2025 REACH-OUT Poster Forum

Book of Abstracts

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Dear colleagues,

I would like to extend a warm welcome to all of you who are joining us for the first time as well as to those who have been long-time supporters of research on the OU-Tulsa campus. It is my pleasure to share with you the abstract book for the 2025 REACH-OUT Poster Forum (**R**esearch **E**xpo **A**bout **C**ommunity and **H**ealth at **OU**-**T**ulsa). Formerly the OU-Tulsa Research Forum, this is an annual event to showcase student, staff, and resident research.

We are happy to host the REACH-OUT Poster Forum in person this year. In addition to presenting posters live at the Poster Forum, the presenters have an opportunity to upload their posters to the Open Science Framework (OSF). Posters uploaded to OSF will be more widely disseminated to a global community. We hope this will enhance what people can learn about each research project. First, second, and third place winners will be selected from all presented posters along with two awards for our special categories.

We hope members of the research community and the greater Tulsa community will enjoy the array of research projects presented this year. This book contains the abstracts of accepted posters for the 2025 REACH-OUT Poster Forum.

I would like to thank our event sponsor for this year, Hillcrest Medical Center. I would also like to acknowledge the School of Community Medicine's Office for Research Development and Scholarly Activity and the OU-Tulsa Schusterman Library for their dedicated commitment in planning and organizing the 2025 REACH-OUT Poster Forum.

On behalf of the 2025 REACH-OUT Program Committee, we look forward to learning about the innovative research projects across our campus. Thank you in advance for your support of research in the Tulsa community.

Sincerely,
Kent Teague, PhD
Assistant Vice President for Research, OU-Tulsa

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Biomedical

Abstract #20 Raising Awareness: Reporting Quality and Risk of Bias in Shoulder Arthroplasty Artificial Intelligence and Machine Learning Studies

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Introduction

Recent studies have used artificial intelligence (AI) and machine learning (ML) to optimize shoulder arthroplasty outcomes in regards to surgical technique, implant detection, and imaging modalities. However, there is a lack of critical appraisal in regards to the adherence to peer-reviewed reporting guidelines in the spaces of AI and ML. The Transparent Reporting of a multivariable prediction model for Individual Prognosis or Diagnosis (TRIPOD+AI) statement aims to provide recommendations for studies developing or evaluating a multivariable prediction model. The 27-item checklist evaluates many aspects of the studies, namely the healthcare context, study population, predictors being used, development of model, and model performance. The objective of this study was to assess the adherence to the TRIPOD+AI statement for AI and ML studies regarding shoulder arthroplasty, as well as assess bias based on the Prediction model study Risk Of Bias Assessment Tool (PROBAST).

Methods

A systematic search yielded 2,454 studies sourced from PubMed, Embase, and Cochrane. Articles met inclusion criteria if they discussed the development or evaluation of an ML model or an algorithm for use in orthopaedic shoulder arthroplasty. After screening, 32 total articles across all three databases met inclusion criteria. The transparency of reporting for each study was assessed according to the TRIPOD +AI statement. Three reviewers extracted data from the included studies to assess their adherence to TRIPOD+AI.

Results

It was found that only 3 (9.4%) studies referenced TRIPOD +AI. The median adherence to the TRIPOD+AI guidelines was 56.5% across all studies and the mean adherence was 55.8%. Risk of bias of the included studies was rated overall as low in 40.6% (13/32), high in 34.4% (11/32), and unclear in 25.0% (8/32) according to PROBAST. The analysis section contributed primarily to the high risk of bias designations.

Discussion

Overall we found shoulder arthroplasty studies regarding machine learning models and artificial intelligence have suboptimal reporting of TRIPOD +AI items, and 34% of these articles were at a high risk of bias according to PROBAST. This review serves as an important first step in evaluating the completeness of transparent reporting for machine learning prediction models in shoulder and elbow surgery, offering a baseline for future improvements rather than a strict critique. The identification of gaps in current reporting practices should help guide more transparent and consistent reporting in future studies.

Abstract #23 Predictors of Major Adverse Cardiac Events after Emergent or Urgent Abdominal Surgeries: A National Analysis

Authors

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Introduction

High risk abdominal procedures can have post-operative complications. Major Adverse Cardiovascular Events (MACE) are among the most severe. There is a need for a predictive model to help identify and guide management of high-risk patients in the perioperative period. We hypothesized that high-risk procedures and certain pre-operative parameters may increase risk of MACE. This retrospective cohort study aims to verify that hypothesis and build a predictive model that can be used to stratify the risk of 30-day post-operative MACE in patients undergoing urgent abdominal surgery.

Methods

We used data from the 2016-2021 American College of Surgeon - National Surgical Quality Improvement Program (ACS-NSQIP), with 2021 data held out for validation of the model. Patients, beyond the age of 18, with emergent and urgent abdominal surgeries as defined by CPT codes were selected. MACE, as the primary outcome, was defined as experiencing cerebrovascular accident, cardiac arrest, or myocardial infarction within 30 days postoperatively. Logistic regression examined the association between predictors of interest and MACE. Possible predictors of MACE included demographics, comorbidities, surgery-related factors, and pre-operative lab values. Backward stepwise selection was used to select variables in the final model using predictors for initial entry that met the criteria of $p<0.05$ in unadjusted analysis. The final model was applied on the 2021 data for validation.

Results

The overall prevalence of MACE in the sample was 1.4%. After applying multivariable analysis and adjusting for other predictors, predictors of MACE with the highest odds ratio (OR) were age≥60 years(OR=2.32, 95% CI: 1.97, 2.74), high risk procedures (exploratory laparotomy, biliary, colorectal, gastric, small bowel, renal) (OR=2.32, 95% CI: 1.92, 2.81), serum creatinine ≥ 1.2 mg/dL (OR=2.12, 95% CI: 1.84, 2.43), open surgery versus laparoscopic (OR=1.92, 95% CI: 1.58, 2.33), and sepsis (OR=1.82, 95% CI: 1.59, 2.08). Other predictors of MACE were male gender, low BMI, diabetes, smoking, COPD, CHF, hypertension requiring medication, dialysis use, dependent functional status, bleeding disorders, ventilator dependence, ascites, hyponatremia, hypoalbuminemia, and thrombocytopenia. The AUC for the final model on the training (2016–2020) and validation (2021) data were 0.871 and 0.877, respectively.

Discussion

To our knowledge, this study is the first attempt at utilizing pre-operative parameters, demographics, and surgery procedures to produce a model that predicts incidence of MACE within a 30-day post-operative period. This model can help considering non-surgical treatment options in higher-risk patients to decrease MACE and mortality.

Abstract #29 Impact of Severe Obesity on Inpatient Admissions: A statewide Analysis of Oklahoma Discharge Public Use Data

Authors

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Introduction

There is a correlation between obesity and the risk of comorbidities. Despite the high prevalence and increasing rates in Oklahoma, there is limited literature on the effects of obesity and its impact on hospital utilization at the state level. The objective of this study was to identify the most prevalent Diagnosis Related Groups (DRGs) among individuals with severe obesity who were admitted as inpatient, and compare these findings to those in the population without obesity, and describe the impact of severe obesity on hospital length of stay and total hospital charges.

Methods

This study utilized data from the Oklahoma State Department of Health Inpatient Public Use Data File (OK-PUDF) from 2016–2022. The inclusion criteria included patients over the age of 20, without obesity or with severe obesity identified by ICD-10 code. The primary outcome was the most prevalent DRGs among patients with severe obesity compared to patients without obesity. Secondary outcomes included hospital length of stay and total hospital charges. Comparisons of DRGs between patients with severe obesity and those without obesity were conducted using a Chi-square test. Hospital length of stay and inpatient charges are presented with median and interquartile range.

Results

11 DRGs were significantly more common among patients with severe obesity. The highest magnitude of association for patients with severe obesity relative to those without obesity were for pulmonary edema and respiratory failure (OR=2.64, 95% CI: 2.56–2.71), cellulitis (OR=2.64, 95% CI: 2.55–2.73), heart failure and shock (OR=2.41, 95% CI: 2.36–2.46), and respiratory system diagnosis with ventilator support (OR=2.11, 95% CI: 2.03–2.19). Among patients with severe obesity, the median hospital charge was \$38,487 (IQR: \$21,683–\$70,562), and length of stay was 4.0 days (IQR: 2.0–7.0). In contrast, among patients without obesity, the median hospital charge was \$30,285 (IQR: \$15,901–\$60,826), and the median length of stay was 3.0 days (IQR: 2.0–6.0).

Discussion

This study highlights the significant discrepancy in hospital utilization between those without obesity and patients with severe obesity in Oklahoma. These findings underscore the need for targeted interventions to manage obesity and its complications which could potentially help reduce hospitalizations, improve patient outcomes, and alleviate healthcare costs at the state level. Future study is needed to identify contributing factors to this discrepancy in outcomes to capture the direct impact of obesity and what interventions could reduce the differences observed in these patient populations.

Abstract #34 Disparate Health Outcomes in American Indian Individuals with Cystic Fibrosis in Oklahoma

Authors

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Introduction

American Indian and Alaskan Native (AI/AN) communities face a disproportionate burden of illness and disparities in health outcomes for many chronic conditions. Previous research on cystic fibrosis (CF) has shown ethnoracial health disparities; however, there is a lack of research on AI/AN individuals with CF. The objective of this study was to compare the health status of the AI/AN CF population in Oklahoma to that of their non-Hispanic White peers.

Methods

This retrospective study utilized CF Registry data of non-Hispanic White and AI/AN individuals seen at the Tulsa and Oklahoma City CF Centers in 2023. Data included demographics, health status, and healthcare utilization. Individuals who were AI/AN regardless of other races/ethnicities were classified as AI/AN. The best quarterly anthropometric and lung function measurements were used to calculate annual averages. Mann-Whitney U, Welch's t-test and chi-square tests were performed with a significance value of 0.05.

Results

Of the 299 individuals assessed 76.6% (n=229) were non-Hispanic White. The remaining 23.4% (n=70) were "AI/AN" with the majority being 'AI/AN with another race/ethnicity' (n=63, 90%). The most common CF genotypes for both the White (50.7%) and AI/AN (54.3%) groups were homozygous F508del. There was a statistically significant difference in individuals <19 years with hospitalizations/home IV treatments due to Pulmonary Exacerbation (PEX) between the AI/AN (n=11, 22%) and White (n=9, 7.3%) groups ($X^2_{(1)}$=7.6120, *p*=0.006). The difference in individuals 19+ years with PEX hospitalizations/home IV treatments was not statistically significant (*p*=0.690). None of the differences in anthropometric and lung function variables were statistically significant. Despite this 13.0% of AI/AN individuals ages 2-19 years had a BMI $\geq$95th percentile compared to 5.4% of White individuals (*p*=0.098). When assessing the presence of overweight and obesity in individuals 19+ years, the AI/AN group had 30% with obesity and 15% with overweight compared to the White group which had 15.2% with obesity and 24.76% with overweight (*p*=0.242).

Discussion

Within this sample, more AI/AN individuals with CF experienced hospitalizations from PEX than their White peers. Further investigation of potential disparities in this population is needed to determine reasons for higher-than-expected healthcare utilization. Further investigation into differences in BMI may also be warranted.

Abstract #36 Insulin as a Reponic Hormone: Cross-Sectional NHANES Analysis of Fasting Insulin, Body Composition, and Grip Strength in U.S. Adults

Authors

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Introduction

Traditional classifications consider insulin as an anabolic hormone; however, physiological actions suggest that insulin's primary evolutionary role is energy storage and conservation. Unlike classic anabolic hormones such as testosterone that drive protein synthesis and tissue growth, insulin primarily inhibits protein breakdown while directing nutrients toward storage (glycogen, triglycerides) and suppressing energy usage. This repositions insulin as a "reponic" hormone (from Latin *repono*, "to store"). The relationship between fasting insulin levels and body composition remains incompletely characterized. Our objective was to investigate associations between fasting insulin levels and body composition in U.S. adults, while also examining grip strength and metabolic parameters.

