(s): The objective of this presentation is to describe and assess the building of a professional community to coordinate the development of a sustainable CHW infrastructure in Oklahoma.

Methods: The Oklahoma CHW Coalition (“Coalition”) established and worked towards a strategic plan to develop a sustainable infrastructure by incorporating prior statewide CHW efforts and national workforce standards, and by working with subcommittees. Coalition members were invited to respond to an online evaluation survey, join the Oklahoma Public Health Association’s (OPHA) CHW Section, and form a CHW Association.

Results: Over 21 months, 31 organizations and 143 participants, including 64 CHWs, attended at least one of 14 full Coalition or 18 subcommittee meetings. Diverse stakeholders built the strategic plan and worked toward its objectives, including voluntary certification. Some Coalition members joined the OPHA CHW Section focused on advocacy, and some CHWs are conceptualizing their professional association. Survey results and outcomes of an in-person Coalition meeting in June 2023 provided guidance on continuing the professional community.

Conclusion: Building the Coalition as a professional community was timely, led to first successes, and the spread of energy to complementary groups. Engagement and leadership of CHWs in the professional community is critical to empower and unify CHWs as trusted advocates for a more equitable and healthier Oklahoma.

Title: Assessing Oklahoma’s Oral Health: A statewide report card.
Author(s): Terrisa Singleton, MHSA; Leon Bragg, DDS; Lisa S. Pendarvis, MPH; PMP, PCMH CCE; & Nicki Largent
Track: **TRACK #3: ORAL HEALTHCARE & ACCESS**

Background: The Delta Dental of Oklahoma Foundation, in collaboration with the Oklahoma Oral Health Coalition and the Oklahoma Primary Care Association, collected data on key oral health indicators and “graded” Oklahoma’s performance in comparison to national averages.

Objective(s): The purpose of the Oklahoma Oral Health Report Card is to provide a snapshot of the state of the oral health of Oklahomans, in the context of national statistics.

Method: Thirteen (13) oral health indicators for various populations (including children, adults, seniors, and pregnant women) were selected for review. Data on each indicator were collected from various national and state sources, including the Oklahoma State Department of Health Dental Service’s statewide assessment of third grade children. For each indicator, the percentage difference between the national and Oklahoma scores was calculated and assigned a letter grade based on a 4.0 scale. The points for all 13 indicators were averaged to create a total point value and overall letter score for Oklahoma.

Results: Oklahoma’s overall grade is “D.”

Conclusion: Oklahoma is significantly lagging behind in key oral health indicators, compared to the national average. This report is a valuable tool for communicating to policy makers and others the importance of prioritizing oral health issues in Oklahoma.

Title: Assessing Oklahoma’s Oral Health: A survey of 3rd Grade school children.
Author(s): Jana Winfree, DDS, MPH & Nicole Reynolds, DDS
Track: *TRACK #3: ORAL HEALTHCARE & ACCESS*

Background: The University of Oklahoma Hudson College of Public Health, in collaboration with the Oklahoma State Department of Health, conducted an oral health needs assessment among third grade children in the state of Oklahoma. Funding was provided by Delta Dental of Oklahoma Foundation.

Objective(s): The purpose of the 2022-2023 needs assessment was to produce statewide estimates of dental health status indicators.

Methods: This cross-sectional design included a random sample of third grade students in Oklahoma and direct observation of dental caries and sealants by Oklahoma licensed and registered dental hygienists. The protocol for data collection and calibration training was guided by recommendations of the Association of State and Territorial Dental Directors (ASTDD) in their publication “Basic Screening Survey for Children Planning and Implementation Tool Kit (rev. 2022).”

Results: Oral health status was evaluated in several categories (ie, presence of sealants on at least one permanent molar tooth, dental caries experience, untreated decay (active caries), etc.). Statistical results to be presented during presentation.

Conclusion: This assessment provides valuable information about the status of the dental health of children in Oklahoma, as well as the progress being made to reach the goals set by Healthy People 2030.

Title: Expanding the Oral Health Workforce: A Dental Therapy Toolkit for Oklahoma
Author(s): Alexandria Holt, MPH, CPH & Julie Seward, RDH, MEd
Track: *TRACK #3: ORAL HEALTHCARE & ACCESS*

Background: The Southern Plains Tribal Health Board and Native Oral Health Network with support from the National Indian Health Board Tribal Oral Health Initiative created the resource ""Expanding the Oral Health Workforce: A Dental Therapy Toolkit for Oklahoma"" in 2022. The toolkit provides information about dental therapy, an overview of the oral health status in Oklahoma, and provides dental therapy resources from across the United States.

Objective(s): To provide information about the dental therapy profession and how it can address oral health disparities in Oklahoma

Methods: We gathered all relevant resources from across the United States and synthesized the data and information into easy-to-read infographics to assist in the education, outreach, and advocacy for dental therapy in Oklahoma.

Results: Oklahoma scored a D on the Oklahoma Oral Health Report Card. The Oklahoma Oral Health Coalition analyzed 13 indicators of oral health in comparison to the United States. Similarly, the Indigenous population of Oklahoma ranks lower than the national average for several indicators including childhood dental decay, dental sealant applications for children, and the dentist-to-population ratio. Resources on dental therapy, provided in this toolkit, outline how dental therapy can address many of the disparities we found in the oral health data for Oklahoma.

Conclusion: Dental therapy is one evidence-based solution to the oral health disparities we see in the general Oklahoman population as well as the Indigenous population of Oklahoma. This toolkit provides readers with resources on dental therapy and how it can be implemented and action items for advocacy.

Title: Meeting the needs of Oklahomans: Food Insecurity and Community Clinical Linkages

Author(s): Lauran Larson, MPS; Keeley White, MPH; Colleen Almeida Smith; Lindsey Diel, CPHQ; Candace Pape-Macedo; Houa Xiong; & Greg Marshment, MS, CHES

Track: *TRACK #3: ORAL HEALTHCARE & ACCESS*

Background: Oklahoma ranks among the highest states in terms of food insecurity rates with 561,640 or 1 in 7 people facing hunger. Food insecurity contributes to a cycle of chronic disease and poverty. The State Partnerships Improving Nutrition and Equity (SPINE) grant seeks to reduce food insecurity and improve key partnerships. Collaboration at the state level among key partners is crucial to implementing an effective approach.

Objective(s): The objectives of the project are to strengthen partnerships, screen patients for food insecurity, and intervene when patients screen as food insecure.

Methods: The primary measurements are the number of clinics participating in the intervention and the number of food boxes distributed to households. The program also collects testimonials. Another measurement is based upon the quantity and strength of partnerships involved in program planning and delivery.

Results: Nine health systems have participated in the SPINE project thus far. The Regional Food Bank of Oklahoma and the Food Bank of Eastern Oklahoma have replicated each others' successful approaches. The food banks have partnered with Hunger Free Oklahoma to incorporate SNAP application assistance in healthcare partner training. The Oklahoma Hospital Association has surveyed hospitals to assess readiness and begin pilot projects with interested hospitals in high need areas. The Oklahoma Primary Care Association has fostered relationships between organizations.

Conclusion: The SPINE team has grown from four participating organizations to six. The project can be improved by collecting more outcome data and growing to include more food insecurity relief organizations and healthcare partners.