Methods

A cross-sectional analysis of data from 1,190 adults aged 18-59 years in the 2013-2014 National Health and Nutrition Examination Survey was analyzed. Variables included fasting insulin levels (categorized into quartiles), glycohemoglobin, DEXA measurements, maximum grip strength, and demographics. Linear regression models assessed associations between insulin levels and outcome variables, adjusting for confounders.

Results

Mean fasting insulin was 9.09±0.25 µIU/mL. Higher insulin levels were associated with disproportionate increases in fat versus lean mass. Comparing highest to lowest insulin quartiles, trunk fat mass increased 90.3%, total fat mass increased 67.7%, while lean mass increased only 21.4%. Despite lean mass gains, grip strength showed minimal improvement (+5.8% in highest quartile), and grip-to-lean ratio decreased progressively across quartiles (-4.7%, -8.0%, and -14.8% respectively). Each 1 µIU/mL increase in insulin was associated with increased total body fat percentage (+0.524%), trunk fat percentage (+0.694%), and decreased grip-to-lean ratio (-0.008).

Discussion

This analysis demonstrates that elevated insulin is associated with markedly disproportionate increases in fat versus lean tissue, with fat mass gains 3-4 times greater than lean mass gains. The minimal improvement in grip strength despite increased lean mass, coupled with a progressively decreasing grip-to-lean ratio, aligns with insulin's role in protein breakdown inhibition rather than active synthesis. This pattern contrasts with true anabolic hormones, which produce proportional functional capacity improvements alongside lean growth. These findings support insulin's classification as primarily reponic rather than anabolic.

Abstract #37 Pharmacogenetic Testing in Children with Cystic Fibrosis

Authors

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Introduction

Clinical pharmacogenetics (PGx) aims to reduce variability in pharmacotherapy outcomes. However, unfamiliarity and lack of established protocols has limited its clinical use in pediatric care. People with cystic fibrosis (CF) face a higher risk of adverse drug effects due to the complex regimens they often require. Preemptive PGx testing and education at an early age could enhance the outcome of future pharmacotherapy regimens for these patients. The objective of this research was to study the clinical utility of PGx testing in children with CF by evaluating current and potential gene-drug interactions.

Methods

A prospective study of children 0 through 18 years with CF was conducted in a pediatric CF center. PGx testing was performed by using a multi-gene panel, while current medications were obtained from electronic medical records. Guidelines and drug labels were used to identify actionable recommendations. Parents were educated on findings and were provided a satisfaction survey. Current and potential gene-drug interactions were grouped by drug class. Descriptive statistics were conducted to determine frequencies and percentages of actionable genotypes and current/potential gene-drug interactions by drug class.

Results

A total of 40 participants were recruited. A greater portion of the participants were female (52.5%), non-Hispanic White (55.0%), and homozygous ΔF508 (59.0%). Thirty percent of individuals had 5 actionable genotypes followed by 27.5% with 6. The most common actionable genotypes observed included CYP2C19 (100%), CYP2D6 (57.5%), IL28B/IFNL3 (52.5%), CYP2B6 (50%), and BCHE (45%). When assessing current and potential gene-drug interactions by drug class, all individuals had genotypic variations interacting with proton pump inhibitors, followed by antidepressants (85%), and antivirals (85%). Of the total potential gene-drug interactions, nine involved current medications. Twenty-three (57.5%) caregivers completed the survey regarding the education they received. All agreed/ strongly agreed they have received adequate education and the results of the PGx testing would improve their child’s future medication therapy; however, a slightly lower percent (91.3%) agreed/strongly agreed the education was easy to understand.

Discussion

While current gene-drug interactions were limited, numerous potential gene-drug interactions were revealed in a significant portion of children, particularly involving CYP2C19 and CYP2D6 pharmacogenes. This suggests the potential utility of PGx in enhancing future pharmacotherapy outcomes for individuals with CF. Overall, caregivers viewed the PGx results as helpful for future medication therapy and were satisfied with the education provided.

Abstract #48 Impact of Bilateral Oophorectomy on Weight Changes: A Clinical Study in Oklahoma

Authors

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Introduction

Bilateral oophorectomy is a common gynecologic procedure that approximately 300,000 women undergo annually. The procedure can be done alone or offered at the time of hysterectomy for cancer prevention and benign or malignant indication. Once oophorectomy has occurred, surgical menopause begins immediately. Women who undergo oophorectomy can be at increased risk for adverse effects on their health. Research evaluating the impact of this procedure on weight changes and related health risks is limited. The purpose of this study is to evaluate changes in weight in women at the Oklahoma Cancer Specialists and Research Institute (OSCRI) after bilateral oophorectomy.

Methods

A longitudinal retrospective chart review was performed using the OSCRI Electronic Medical Record (EMR). Patients included in the study had undergone bilateral oophorectomy with physicians at OSCRI between January 1, 2016, and December 31, 2017. Inclusion criteria included women 18 years or older who completed a preoperative visit and at least three follow-up visits post-oophorectomy. To evaluate the impact of the procedure on weight changes, data collected from the EMR included weight, BMI, and ECOG performance status from preoperative and postoperative patient appointments and were entered into REDCap.

Results

Patients in the initial study analysis (n=104) had a pre-operative mean weight of 211.89lbs, SD=60.47 and a mean BMI of 36.40, SD=10.54. At the first post-operative follow-up visit, 102 patients out of the total 104 had a recorded weight and BMI. A statistically significant decrease in mean weight was noted from the pre-operative visit to the first post-operative visit (-3.64lbs, SD=7.51; $p<0.0001$). BMI changes from the pre-operative visit to the first post-operative visits were also decreased (-0.81, SD=2.21; $p=0.0004$). An overall trend of decreasing weight and BMI were noted comparing pre-operative visit values to post-operative visits 2-7, but the changes were not statistically significant.

Discussion

The preliminary study results suggest a decrease in weight and BMI values for this specific patient population post-oophorectomy. Future plans for this study include expanding the patient population within the study and comparing weight and BMI changes from pre-operative visit to two-years post-operative. Additionally, investigation into the association of sociodemographic variables on weight changes post-oophorectomy will be analyzed in this study population. The results of the study support the need for development of management strategies to assist in the mitigation of weight changes after bilateral oophorectomy. Knowledge gained from these findings are beneficial for improving patients’ overall health and quality of life.

Abstract #50 ACE Scores and Their Relation to Smoking Cessation

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Introduction

Studies have shown that Adverse Childhood Experiences (ACEs) correlate with increased likelihood of smoking, earlier smoking initiation, and heavier use. Potential reasons for this relationship include normalization of smoking within the environment, maladaptive coping for stress, anxiety and/or depression, and increased withdrawal symptoms. Toxic stress in childhood may result in reinforcement of nicotine dependence and sustained smoking. Research on links between ACEs and smoking behavior and cessation is limited, with no studies examining how ACE scores may affect cessation. We sought to investigate potential links between smoking behavior and ACEs to inform future research on cessation interventions.

Methods

This study conducted secondary data analysis from Smart-T3 NIH R01 project, a nationwide 6-month trial (n=454), whose primary aim was to reduce smoking among individuals with low socioeconomic status. Bivariate correlations explored the relationship between higher ACE scores and smoking-related behaviors using Spearman rank correlation tests, chi square tests, and Kruskal-Wallis tests. ACE score groups were: No ACE=0, Low ACE=1-2, and High ACE=3+. Kruskal-Wallis tests compared these groups for age of smoking initiation (ASI), smoking reward, exposure to smokers on weekdays, and exposure to smokers on weekends to evaluate how these factors could be used in future smoking prevention and cessation efforts .

Results

Of the final sample (n=454), the mean ACE score was 3.35 with ACE score distribution as follows 0=13%, 1=16%, 2-3=26%, 4+= 45%. ASI (p=0.0002), reward perception (p=0.0051), and number of smokers present on weekdays (p=0.008) were found to be significantly different across ACE groups. The high ACE group reported a significantly lower median ASI (15) compared to the low ACE group (16; p=0.0035) and no ACE group (18; p=0.0005), respectively. The high ACE group had a significantly higher median reward perception score (4.75) compared to the low ACE group (4; p=0.0018). Neither the high ACE nor the low ACE group were found to be significantly different in reward score when compared to the no ACE group. Looking at exposure to smokers on weekdays across ACE groups, significant differences in smokers present were found when comparing the no ACE group to both the high and low ACE groups.

Discussion

This evidence supports trends in previous literature and shows significant differences in several smoker experiences surrounding initiation, reward, and exposure to other smokers when correlated with ACE scores. These findings allow for a more informed approach to smoking cessation efforts as well as identifying those at higher risk who need earlier preventative interventions.

Abstract #56 Red Cell Distribution Width as a Predictor of 10-Year Cardiovascular Mortality

Authors

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Introduction

Cardiovascular disease (CVD) is the leading cause of death in the US. Moreover, American men are twice as likely to die of heart disease and develop CVD at an earlier age, increasing the need for risk stratification adaptations. Red cell distribution width (RDW), an indicator for oxidative stress, is a biomarker readily available in complete blood count (CBC) results. Since RDW is commonly reported, it may aid in early identification and risk stratification if it is associated with higher rates of CVD mortality. Our objective was to evaluate the association between RDW and CVD mortality in men aged 20-79 years using NHANES data.

Methods

This retrospective cohort study used NHANES data (1999-2010) linked with follow-up mortality data from the National Death Index (NDI) to 2019. Eligibility criteria included males aged 20-79 years with RDW values in NHANES and at least ten years of follow-up in NDI. RDW values were dichotomized as low (≤13.09%) and high (≥13.10%). CVD death was defined as an underlying cause of death that included heart disease or cerebrovascular disease in NDI. Descriptive statistics were estimated using weighted percentages and age-adjusted Cox proportional hazard models were used to assess the risk of death from CVD.

Results

Of the 4,535 eligible men, 3,583 (83.5%) had low RDW and 952 (16.5%) had high RDW. More men with elevated RDW (4.7%) died from CVD compared to men with lower RDW (1.9%). The 10-year risk of CVD mortality was 85% higher among men with higher RDW (HR 1.85, CI 95% 1.09-3.14, p=0.024). Men aged 40-49 with high RDW had over 8 times higher mortality risk (4.1% for RDW ≥13.1 vs 0.5% for RDW ≤13.0), and men aged 20-39 years had 2.5 times higher CVD mortality risk (1.5% for RDW ≥13.10% vs 0.6% for RDW ≤13.0%).

Discussion

These findings indicate higher RDW is associated with an increased risk of CVD mortality among American men. This may indicate RDW could be used as a predictor of future CVD death. Because men are known to develop CVD at an earlier age, future studies should explore if RDW can be used as a biomarker to detect CVD at subclinical levels in order to implement preventive measures.

Abstract #59 Assessing the Impact of a Hands-On Ultrasound Simulation in the Obstetrics and Gynecology Clerkship: Participant Perceptions of Training Components and Curriculum Sustainability

Authors

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Introduction

An ultrasound curriculum is not offered in approximately 25% of American medical schools [1]. While many students will have occasional exposure to ultrasound during their clinical rotations, there are no standardized requirements for ultrasound curricula in medical education that ensures all medical and physician assistant students are introduced to this increasingly important clinical tool. Providing educational experiences through self-guided and interactive US simulators is a promising alternative [2]. The purpose of this study is to evaluate the introduction of curriculum, clinical simulation, and application of learned ultrasound skills to standardized patient encounters for third-year medical students and second-year PA students during the OB/GYN clerkship.

Methods

Third-year medical students and second-year physician assistant students enrolled in the obstetrics and gynecology clerkship at the OU-Tulsa School of Community Medicine will participate in a newly developed curriculum on sonography and its applications in the evaluation of OB/GYN patients. Participants were surveyed before and after the training using a 5-point Likert scale to measure responses to assess the curriculum's effectiveness. The data were examined to identify emerging differences and key themes, with a particular focus on knowledge gains, skills development, and overall satisfaction with the curriculum.

Results

The results of the training session feedback indicate a generally positive response from participants. The training session was considered helpful, with a mean score of 1.47 and a standard deviation of 0.51 based on 32 responses. The ultrasound simulation received a slightly higher mean score of 1.59 (SD = 0.50), suggesting it was particularly beneficial for participants. The didactic session was also viewed as effective, with a mean of 1.56 and a standard deviation of 0.62. In terms of enhancing learning, the activities were rated positively, with a mean score of 1.53 (SD = 0.51). Lastly, the suggestion to continue the curriculum received the highest level of agreement, with a mean score of 1.34 and a standard deviation of 0.48, indicating strong support for its continuation. Overall, the feedback reflects a favorable view of the training sessions and their components.

Discussion

Ultrasound is an essential technology in healthcare due to its relative safety and cost-effectiveness compared to other imaging modalities. Point-of-care ultrasound utilization is expanding rapidly as it is increasingly being used at the bedside by nonradiologist physicians[3]. This study aims to assess learners' experiences and opinions on expanding ultrasound education in the OB/GYN clerkship, and early results indicate participants favor the inclusion of this training.

Education

Abstract #10 Assessing Knowledge, Attitudes, Practices, and Medical Training of Peripheral Arterial Disease Among Internal Medicine Resident Physicians

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Introduction

Despite the life-altering consequences of end-stage peripheral arterial disease (PAD)—including increased risk for a preventable lower extremity amputation—early diagnosis, establishment of best medical management, and timely specialty referral remain ongoing problems. To our knowledge, no study to date has evaluated the understanding of PAD management among resident physicians training in primary care. We sought to identify gaps in internal medicine residents' self-rated understanding of PAD. Secondarily, we investigated whether an interactive educational session could be used to increase knowledge of PAD to promote recognition and confidence in patient care.

Methods

Twenty-two residents in Internal Medicine consented to participate in the study. A 33 question pre-survey was used to assess the residents' self-rated knowledge, practices, attitudes, and medical training regarding PAD. A single educational session was offered to the residents, which included a PowerPoint presentation, hands-on training (pulse exam, Doppler use), and open discussion. A truncated post-survey was conducted, re-asking the self-perceived questions regarding PAD (13 questions in a 3-point Likert scale), which were grouped as high vs. moderate/low. The pre- and post-survey responses required no identification and were linked using a queue option in REDCap. Descriptive statistics were used to examine residents' self-rated level in knowledge, attitude, and practices before the educational session. We then analyzed the changes in responses after the educational session using McNemar Exact test for paired sample comparison.

Results

Twenty residents completed both pre- and post-session surveys, 65% were male and 70% were second- or third-year trainees. Pre-session data revealed appreciable gaps in knowledge: Few self-rated in the "high" category before the educational session, ranging from 0% for confidence in using a vascular Doppler to 40% for knowledge in risk factors of PAD. After the educational session, the number of individuals who self-rated as "high" substantially increased, exceeding 70% for all 13 measures, with a 100% high mark for two measures (knowledge in risk factors for PAD and behavior changes to reduce the progression of PAD). There was a statistically significant change (increase) in all 13 measures ($p<0.05$).

Discussion

By focusing on resident physicians in primary care, our study suggests educational intervention benefit for early career primary care professionals. Vascular surgery educators can easily adapt and implement this training in other healthcare institutions. Significant impact was seen with only a singular session, so we now look to determine if regular sessions can provide durable lasting effects in the recognition, treatment, and early referral of patients with PAD.

Abstract #15 Environmental Connection and Deeper Learning through Field Trips to Outdoor Learning Spaces

Authors

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Introduction

Policymakers, scholars, and educators are concerned about youth well-being, the increasing rates of chronic absenteeism alongside the rise of standardization practices. Researchers have studied the general benefits of outdoor learning spaces for increased student engagement and improved overall well-being. However, a gap remains in our understanding of how a specifically designed outdoor learning space, incorporating both natural elements and planned activities, can foster environmental connection and deeper learning for students, as there is limited research on outdoor learning field trips. To address this gap this paper asks: What kinds of student learning experiences emerged during an educational field trip to an outdoor learning space and which designed structures and planned activities support these observed experiences?

Methods

This study employed a case study methodology to investigate how student learning experiences emerged during educational field trips to an outdoor learning space. Further I explore what structures and planned activities are present at the outdoor learning space, utilizing a place-based education framework. Data includes observations of two elementary school field trips, qualitative post field trip surveys from teachers and school staff for triangulation and pattern matching, and field trip curriculum. Before analysis, ten a priori codes were developed based on the existing literature and theoretical framework. Emergent codes developed, highlighting designed areas of the outdoor learning space and teaching methods employed by the outdoor learning space facilitators applied during each episode that was observed. After identifying the themes, I took several steps to check for alternate explanations or disconfirming evidence—such as instances of disengagement.

Results

The findings indicate that the field trips not only fostered students' emotional and cognitive engagement with their environment through expressions of awe and wonder. The observations suggest that the OLS fosters a strong environmental connection that extends beyond the curriculum's explicit instruction. During the field trips, students also demonstrated deeper learning experiences through instances of growing self-awareness and reflection on their learning experiences, signaling the development of another dimension of deeper learning— intrapersonal competencies.

Discussion

Chawla (2015) emphasizes the need for qualitative studies to capture the complex interactions of outdoor education on children and their caregivers. This research addresses that gap by providing insights into how a specifically designed OLS can facilitate meaningful learning experiences. This research advances the literature by examining student engagement, environmental connection, and potential non-cognitive outcomes like "Sense of Place" development and parental engagement within a designed OLS (Outdoor Learning Space) context.

Abstract #19 Teacher Support of Engineering Peer Play in Preschool

Authors

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Introduction

While engineering education is increasingly integrated into early childhood settings, there is limited research on how preschool children engage in engineering thinking, particularly during peer play. Engineering peer play is systematic, purposeful and goal-oriented, involving peer collaboration in intentional design and problem-solving with the materials available to them. Few studies have explored engineering thinking in the context of free play at learning centers or peer interactions. This qualitative study investigates how preschoolers engage in engineering peer play within classroom centers and examines how teachers can support this process. The study employs a constructivist approach, underpinned by Vygotsky's sociocultural theory and Tank, Rynearson, and Moore's engineering design process model.

Methods

The study was conducted in a preschool classroom with 17 children (ages 3-4) and their lead teacher. Data collection included field observations, photographs of the classroom environment, and an iterative interview with the teacher. The data were analyzed using Dedoose software, applying provisional codes based on the engineering design process and emergent themes. Pattern coding identified relationships between teacher-related codes.

Results

Findings revealed that children naturally engaged in aspects of the engineering design process during open-ended play, though not in a linear fashion. Four observed play scenarios showed children navigating multiple steps of the design process, with one instance demonstrating successful peer collaboration. The teacher's role was vital in facilitating engineering thinking through thoughtful organization of the physical environment, strategic questioning, and provocations. While some peer collaboration was observed, most children engaged in solitary play or primarily interacted with the teacher, rather than with peers.

Discussion

The research highlights the importance of continued research on teacher support in fostering engineering thinking during early childhood. Based on the limited initial findings, teachers should provide ample time, space, and materials for engineering play and use scaffolding techniques such as strategic questioning and provocations to enhance children’s engineering experiences. The findings also point to a need for targeted strategies to encourage peer collaboration in engineering contexts, as most children preferred individual play or teacher interaction. Future research should explore how to support the engineering design process across various classroom centers and develop approaches to foster peer collaboration in engineering play.

Abstract #21 Pilot Study: Assessing Aspects of Resident Physician Adolescent Sexual Health Counseling

Authors

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Introduction

Oklahoma had the fifth highest teen birth rate in the nation in 2022, with a rate of 21.2 per 1000 live births. Literature suggests a lack of sexual health education for adolescents, with physicians often being underutilized as a resource. Studies suggest multiple reasons for this, including physician lack of confidence, perceived time limitations, lack of training in medical education, and adolescents' fear of a breach of confidentiality. This underscores the need for physicians to receive adequate training in this area to competently address sexual health during routine patient visits. This pilot study sought to assess the comfort level and perceived opportunity for sexual health counseling in adolescents among ob/gyn, family medicine, and pediatric resident physicians at the University of Oklahoma School of Community Medicine.

Methods

This study used a 12-question survey adapted from Worly et al. 2021 to assess multiple aspects of resident physician comfort and training in adolescent sexual health counseling, including: safe sexual practices; sexual history; priority of sexual health counseling; perceived frequency of opportunity for counseling; frequency of initiating discussion when the adolescent does not; the approximate number of hours devoted; and whether residents view their training as adequate. A total of 23 surveys were completed out of 64 total residents and an ANOVA analysis was used. Participants were recruited via university email and a $20 gift card was given to 3 random participants upon completion of survey.

Results

Most residents reported feeling comfortable discussing safe sexual practices (52.1%, $p = 0.1$) and obtaining a sexual history (86%, $p = 0.03$). However, 56.1% reported limited time to address sexual health ($p = 0.03$) and the same percentage reported receiving less than 6 hours of training in both medical school and residency. The p-values we obtained indicate that our current dataset might be too limited for drawing definitive conclusions, highlighting the need for further analysis with a larger sample to increase the reliability and generalizability of our data.

Discussion

There is limited data pertaining to resident physician comfort, opportunity, and training in adolescent sexual health counseling. This pilot study indicates that resident physicians at the University of Oklahoma indicate feeling comfortable in multiple areas of adolescent sexual health counseling but simultaneously reports <6 hours of time spent being trained in this area. The small sample size (n=23) limits the generalizability of these findings, so we plan to implement a future study with a larger and more diverse sample.

Abstract #25 Career Aspirations to Provide Obstetric Care: Insights from Family Medicine Residents

Authors

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Introduction

As of 2022, more than 2.2 million reproductive-aged women in the U.S. live in maternity care deserts—areas lacking adequate obstetric (OB) services. This shortage is exacerbated by a projected deficit of up to 5,000 obstetrician-gynecologists by 2030. Family medicine (FM) physicians can address these gaps by providing obstetric care. However, limited research has examined FM residents' perceptions of providing OB care post-residency. This study explored factors influencing FM residents' interest in incorporating OB care, including prenatal, labor and delivery, and postpartum care, into their careers after residency training.

Methods

This was a qualitative study that recruited a non-purposive sample of FM residents (n = 12) from the Department of Family and Community Medicine at the University of Oklahoma-Tulsa School of Community Medicine. We conducted semi-structured individual interviews using video conference between May and July 2024. Topics of inquiry included career aspirations, educational experiences, and perceptions of maternal healthcare in Oklahoma. Participants were compensated with $25 gift cards. Audio-recorded interviews were transcribed verbatim and independently coded by two research team members. We used Braun and Clarke's Thematic Analysis to apply deductive and inductive codes and analyze the data for themes related to our study aim.

Results

Participants included 8 (67%) women and 4 (33%) men. A majority of participants were aged 25-29 years (75%). We identified four prominent themes: lack of interest in OB, work-life balance, insufficient residency/educational training, and financial reimbursement. Many participants expressed a lack of interest in providing OB care, preferring to focus on other aspects of FM. Participants reported that providing OB care required long and irregular hours, leading to poor work-life balance. They felt it was incompatible with their personal goals, family responsibilities, and long-term career satisfaction. Many residents reported being inadequately prepared to practice OB care, specifically labor and delivery, citing insufficient training and exposure. Moreover, while several interviewees desired to provide prenatal care, they perceived that billing for prenatal care as FM practitioners was only feasible if it was bundled with labor and delivery.

Discussion

This study highlights the factors that influence FM residents' decisions to practice OB care post-residency. Participants reported that financial reimbursements, insufficient training, work-life balance, and other professional interests influenced their decision to provide OB care as physicians. Addressing these concerns with targeted interventions in training, scheduling, and billing education could help ensure that FM residents feel equipped and motivated to include OB care in their future practices.

Abstract #28 Assessing the Impact of the MedScholars MCAT Summer Intensive Program on Underserved Pre-medical Students

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Introduction

This program evaluation aims to assess the impact of a pilot MedScholars MCAT Summer Intensive Program on underserved pre-medical students. The program is designed to enhance students' preparedness for the MCAT, increase their readiness to apply to medical school, and help them overcome individual barriers to admission. The program addresses challenges such as lack of mentorship, test anxiety, and limited access to resources to improve student outcomes and foster a sense of belonging in the medical community. This initiative was funded by the George Kaiser Family Foundation (GKFF), which supports programs that advance educational equity.

Methods

Surveys were administered to participants before and after the eight-week MedScholars program, which included live MCAT preparation, mentorship, and workshops on medical school applications. Pre- and post-surveys used a 5-point Likert scale to measure students' perceptions of their preparedness for the MCAT, their readiness to apply to medical school, and their ability to overcome perceived obstacles. The surveys assessed five key domains: confidence in MCAT performance, application preparedness, sense of belonging in the medical field, knowledge of medical school, and support for overcoming barriers.

Results

The survey data demonstrated improvements in all areas. Most respondents identified the MCAT as their largest obstacle in the medical school application process in an open response. Participants (n = 5) reported increased confidence in their ability to perform well on the MCAT. Students also showed a stronger sense of preparedness for applying to medical school, with improvements in their readiness to apply, confidence in their personal statements, and overall application confidence. Additionally, participants felt more supported in overcoming obstacles, particularly in accessing mentorship. Students reported having reliable people to ask questions about the application process and a greater sense of belonging in the medical community.

Discussion

The results suggest that the pilot MedScholars MCAT Summer Intensive Program successfully enhanced participants' MCAT preparedness, increased readiness to apply to medical school, and addressed perceived barriers. The greatest improvements were observed in mentorship and support areas, where participants gained confidence in navigating the medical school application process. These findings highlight the importance of targeted mentorship and support in reducing barriers faced by underserved pre-medical students, and the role of fostering a sense of belonging in improving persistence and success in the medical field. However, this was a pilot project, and the findings are limited in their generalizability. Further examination of this program through larger studies is necessary to understand its long-term impact and effectiveness.

Abstract #31 The Relationship Between Social-Emotional, Language, and Cognitive development in Head Start Preschoolers

Authors

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Introduction

Children's language and social-emotional (S-E) development are interconnected and crucial for relationships and development. Supportive adults help by providing words and strategies for emotion regulation. This relationship is bidirectional, language aids emotion management and helps to strengthen relationships. In Pre-K classrooms, teachers foster both skills through vocabulary exposure and group activities. Executive function (EF) and language develop rapidly and influence each other, with working memory aiding vocabulary acquisition. S-E skills also support language, as engaged children build friendships and engage in sustained play. More research is needed to understand the direction of the relationship among these aspects of development. To explore the trajectories of this development in a Head Start sample, we examined the relationship between children's (S-E), language, and cognitive skills using multiple measures. Our research questions:

1) How are children's social, cognitive, and language skills associated with one another during the fall and spring?
2) How are the skills associated over the preschool year?

Methods

We used data on 381 children's language, social/emotional, and cognitive abilities collected in the fall and spring of 2023-2024 from 72 randomly assigned classrooms from a local Head Start agency engaged in a research practice partnership. Multiple measures were used from that dataset that assess aspects of children's development. Specifically, we examined the relationship among children's social (DECA), cognitive (MEFS and Leiter), and language skills (QUILS & EOWPVT) in the fall and spring and across the school year using structural equation modeling with clustered errors to account for nesting in classrooms.

Results

Preliminary structural equation models of the fall and spring show good model fit (CFI = .953, TLI = .939, RMSEA = .062, SRMR = .066 and CFI = .986, TLI = .981, RMSEA = .036, SRMR = .056, respectively) and show interesting patterns of the relationship of cognitive, language, and S-E skills. Language skills were most strongly predicted in the fall by children's (EF), but in the spring, their expressive vocabulary was most predictive.

Discussion

Differences in the strength of predictors might point to sensitive and critical components of children's development, where language skills are more strongly affected by children's EF in the fall, but their receptive vocabulary in the spring. Teachers could work to boost different skills that are interrelated at different times throughout the school year, like EF in the fall with games like Simon Says, and rich vocabulary embedded in content in the spring for language.

Abstract #33 Teaching Trauma-informed Care in Undergraduate Medical Education: A Scoping Review

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Introduction

A traumatic experience can impact physical and emotional health for the rest of one's life. The trauma-informed care framework considers the impact of past trauma and approaches treatment in a sensitive and understanding manner. As awareness of trauma-informed care increases, undergraduate medical schools are beginning to educate students on how to care for patients who may have experienced trauma. This scoping review analyzed published evaluations of curricula that focused on trauma-informed care.

Methods

Seven databases were searched for articles about trauma-informed care education for undergraduate medical students through a comprehensive search strategy. The curricula had to be both implemented and evaluated to meet inclusion criteria. 233 articles were retrieved, and a two-tier process was used by independent coders to evaluate for inclusion criteria. The coders focused on extracting key information about facilitators, participants, curriculum content, teaching methods, and learner outcomes.

Results

Common themes emerged from the 15 articles included in this scoping review. Most studies utilized didactic components and used a multidisciplinary teaching team. Most trainings also encouraged students to apply their new knowledge through patient interviews, simulations, or role playing. All studies incorporated qualitative components of evaluation, and one included a quantitative component. Most studies found that participants showed more knowledge and competence in implementing trauma-informed care after the trainings. However, only two studies incorporated a longitudinal follow-up evaluation.

Discussion

Opportunities for training in trauma-informed care could have a broad impact on the patients these trainees care for throughout their career. Brief trainings can increase students' understanding of how trauma affects patients as well as applicable, sensitive approaches to work with patients who have experienced trauma. While teaching methods varied among the trainings reviewed, learner outcomes were exceedingly positive. Courses that incorporated hands-on practice opportunities such as simulations and patient interviews received highly positive feedback from learners. Students expressed that they desired the opportunity to learn with a multidisciplinary approach, and that their trainings could improve by adding depth to the discussion and practice of inclusivity of patients of different identities and lived experiences. Areas for growth regarding trauma-informed competencies would center around professionalism, interprofessional collaboration, system-based practice, and personal and professional development. As trauma-informed care is beginning to be implemented in undergraduate medical education, the literature in this review can be used to guide educators seeking to incorporate trauma-informed care into medical school curricula.

Abstract #53 Foster Parenting in Action: A Qualitative Exploration of Home-Based Relationships

Authors

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Introduction

Foster children's social relationships are shaped by various factors, including parents' beliefs, age, socioeconomic status, and trust within the home. Recognizing these influences can enhance placement-practices beyond therapy and guide targeted interventions for stable caregiving. The quality of caregiver-child relationships significantly impacts social-emotional (SE) outcomes, helping mitigate the effects of adversity such as abuse, neglect, or loss. Attachment theory explains SE behaviors through caregiver-child interactions and attachment processes; the bioecological system model highlights the dynamic interplay between individuals and their environment in shaping SE development. While prior research has focused on parental influence, this study explores how caregivers and children construct knowledge based on lived experiences. This study sheds light on the often-overlooked process of how caregivers and children construct knowledge based on their lived experiences in the home. By exploring how foster parents interact with children from a constructivist perspective, the study underscores the crucial role of these relationships.

Methods

The study used a constructivism/interpretivism paradigm and thematic analysis to examine how parents interact with foster children in a natural home environment. The essence was to ascertain both the voices of the parents and children in foster care regarding how they construct their social interactions, which remains limited in educational research. This study employed an interview, field notebook, and observation as data collection methods between a parent and foster children. This pilot's study included one interview and an observation.

Results

The study examines foster parent-child interactions, highlighting the impact of lived experiences, parental beliefs, and expectations on relationship quality. Social relationships are shaped by trust, consistency, and emotional bonds. Foster parents recognize biological parents' mental health, economic status, and sibling separations as influencing children's behaviors. Many foster parents seek long-term or shared-care, emphasizing the need for targeted interventions to enhance foster children's social-emotional development and overall well-being.

Discussion

The quality of caregiver-foster child relationships influences SE behavior outcomes, shaped by home interactions such as meals, play, and routines. Factors like biological parents' mental health, placement stability, and parenting styles (authoritative vs. authoritarian) impact these relationships. Foster children's SE behaviors are influenced by placement instability and separation from siblings which affects foster parent-child bonds and social-emotional development and well-being of children. The study provides further research to explore foster parent's engagement in early care and education. Insights from this research deepen our understanding of home environments in foster children's development including practical implications for improving caregiving practices and empowering caregivers with valuable knowledge.

Abstract #55 The Attitudes of Teachers Toward Pre-K Students Reading Picture Books on Screen

Authors

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Introduction

The way young children interact with books has been evolving over the years. Technology plays a vital role in education; many preschoolers are now engaging with picture books on screens. This shift has been a reason for discussions among teachers especially. Some teachers view digital picture books as a valuable tool for early literacy. This study explores how Pre-K teachers perceive digital picture books how these attitudes shape the way they introduce them in their classrooms and how it helps children's early literacy development. At the same time, the research addresses the gap in understanding how teacher attitudes affect early literacy practices in screen-based contexts and seeks to offer viable recommendations for improving instructional practices.

Methods

For this qualitative research ,the researcher gathers data from 35 PreK teachers through a **survey** of 28 participants, a **iterative interview** with one teacher, and **a focus group discussion** involving six educators. A pilot study has already been done, and it provided valuable insights that informed the design of this expanded research, allowing for a more in-depth exploration of teacher attitudes and instructional practices. Data will be analyzed thematically to find out key patterns and themes related to teachers' experiences, beliefs, and instructional strategies involving digital picture books.

Results

Preliminary findings show that multiple factors influence teachers' attitudes toward digital picture books, including their perceptions of educational benefits, prior technological experience, and access to resources and training.

The teacher who have had positive experiences with digital picture books in the pilot study highlighted their different features. Elements like clickable text, voice narration, and animations can enhance engagement and comprehension, making stories more immersive for young learners. These digital tools can support vocabulary development and sustain children's interest in reading. However, not all teachers share this enthusiasm.

Discussion

The implications are significant in Early Childhood Education setting in this research. By identifying the factors that shape teacher attitudes and the strategies they use, this study provides valuable insights for designing more effective professional development initiatives. Supporting teachers with training and resources can enhance their ability to integrate digital picture books meaningfully into early literacy instruction. The findings inform teachers, policymakers, and curriculum developers on how to promote the effective use of digital tools in ECE classrooms, ultimately improving learning outcomes for children and fostering a more interactive and engaging educational experience. Reading digital storybooks on screens increases early literacy of children by enhancing their word recognition as well.

Abstract #58 Implementation of a Comprehensive Ergonomic Curriculum into OBGYN Residency

Authors

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Introduction

Work-related musculoskeletal disorders (WMSDs) are common among surgeons in subspecialties, often leading to decreased productivity, absenteeism, and early retirement. Despite the critical importance of ergonomic practices during surgical training, formal ergonomic curriculums are rarely implemented. Our study aims to integrate a comprehensive ergonomic curriculum into OBGYN residency training, evaluate its effectiveness and acceptability, and assess the occurrence and magnitude of WMSDs within our department.

Methods

This study was adapted from previous research to improve ergonomic posture in the operating room. All current OBGYN residents and faculty at the OU School of Community Medicine consented to participate and were included in the study. Baseline upright posture data were collected over five weeks using UpRight Go 2 posture devices during surgeries. These devices track non-slouched ("upright") posture via gyroscopic sensors. Participants then engaged in a one-hour lecture and a two-hour simulation session, where they learned ergonomic practices and strategies tailored for OBGYN physicians. Post-intervention data on upright posture and survey feedback were collected over a similar five-week period. Vibrate function remained disabled in both pre and post-intervention groups. Pre- and post-surveys assessed participants' knowledge levels, current WMSDs, and perceptions of the curriculum's importance. Primary outcomes included upright posture time, incidence of WMSDs, and participant satisfaction.

Results

Twenty participants completed the study. Pre-intervention upright posture time averaged 50.35% (3207 of 6370 minutes), improving significantly to 53.57% (1703 of 3179 minutes) post-intervention (p=0.003). Surveys revealed that 100% of participants valued the training and supported its integration into residency curricula, with 90% incorporating the ergonomic practices into their workflows.

Discussion

Although the sample size was small, the curriculum demonstrated measurable improvements in upright posture time and was highly valued by participants. Its integration into residency programs is crucial to address the ergonomic challenges faced by OBGYN physicians. Sampling bias may exist in this study due to the voluntary participation of residents and faculty members. Future studies will evaluate the long-term retention of ergonomic practices and explore the effectiveness of annual reinforcement training in sustaining improvements.

Quality Improvement

Abstract #12 Referrals for Diabetes Education Promote Improved Glycemic Control in Hispanic Patients

Authors

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Introduction

A quality improvement initiative was conducted at a free mobile clinic in Tulsa County to address inadequate glycemic control among the underserved Hispanic population with type 2 diabetes (T2DM). The identified problem stemmed from gaps in Hemoglobin A1c (HbA1c) reduction through health education, despite evidence supporting diabetes education. A gap analysis revealed limited integration of education into routine care, prompting the need for a structured intervention. Before the intervention, glycemic control efforts lacked a standardized process for diabetes education referrals. A literature review was performed, leading to the integration of subsidized diabetes education as a best practice to empower patients and improve outcomes. The project aimed to evaluate the effectiveness of diabetes education in reducing HbA1c levels, targeting a 1% decrease in HbA1c through pre/post-measurements. The Plan-Do-Study-Act (PDSA) model guided implementation. Through iterative cycles, it aimed to establish an efficient and cost-effective process for incorporating health education into the glycemic management plan for patients with type 2 diabetes (T2DM).

Methods

The initiative introduced education referrals at the ambulatory clinic for eligible Hispanic patients with HbA1c levels >7%. The staff diabetes nurse randomly selected two cohorts of six patients each for the referral process. After giving verbal consent to participate in the three education classes, each patient was advised of the subsidized education opportunity and enrolled by the designated staff nurse. The first cohort was given the referral information and instructed to schedule the classes. The clinic's nurse assisted the second cohort with the scheduling process. All participant data was protected and confidentiality was maintained throughout the project.

Results

A retrospective chart review from June to December 2024 assessed these patients’ pre and post-HbA1c outcomes. One patient was excluded due to no class attendance. Five of the eleven patients who attended at least one class achieved ≥1% HbA1c reduction. Enhanced communication processes by the clinic’s nurse resulted in improved class attendance in the second cohort.

Discussion

Post-intervention, 45% of participants met the target HbA1c reduction, supporting education's integration into care. The project established new referral processes, improved staff workflows, and underscored interdisciplinary collaboration. Lessons for improvement included addressing patient barriers, streamlining referral and scheduling processes, and incorporating qualitative patient assessments for further subjective analysis. Overall, these findings highlight the value of diabetes education for improving T2DM management in the primary care setting.

Abstract #18 Referrals to a Level I Trauma Center: A Retrospective Review

Authors

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Introduction

The appropriate triage and transfer of trauma patients are crucial for optimizing healthcare resources and ensuring timely, high-quality care. Level I trauma centers serve as regional hubs for complex cases, but unnecessary transfers place a burden on facilities, physicians, medical staff, and the healthcare system. A key challenge in trauma referrals is the limited availability of orthopedic specialists at rural and community hospitals, leading to transfers that may not require Level I trauma center resources. This study aims to analyze referral patterns to the only Level I trauma center in Oklahoma, evaluating the characteristics of transferred patients, mechanisms of injury, and the impact of limited orthopedic coverage at referring facilities.

Methods

A retrospective review of 7,755 patients transferred for orthopedic trauma between 2016 and 2021 was conducted. Data were collected from the OUMC Trauma Registry and Medical Records, including demographic variables, injury mechanisms, transfer methods, and patient outcomes.

Results

The average patient age was 34.9 years, with 62% being male and 77% identifying as Caucasian. The leading mechanisms of injury were falls (44.2%) and motor vehicle collisions (27.5%). Ambulance transport accounted for 71% of transfers. Among transferred patients, 42.5% were admitted to the floor, 10% to the ICU, 14% went to the operating room, and 26.3% were discharged home without admission, suggesting potential overtriage in orthopedic trauma populations.

Discussion

Over one in four transfers to our Level I ACS-verified trauma center were discharged home from the ED. While many of these patients likely required outpatient surgical management for isolated injuries, these arrangements could often be made without an ED-to-ED transfer if secure real-time consultation and image sharing were available. Strengthening communication between referring facilities and trauma specialists may help improve the efficiency of transfer decisions while ensuring that patients with both isolated and complex injuries receive the appropriate level of care. Further research is needed to explore strategies for optimizing transfer protocols and enhancing collaboration between rural hospitals and trauma centers.

Abstract #22 Underrecording and Underreporting of Obesity; a Comparison of Three Nationwide Databases

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Introduction

Obesity is often under-reported in inpatient and outpatient settings where other medical and acute conditions take precedence. However, lack of in-patient reporting can lead to delayed access to care which places patients at continued risk for comorbid conditions. Documentation of obesity in patient charts has been shown to improve access to obesity care and be a predictor for future weight loss. This project aimed to describe the prevalence of obesity in the general adult US population versus the prevalence as documented in hospital registries.

Methods

This comparison utilized three datasets to estimate the prevalence of adult obesity in the United States general population and in inpatient hospitals in the United States. The 2017-2018 National Health and Nutrition Examination Survey(NHANES) dataset(n=5,434) was used to estimate the prevalence of obesity in the general population. For the inpatient hospitals, data from the 2017 National Inpatient Sample (NIS)(n=6,084,184) and the 2017-2018 American College of Surgeons-National Surgical Quality Improvement Program (NSQIP) (n=2,006,047) was used. NHANES and NSQIP captured BMI from height and weight measured while obesity was captures using ICD-10 codes within NIS data based on hospital records. Obesity was categorized as BMI>=30 and the severe obesity sub-group was defined as BMI>=40. The complex survey design was accounted for in the analysis and weighted percentages were presented for NHANES and NIS datasets. Further analysis examined the prevalence of obesity by age, gender, and racial/ethnic subgroups by database to identify different trends between databases.

Results

The overall prevalence of obesity in NHANES was 41.9%. For the in-patient population in NSQIP the prevalence was 44.5% and the prevalence of obesity as recorded in patient hospital records via ICD-10 coding (NIS) was 15.4%. For severe obesity, the prevalence was 8.9%, 10.2%, and 7.1% for NHANES, NSQIP, and NIS. There were not substantial differences observed across gender, age, race or ethnicity subgroups between databases.

Discussion

There was a descriptive difference in the prevalence of obesity based on height and weight (NHANES and NSQIP) and the diagnosis of obesity recorded in hospital records (NIS). These results imply that obesity is underrecorded and underreported in the inpatient setting at a systematic level. This can lead to delays in obesity care and allow progression of obesity related co-morbidities. Further efforts should focus on developing standardized reporting protocols and clinician training to improve the documentation of obesity in hospital settings.

Abstract #26 Orthopedic and Craniofacial Fractures in Equine-Related Trauma: A Retrospective Analysis

Authors

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Introduction

Recreational and occupational horseback riding is a very popular activity throughout the United States. However, equine-related activities pose significant risks to riders due to these animals' size, strength, and temperament. Numerous studies have been published indicating the severity of equine-related injuries, often resulting in serious injuries requiring hospitalization. Among these injuries, fractures continue to be one of the most common injuries sustained by horse riders secondary to traumatic brain injury. There are many mechanisms by which riders could sustain a fracture, leading to a wide array of fracture patterns. However, very few studies have focused on the specific distribution of fractures in equine-related trauma. This retrospective study aims to identify the most common orthopedic and craniofacial fracture patterns in equine-related trauma.

Methods

Patients admitted to a level II trauma center for equine-related trauma between January of 2015-October 2024 were identified using ICD-10 codes and injury descriptions. Of the patients admitted for equine-related trauma, only patients with ICD-10 codes and injury descriptions related to fractures were included for further analysis. Fracture patients were then categorized according to the anatomic location of their fracture site, pattern of injury, and mechanism of injury.

Results

Of the 234 patients admitted for equine related trauma, 179 (76.5%) sustained an orthopedic or craniofacial fracture. The most common fractures observed were rib fractures, with an incidence of 22.7%, followed by lumbar vertebral fractures (10.3%) and thoracic vertebral fractures (7.26%). The most common mechanism of injury related to these fractures was identified as a rider being injured from a fall in a non-collision incident, which resulted in 128 fractures (42.7%), followed by being struck by a horse, resulting in 78 fractures with an incidence of 26%. Injuries of note included 46 total spinal fractures (15.3%), 98 long bone fractures (32.7%), and 69 craniofacial fractures (23.0%) of which 5 were skull base fractures (2.14%). Additionally, we found that a majority of fractures occurred concurrently (59.2%) with the most common combination being rib and thoracic spine fractures (6 cases).

Discussion

While an abundance of literature demonstrates the risk of traumatic brain injury with equine-related trauma, few studies have identified the incidence of specific anatomic fracture patterns. The findings of the study underscore the considerable burden that orthopedic and craniofacial fractures pose in regard to equine-related trauma. Many of the fractures often occurred as multisite fractures, further highlighting the severity of equine related fractures and the need for improved safety measures and protective gear.

Abstract #30 Co-Creating a Mnemonic with Learners to Support Telehealth Competency Development During Simulations

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Introduction

The COVID-19 pandemic highlighted the need for structured telehealth training to address challenges unique to virtual care, such as patient safety risks, technology failures, and communication barriers. While professional organizations, including the Association of American Medical Colleges (AAMC), have established telehealth practice standards, medical curricula often lack structured reinforcement tools to support competency retention. At the University of Oklahoma-Tulsa School of Community Medicine (OUSCM), high-fidelity standardized patient (SP)-based simulations have been effective in teaching telehealth skills. However, learners reported difficulty recalling key steps during simulations, and faculty observed skill decay over time. In response, we co-developed a mnemonic-based educational instrument to support telehealth competency training.

Methods

An interdisciplinary team at OUSCM developed a simulation-based telehealth curriculum using SP encounters to assess learner competencies. Faculty evaluated learners using a rubric aligned with AAMC telehealth practice standards, focusing on eight key competencies: patient safety, equipment use, communication, ethical considerations, data collection, virtual environment management, troubleshooting, and practice barriers. Initial pilot testing included preparatory materials, followed by faculty assessments and learner debriefs. Key telehealth tasks were identified by mapping common errors to cross-cutting competencies, with generalizable skills prioritized. Mnemonic options were tested for applicability and face validity, leading to iterative refinements informed by learner and faculty feedback.

Results

The mnemonic tool underwent three major design iterations. The initial version (SCCAMPPER) followed a comprehensive telemedicine workflow but was found to be cumbersome with redundant elements. A revised version (CAMPER) streamlined categories, reducing extraneous components while improving usability and workflow integration. The final iteration incorporated universal design principles, including checklist formatting and visually intuitive elements to improve clarity and retention using principles of skeuomorphism. Usability testing demonstrated that learners found the mnemonic easier to implement, with improved recall.

Discussion

The CAMPER mnemonic provides a reinforcement tool to enhance telehealth education, standardize virtual care workflows, and improve retention of essential competencies. Its simple yet comprehensive design allows for broad applicability across healthcare settings. However, further research is needed to evaluate its impact on skills retention, patient outcomes, and clinical decision-making. Future studies should include controlled trials to measure its effectiveness compared to traditional instructional methods and assess its adaptability across diverse healthcare environments. Additionally, formalized qualitative analysis of the iterative design process would improve generalizability. Lastly, translation and cross-cultural adaptation will be necessary to evaluate its global utility. While initial results are promising, continued refinement and validation in real-world clinical contexts will be essential for optimizing its educational impact.

Abstract #35 Empanelment: Improving Continuity of Care in the Pediatric Residency Clinic

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Introduction

One of the challenges of residency training is improving continuity in the clinic setting. Studies show that patient empanelment is the foundation for improving accountability and continuity, as well as enabling high-performance primary care. It is important that training programs establish sustainable processes for ensuring resident continuity and patient empanelment given the benefits such practices have on both patients and residents. The goal of this quality improvement (QI) project was for residents to meet goal empanelment numbers so that 30% of resident visits were with patients for which they were the assigned provider.

Methods

This project involved collaboration with providers and staff in the general pediatric clinic. Patient empanelment goals were set in January 2023 at 50 for PGY-1, 75 for PGY-2, and 100 for PGY-3 residents. To achieve empanelment goals, the following processes were put into place: 1) when a current resident saw a patient whose primary care provider (PCP) in the electronic medical record was a graduated resident, that current resident updated the listed PCP to themselves; and 2) all residents assigned themselves as PCP for all newborn visits. In order to improve continuity with assigned resident PCP, during each well child check (WCC), the subsequent WCC visit was pre-scheduled. This was facilitated by patient service representatives (PSRs) and nursing staff.

Results

From January to March 2023, the percentage of residents who met their empanelment goals increased from 20% to 80%. From July 2023 to July 2024, the visit continuity goal (30%) was achieved. After resident turnover in July 2024, that goal was only met in November 2024.

Discussion

This QI project aimed to address the challenges of improving continuity of care with assigned PCPs. One of the key challenges faced was provider availability, as residents' clinic schedules are limited due to other responsibilities. While this project resulted in notable improvement in meeting empanelment goals, as well as maintaining the percentage of patients seeing their PCP more consistently, continued work will be needed in maintaining these processes when new residents start.

Abstract #41 Utilizing Electronic Health Record Care Gaps to Improve Pediatric Preventative Care

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Introduction

Provider utilization of available tools within electronic health record (EHR) systems can improve preventative health processes such as screenings. The Epic EHR includes many tools to enhance patient care including Care Gaps/Health Maintenance which provides preventative health recommendations (e.g., vaccinations) based on a patient's medical record. After discussion with pediatric residents, we learned of their limited use of the Care Gaps tool. The goal of this quality improvement (QI) project was to assess and improve the effectiveness of patient care via utilization of the Care Gaps tool.

Methods

The plan-do-study-act approach was used in developing and monitoring the project. Planning phase included assessing the extent and accuracy of preventative health recommendations provided by the Care Gaps tool. A pre-survey was designed and administered to pediatric residents to assess their knowledge and use of EHR Care Gaps and preventative health recommendations. Residents were then educated on navigating, utilizing, and troubleshooting patient Care Gaps including insuring immunizations are up to date via an immunization query. A post-survey was administered 3 months following the education to reassess the residents' use of Care Gaps and their confidence in making preventative health recommendations.

Results

Of 21 (92%) residents who completed the pre-survey, 67% were aware of Care Gaps. Fifty percent of the 21 respondents reported never using Care Gaps to track preventative health measures, and 71% of them had not used it for chronic disease populations. Twenty-four percent of the residents were confident in their knowledge of preventative health recommendations for general pediatrics and 14% for the chronic disease populations. Additionally, 76% did not know how to perform an immunization query, an important step in ensuring accuracy of Care Gaps vaccine recommendations. Of 18 (75%) residents who responded to the post-survey, 89% were aware of Care Gaps. Usage of Care Gaps increased with 83% of respondents using it for preventative health recommendations and 72% using it for chronic disease populations. Confidence in knowledge improved for general pediatrics (39%), though it remained similar for chronic disease populations (16%). However, 61% still did not know how to perform an immunization query.

Discussion

Post-survey findings demonstrated an increase in residents' knowledge of the Care Gap function and their confidence in its use after receiving education. Our next step will focus on determining whether the Care Gaps function can increase the rate of laboratory screenings recommended by the American Academy of Pediatrics for children with overweight and obesity following pediatric resident education.

Abstract #42 Reducing Overdue Diabetic Nephropathy Screenings: A Quality Improvement Project

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Introduction

The 2023 United States Renal Data System (USRDS) report shows that Oklahoma ranks mid-range nationally for End-Stage Renal Disease (ESRD) cases caused by diabetic nephropathy. Around 35% of new ESRD cases in the state each year are linked to diabetic kidney disease. Early urine protein screening is essential for identifying kidney disease in diabetic patients, enabling timely interventions to slow disease progression. This quality improvement project aims to reduce the number of diabetic patients overdue for proteinuria screening by 25% by the end of March 2025 at the Tisdale clinic.

Methods

On September 13th, we started our first PDSA cycle during a staff meeting. We began with a quick education session for the nursing staff on the importance of early proteinuria screening for diabetic patients. We then collaborated to integrate urinary protein screening into our regular workflows. With the clinic manager's support, we updated the EHR system to automatically flag overdue screenings.

Our second PDSA cycle began on December 13th. The clinic manager shared a list of patients still due for screening. To address this, we designated one physician to dedicate a weekly afternoon to a diabetic clinic. These patients were contacted to schedule their annual Medicare wellness exams, which included proteinuria screening.

Results

Before initiating PDSA Cycle #1, 66 diabetic patients were overdue for urinary protein screening. By the end of the first cycle, this number dropped to 48, representing a 27% reduction. After completing the second cycle, the number of overdue diabetic patients decreased further to 39, reflecting a 41% reduction from baseline.

Discussion

The Wayman Tisdale Clinic serves a diverse, high-risk population in North Tulsa. Recent changes, including shifts in nephrology services and the implementation of a new EHR system, have created gaps in documenting routine kidney care and maintaining screening protocols. While challenges like heavier workloads and patient compliance were anticipated, collaboration among stakeholders and EHR improvements were key to driving lasting progress. This quality improvement project focused on enhancing care for individual patients while improving overall population health metrics. Success here can provide replicable strategies for other clinics facing similar obstacles.

Abstract #43 Improving Colon Cancer Screening Rates in Primary Care: A Quality Improvement Project

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Introduction

Colorectal cancer (CRC) is a leading cause of cancer-related death; many eligible patients do not undergo timely screening. Barriers include lack of awareness, fear, procedural preparation, and cost. Primary care clinics play a key role in promoting screening but often lack standardized communication and follow-up systems. This project applied Plan-Do-Study-Act (PDSA) cycles to improve patient education and follow-up care, aiming to increase CRC screening rates by 15% before February 01, 2025, at OU-Family Medicine clinic.

Methods

A cause-and-effect ("fishbone") diagram developed by residents, attending physicians, and nurses identified barriers to CRC screening. PDSA cycles were implemented to increase CRC screening orders and raise patient awareness. The first PDSA cycle, in December 2024, introduced a Smart Phrase within the electronic medical record (EMR) for nurses to standardize CRC screening history and identify eligibility. Provider training was conducted through emails and an in-person announcement. The second PDSA cycle, in January 2025, placed educational flyers within each exam room to highlight the benefits of timely CRC screening. Monthly EMR data tracked completed screening orders, including colonoscopies, Cologuard, and fecal occult blood testing.

Results

Before the first PDSA cycle, there were 23 CRC screening orders in November (8 colonoscopies, and 15 Cologuard). After the first PDSA cycle, 5 CRC screening orders were placed (1 fecal occult, and 4 Cologuard), which is a 78% decrease compared to the baseline. After the second PDSA cycle, 11 CRC screening orders were placed (2 fecal occult, and 9 Cologuard). This shows 120% increase compared to the first PDSA cycle and 52% decrease from baseline. The results should be interpreted with caution as it was not possible to quantify how many individuals were eligible for CRC screening during this timeframe.

Discussion

Integration of the Smart Phrase into nurse workflows did not increase CRC screening orders. No formal provider or staff feedback was collected, limiting assessment of awareness and usability. Tracking feedback may improve adoption of the cycle. Notably, more orders were placed during the second PDSA cycle, indicating the feasibility of educational flyers in facilitating patient-provider awareness. Implementation challenges included difficulty obtaining accurate data, limited staff availability during clinic hours, and a short time frame for PDSA cycles implementation. These challenges highlight the need for additional staff training or alternative outreach methods to address patient hesitancy and improve follow-up adherence. Future efforts should enhance EMR functionality to automate reminders and extend education campaigns to family members who may influence patient decisions.

Abstract #46 Pediatric Development: Optimizing 9-Month Developmental Screening Compliance and Interventions

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Introduction

Developmental delays and disabilities affect 1 in 6 children ages 3-17 years. Since developmental interventions are most effective in early childhood, early identification and intervention are critical to optimize outcomes. This quality improvement (QI) study, which utilized 2020 American Academy of Pediatrics guidelines on developmental screening, aimed to improve primary care clinic implementation and documentation of Ages and Stages Questionnaire (ASQ-3) developmental screenings at 9-month Well Child Checks (WCC). The goal was to improve ASQ-3 9-month screening to 75%. A secondary goal was to track what patient interventions were made for failed screenings.

Methods

Following the Plan-Do-Study-Act (PDSA) model, a multidisciplinary team examined pre-intervention data for ASQ-3 documented for 9-month WCC visits starting in 03/2021. Using monthly data collection to assess ASQ screening compliance, three intervention cycles were completed. Cycle 1 (06/2022-08/2022) involved updating nursing clinic check-in sheets to include ASQ-3, nursing re-education to give the ASQ-3 at the beginning of the visit, and placing the forms at each nurse workstation. Cycle 2 (09/2022-03/2023) included electronic medical record (EMR) review by pediatric residents to compare rates of ASQ-3 completion to automatically generated data. Nurses and residents were educated on how to properly insert ASQ-3 data into the EMR for proper documentation and billing. Cycle 3 (04/2023-12/2024) involved manual chart reviews to reassess intervention efficacy and the transition to a new EMR system. The use of dot phrases was implemented to ensure ASQ-3 screening data appeared in clinical notes. Any abnormal screenings prompted re-screening at subsequent visits to ensure follow-up and intervention tracking.

Results

Screening completion and documentation were evaluated over 45 months. The ASQ-3 9-month WCC screening rate increased from 12% in the first 6 months of pre-intervention to 73.7% in the last 6 months of the study. Before transitioning to a new EMR (03/2021–06/2023), the average screening completion rate was 38.4%. After the transition (07/2023–12/2024), it increased to 60.4%. The EMR transition required process adjustments, with ongoing efforts to refine data tracking and staff training.

Discussion

The rate of 9-month screening increased over the project, suggesting effectiveness of the interventions. As screening rates improved, focus shifted toward improving the accuracy of scoring to ensure that children with abnormal scores received appropriate interventions or continued monitoring at future encounters. Future interventions will include identifying children who failed the 9-month ASQ-3 to ensure appropriate follow-up and interventions.

Abstract #51 Prenatal Care Gaps in Primary Care: Removing Barriers to Patient-Centered Prenatal Care

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Introduction

Prenatal care is a staple of the OU-Tulsa Family Medicine Clinic (OUTFM) and many of our patients have multiple barriers to care, including non-modifiable environmental factors, inconsistent continuity in clinic, low health literacy, and low physician confidence with prenatal care workflows. This can lead to inconsistencies, miscommunications, and delays in care. Standardizing prenatal care processes can help bridge these gaps and enhance patient understanding. This quality improvement (QI) project aimed to reduce barriers to prenatal care by implementing standardization measures over six months, improving provider confidence and comfort in delivering consistent, high-quality prenatal care at OUTFM.

Methods

To improve prenatal care in the OUTFM Clinic, we utilized the Plan-Do-Study-Act (PDSA) cycle model, a tool used for improving processes by planning, implementing, reviewing, and acting on the results. Two PDSA cycles were completed. In our first PDSA cycle, we coordinated with nursing staff to create and collect patient satisfaction surveys assessing prenatal patient education and quality of care. We completed clinic-wide education including nursing, attendings, and residents to promote survey distribution and completion. Next, standardizations were made to the prenatal electronic health record (EHR) template to enhance resident clarity, consistency, and thoroughness during prenatal visits. We had residents complete a survey analyzing the impact of these EHR changes on their delivery of care. In the second PDSA cycle, the clinic’s prenatal patient packet was revised, reviewed with residents, and distributed. A second resident survey was conducted to assess the impact of the revised packet. We utilized descriptive data analysis to review the results of our project.

Results

Before the first PDSA cycle, patients (n=2) reported high satisfaction with their prenatal care. Resident surveys consisted of 33% completed by third-year residents, 27% by second-year residents, 27% by first-year residents, and 13% by medical students. Following the first PDSA cycle, 73% of residents felt confident in conducting a routine prenatal visit, increasing to 100% after the second PDSA cycle.

Discussion

The revised patient packet and EHR note template improved resident confidence and knowledge regarding prenatal care. We identified further prenatal care gaps, which will inform future PDSA cycles at OUTFM to enhance care for our patients. Through our QI project, we identified clear limitations in collecting patient response data secondary to poor distribution and completion rates affecting our first cycle. However, with added emphasis on standardization of resident education and training, we have confidence that our patients will benefit from lessened barriers to their prenatal care.

Abstract #54 The Reducing Opioid Use Incidence in Seniors in Oklahoma Study: Patients' Perspectives

Authors

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Introduction

Despite initiatives to alleviate the impact of the opioid crisis, there have been limited studies addressing the challenges of non-cancer chronic pain (NCCP) management in older adults. The Agency for Healthcare Research and Quality (AHRQ)-funded Reducing Inappropriate Opioid Use in Seniors in Oklahoma (RISE-OK) study was a multi-faceted, person-centered, scalable primary care intervention initiated in 2020 to improve NCCP among older adults in Oklahoma primary care clinics. Our objective was to evaluate the utility, effectiveness, and generalizability of the RISE-OK study from the patients’ perspective.

Methods

The Oklahoma Primary Healthcare Improvement Cooperative (OPHIC) enrolled 31 primary care practices in RISE-OK. Semi-structured interviews were conducted via telephone with 10 patients 60+ years of age with NCCP from participating practices upon completion of the practice intervention. Interview topics included, but were not limited to, primary care provider (PCP) satisfaction, challenges faced in managing chronic pain, and alternative treatment methods. Three researchers conducted thematic analysis for recurring themes in the patient interviews. Discrepancies were resolved via full team discussions until consensus was met.

Results

Patients interviewed had a mean age of 71 years; 50% were female, 60% were non-Hispanic White, and 70% resided in rural Oklahoma. Interviews indicated program implementation varied across practices. Most patients reported overall satisfaction with their PCP’s management of their pain. Patient responses also highlighted that the availability of clinical interventions to effectively decrease pain-life interference is considerably limited, especially in rural areas. More specifically, patients reported large distances and low availability of primary care and mental health/substance misuse prevention services. Many patients did not fully understand their change in various risk factors as they age. For example, several patients reported not knowing the importance of keeping naloxone on hand for accidental opioid overdoses. There was also significant uncertainty and lack of knowledge about the impact of cannabis use and other non-evidence-based approaches for NCCP resulting in patients attempting to self-manage, often leading to withdrawal symptoms. Despite these gaps in knowledge, patients were eager to obtain information and reported wanting to stop or decrease their opioid use.

Discussion

Patient interviews highlighted the complexity of NCCP management among older adults and the need for improved access to and coordination of care and primary care processes. Upcoming analyses will incorporate physician semi-structured interview findings to better understand both provider and patient perspectives to improve future interventions.

Abstract #60 Exploring Patient Preferences for ACEs Education in the Clinical Setting: A Focus Group Study

Authors

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Introduction

Adverse Childhood Experiences (ACEs) include potentially traumatic events and environmental aspects at home during childhood and increase the risk of negative health outcomes such as heart disease, suicidality, and obesity. While existing research has delved into the prevalence and consequences of ACEs, understanding how patients prefer to receive education on this critical topic remains an underexplored area. This study aimed to explore patients' knowledge of ACEs and their preferences concerning the delivery of ACEs education in clinical settings.

Methods

We conducted two one-hour, in-person focus group sessions with (n=8) patients at the OU Tulsa Internal Medicine Clinic.~~ .~~ Moderator-led discussions focused on participants' current understanding of ACEs and their effects on adult health, impressions of various ACEs infographic posters, and preferences for ACEs education during doctor's visits. The focus groups were recorded, transcribed, and analyzed using thematic content analysis.

Results

Participants demonstrated a range from comprehensive to limited familiarity with ACEs and showed understanding of the connections between ACEs and health conditions such as anxiety, depression, autoimmune disorders, and stuttering. Participants recognized the stigma associated with discussing past trauma. ACEs infographic posters appear to be effective conversation starters, and participants had varying preferences toward the design of the poster. Additionally, participants were open to the inclusion of an optional ACEs screener in pre-appointment paperwork, although they stressed the importance of a trained, trauma-informed clinician.

Discussion

This initial qualitative research assessing the views of patients regarding ACEs education and conversing about ACES with healthcare providers reveals an openness to the inclusion of a discussion about ACES as part of their primary care visit. The results provide insight into the different levels of health literacy, knowledge of effects of ACEs on adult health, and comfort discussing ACEs among participants. While participants were responsive to ACEs infographic posters, specific images and language used on the poster proved to be of great importance. Although participants were open to discussing ACEs with their doctor, many emphasized that the physician must be properly trained to avoid re-traumatization or excessive feelings of vulnerability for the patient. Additionally, they had preconceived ideas about which types of doctors may be more trauma-informed, such as psychiatrists. Asking patients about their knowledge and preferences can help guide healthcare providers to improve patient education, trust, and quality of care.

Abstract #65 Logistical Lessons Learned from Conducting a Pilot Randomized Controlled Trial

Authors

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Introduction

Starting a pilot study requires establishing several logistical processes and refining them over time to ensure rigor. This presentation will highlight the logistical lessons learned while conducting a pilot randomized control trial over its first two years. The current study involves working with older adults with multiple chronic conditions in their homes, recruited using several strategies. This qualitative case study seeks to discover what challenges were encountered by the HealthPAL lab during its first two years, and how were these challenges overcome. The Occupational Adaptation (OA) model is used in occupational therapy to describe the interaction between a person/group within their specific environment, and the process of adapting to their role demands and challenges. This model is used to describe what challenges were encountered within a new research lab, and how the team adapted.

Methods

A retrospective qualitative case-study design with thematic analysis was used to answer the primary research question. Data was collected from five members of the lab: principal investigator, occupational therapy interventionist, and three graduate research assistants. IRB modifications reports, weekly meeting notes, informal interviews, and emails were collected to investigate instances where challenges were identified and problem-solving occurred.

Results

Three themes were found when investigating the types of challenges encountered: clerical logistics, safety considerations, and division of responsibilities. To examine how these challenges were overcome, interpretation through the OA model reveals the process of refinement through role demand, press of mastery, and occupational response. Within the lab, the protocols for safety concerns and clerical logistics with recruitment expansion difficulties elicited the greatest adaptive responses.

Discussion

Resources exist for junior researchers establishing a new lab, and what guidance there is must be adapted to the unique study and environment. In addition to study protocols, the physical and psychological well-being of the researchers must be considered. The themes of this case-study reveal example areas of focus for new research professionals, and reassurance to current researchers. The ongoing pilot trial has shown positive preliminary outcomes and improvements in all growth areas within the lab, after the pain points were alleviated, demonstrated in the OA model. Investigating the unexpected challenges faced in the iterative process of starting a research lab promotes investigative excellence and provides guidance and encouragement for new research professionals to start rigorous research needed to advance the profession of occupational therapy and allied health.

Social/Behavioral and Community Service

Abstract #8 Internal Consistency of the Self-Management Assessment Scale for Older Adults with Multimorbidity

Authors

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Introduction

The Self-Management Assessment Scale (SMAS) is a screening tool with five subscales assessing constructs of interest to occupational therapists: knowledge, social support, future goals, daily routines, and emotional support. Validity and reliability were established in type 2 diabetes (Oberg et al., 2018), however, a reliable tool for barrier identification in multiple chronic conditions (MCC) self-management is needed. We compared the internal consistency of the SMAS to a gold standard, the PROMIS-Self-Efficacy for Managing Chronic Conditions (PROMIS-SE) in older adults with MCC.

Methods

This data was collected as part of the baseline battery for a randomized controlled trial of a health behavior change intervention for older adults with MCC (ActiveOT). Participants (n=41) were recruited from community outreach and primary care clinics. We used Cronbach's alpha to calculate the internal consistency of the total scale and subscales of both tools. Sufficient internal consistency was discerned by an alpha value of ≥ 0.70 (Oosterveer et al., 2022).

Results

The SMAS had sufficient internal consistency for the overall scale (α=0.88), and 3/5 subscales: knowledge (α=0.87), social support (α=0.81), and future goals (α=0.77); daily routines (α=0.58) and emotional support (α=0.56) did not meet the threshold. PROMIS-SE results were similar: overall scale (α=0.85) and 4/5 subscales (emotions (α=0.83), symptoms (α=0.86), medications (α=0.72), and daily activities (α=0.81)) met the threshold, but social interaction (α=0.67) did not.

Discussion

The study suggests both the PROMIS-SE and SMAS may be useful to screen for barriers in self-managing MCC. Impact Statement: The SMAS screens for important aspects of the occupational therapy domain (i.e., future goals and daily routines). Occupational therapists may wish to use the SMAS as a screening tool in MCC but should use caution when interpreting the individual subscales.

Abstract #9 Exploring Factors Related to Well-Being Among Incarcerated Women: Hope, Shame, and Adverse Childhood Experiences

Authors

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Introduction

Incarceration rates among females have significantly increased in the United States over the past 40 years. Studies have documented how trauma, economic vulnerability, and mental illness may amplify psychological distress for women who are incarcerated. However, little research exists on the relationships between hope, shame, adverse childhood experiences (ACEs), and well-being among incarcerated women. The purpose of this study was to explore the relationship between hope and psychological flourishing among incarcerated women and to determine how adverse childhood experiences, shame, and hope are associated with flourishing in incarcerated women.

Methods

To explore the relationship of these variables with well-being, de-identified data from the Oklahoma Department of Corrections was analyzed. All inmates at both women's prisons, Eddie Warrior in Taft, Oklahoma and Mabel Bassett in McCloud, Oklahoma, had the opportunity to participate in the study. Participation in the survey was completely voluntary. The measures utilized in the study included the Adult Hope Scale, an adapted Flourishing Scale, the Adverse Childhood Experiences Questionnaire (ACE), and the Others as Shamers Scale.

Results

Of the 2006 incarcerated women, 149 participated in this study. Results from the one sample t-test found that ACE scores (5.77) for the study participants were significantly higher ($p < .001$) than the Centers for Disease Control and Prevention rate (1.61). A strong positive correlation ($r(135) = .624$, $p < .001$) between hope and flourishing was found with hope ($\beta = .506$, $p < .001$) serving as the stronger predictor of flourishing within the model. Shame was found to have a moderate negative correlation ($r(139) = -.363$, $p < .001$) with flourishing. Results of a multiple regression found that the model was statistically significant ($F(3, 119) = 28.416$, $p < .001$) and accounted for 41.7% of the variance in flourishing (R2 = .417, R2Adjusted = .403).

Discussion

Research has found that by decreasing negative psychological thought patterns, such as shame, and instead developing positive self-thought, such as hope, an individual's well-being increases. Since shame and hope are negatively correlated and hope is something that can be nurtured, programs that are intentional in teaching pathways skills to incarcerated women will have positive association with reducing shame and also increasing flourishing. The results of this study provide evidence that even those with significant histories of adversity and trauma can possess and develop hope. Furthermore, given the vulnerable nature of this population, the implementation of hope-based programming by the DOC could provide vital pathways to increasing well-being.

Abstract #13 Transforming Health Equity for Native Americans: Addressing Historical Trauma and Systemic Barriers.

Authors

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Introduction

Native American communities experience significant health disparities rooted in historical trauma from forced relocation and ongoing sterilization practices occurring as recent as 2019. This is highlighted by the diabetes diagnosis rate among Natives of 16% in ages 18+, compared to 8% in the general U.S. population. Persistent marginalization has resulted in disproportionate rates of chronic diseases, mental health disorders, and limited access to culturally competent health services affecting Indigenous populations today all over the United States.

Methods

This presentation explores the impacts of past and present-day colonization on the health outcomes of Native Americans, with an emphasis on the loss of sovereignty and cultural practices. It reviews historical and current federal, state, and tribal policies, including the Indian Health Services (IHS) funding and access, and the analysis of existing health outcomes data highlights the need for multifaceted approaches to addressing these inequities. These evaluations detail the systemic barriers in place since before the founding of the United States emphasizing the need to develop feasible solutions rooted in collaboration and community-driven health strategies.

Results

Through our policy and data analysis, we identified food insecurity, environmental contamination, and cultural incompetence in healthcare as the leading barriers to health equity for Native Americans. Involving the tribes in decision-making processes, improving healthcare access, and promoting food sovereignty are necessary initiatives for quality and equitable healthcare outcomes. Focusing on historical trauma-informed care can help to ensure long-term community resilience and improvements in healthcare.

Discussion

Health equity for Native Americans requires addressing historical injustices, pushing for Indigenous community-led initiatives, and dismantling systemic barriers to reconstruct healthcare to support the unique health needs of Native peoples. Fostering culturally relevant healthcare solutions and adopting a collaborative approach can lead to improved healthcare outcomes and restore aspects of lost cultural practices vital to Native American identities. This study builds on existing literature by examining historical and contemporary colonial policies and how they continue to shape the health outcomes of Native Americans. It also uniquely integrates policy analysis with health outcomes data to illustrate the compounded effects of historical trauma, systemic marginalization, and inadequate access to culturally competent healthcare.

Abstract #14 Coaching and Mentoring in Employability for Adults with Autism: A Meta-Analysis

Authors

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Introduction

The increasing prevalence of individuals with autism spectrum disorder (ASD) highlights the urgent need to discover effective ways to facilitate employment opportunities and job retention. The study investigates various work-related coaching and mentoring interventions for adults with ASD to determine the most effective types of interventions in terms of employability outcomes.

Methods

A systematic literature review on work-related interventions for individuals with ASD was performed using various databases. The search was limited to contemporary research of scholarly peer-reviewed journals and grey literature including conference papers, proceedings, and reports published in the 21st century. After applying exclusion and inclusion criteria, 16 studies with 17 effect sizes were synthesized in a random-effects meta-analysis.

Results

The meta-analysis revealed a positive effect of interventions on employability. Results of the overall analysis of the 16 included studies with 17 outcomes indicated Cohen’s $d = 2.046$, $p < .05$. Moderator analyses did not reveal significant differences in the type of intervention (ABA vs. assistive technology), the type of task (manual, intellectual, social), or the type of outcome measured (accuracy vs. fluency).

Discussion

The results uphold the use of coaching and mentoring through multiple interventions to improve the employability of adults with ASD. Organization's support and welcome providing adaptive and accommodating human resource processes (recruitment, employment, and retention) maximize the likelihood of workplace success for them in community-based employment. Human resource professions, working collaboratively with vocational rehabilitation centers, can mediate or facilitate job-coaching and peer-mentorship utilizing evidence-based strategies or interventions. Further research is needed to examine ways to guide organizations supporting the transition of adults with ASD into the workforce.

Abstract #16 Does Immigrant Identity Affect How Patients Talk to Their Families about Health Symptoms?

Authors

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Introduction

Immigrant communities are often thought to have close-knit families. This strong family bond may impact a patient's willingness to express health concerns to family members to prevent burdening them. This study examines whether immigrants are more likely to minimize health symptoms to their families as compared to non-immigrants. A secondary aim examined whether hope and family cohesion moderate this potential minimization of health symptoms.

Methods

We surveyed 237 adult patients in the OU-Tulsa Pediatric and Bedlam clinics. 120 were immigrants and 117 were non-immigrants. Survey questions asked about demographics, health status, minimizing health symptoms, family cohesion, and hope. To measure minimizing health symptoms, the research team created the Minimizing Health Symptoms (MHS) scale which contained two five-item subscales, one on minimizing symptoms to spouses and partners (MHS-SP) and one to family members and close friends (MHS-FF).

Results

The MHS-SP and MHS-FF demonstrated strong reliability, $\alpha=0.87$ and $\alpha=0.90$. An independent samples t-test compared immigrants and non-immigrants on the MHS-SP and MHS-FF and found no significant differences. Likewise, no differences were found in family cohesion or hope between groups. Next, we tested for an interaction between immigrant identity and hope on minimizing health symptoms. A regression controlling for demographics found no such interaction. Finally, we tested for an interaction between immigrant identity and family cohesion on minimizing health symptoms. A regression controlling for demographics found no interaction on the MHS-SP. However, there was a significant interaction between these on the MHS-FF ($B=0.34$, $SE=0.15$, $p=0.021$). When family cohesion was high, both groups minimized health symptoms to their families. However, when family cohesion was low, immigrants were more forthcoming with their families about health symptoms than non-immigrants.

Discussion

Contrary to our hypothesis, minimizing health symptoms to family did not differ between immigrants and non-immigrants. Despite stereotypes about immigrant families having more cohesion and hope, neither were observed in our sample. There was an interaction between immigrant identity and family cohesion on minimizing health symptoms. However, this interaction could be spurious, especially because it appears to be driven by a small proportion of the sample with very low family cohesion. Stereotypes about immigrant families being hopeful and cohesive are pervasive. While there are cultural differences among immigrants and non-immigrants, every family is different. It is key for providers to be aware of implicit biases that may lead to assumptions about how patients talk to their families about their health.

Abstract #17 Protecting the Sacred: Indigenous Child Removal in Oklahoma Child Welfare Cases

Authors

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Introduction

Given what is known about the historical mistreatment of Indigenous children, the current study used Oklahoma data to determine if Indigenous identity was associated with a child being removed from their home as part of a child welfare investigation when controlling for public assistance, caregiver substance use, domestic violence, child demographics, and maltreatment allegation types.

Methods

A sample of Oklahoma's child welfare data from federal fiscal year 2019's National Child Abuse and Neglect Data System's child file was used (n=65,200). Children were classified as non-Hispanic White, Indigenous alone, Indigenous and White, Indigenous/Other ethnoracial minority, or non-Indigenous ethnoracial minority. Descriptive statistics and clustered hierarchical logistic regression were conducted with $p<0.05$ indicating statistical significance. Corresponding frequencies, percentages, adjusted odds ratios (aOR) and 95% confidence intervals (95%CI) are reported.

Results

Children were mostly non-Hispanic White (n=25,671, 39.37%). Within the Indigenous subgroups children were predominantly Indigenous and White (n=10,040, 15.40%) followed by Indigenous/Other ethnoracial minority (n=5,636, 8.64%). A small portion of children (n=5,668, 8.69%) were removed from their home. Cases without missing data (n=60,230) were clustered by 'child ID' to account for children with >1 investigation. Step one of the logistic regression model included all covariates ($X^2(11)=4119.81$, $p=0.0000$, pseudo-$R^2=0.1461$). The ethnoracial grouping variable was added to step two which slightly enhanced the model's performance ($X^2(15)=4190.31$, $p=0.0000$, pseudo-$R^2=0.1470$). Compared to non-Hispanic White children, children who were Indigenous and White exhibited higher odds of removal (aOR: 1.11, 95%CI: 1.01, 1.22) as did children who were Indigenous/Other ethnoracial minority (aOR: 1.35, 95%CI:1.20, 1.52).

Discussion

By grouping multiracial Indigenous children in their own ethnoracial categories – a better picture of Indigenous child welfare experiences was obtained. This is particularly important as higher odds of removal were observed for both the Indigenous and White and Indigenous/Other ethnoracial minority groups. Further research is needed to explore the percentage of multiracial Indigenous children falling outside the protections afforded to citizens of federally recognized tribes via the Indian Child Welfare Act (ICWA). Additional research is needed to determine the intersection between Indigenous identity and family/community level factors that may influence child removal decisions.

Abstract #32 Erased Voices: Investigating Intimate Partner Violence Among Indigenous Mothers

Authors

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Introduction

Previous research using monoracial identity has shown that Indigenous mothers experience intimate partner violence (IPV) at high rates. Given the high percentage of multiracial Indigenous people, the use of categories like ‘multiracial’ limits Indigenous representation in research. Our primary objective was to compare differences in self-reported IPV experiences between Indigenous subgroups using aggregated and disaggregated ethnoracial identity data within the Pregnancy Risk Assessment and Monitoring System (PRAMS).

Methods

We conducted a cross-sectional analysis of the Centers for Disease Control and Prevention’s PRAMS Phase 8 (2016-2022) to assess rates of IPV among the aggregated identity variables provided by PRAMS and a disaggregated ethnoracial variable we constructed. Individuals were considered to have experienced IPV if they reported any physical harm by a current/former spouse/partner during or within 12 months prior to their pregnancy. We calculated prevalence rates of IPV for the sample alongside population estimates and corresponding 95% confidence intervals (CI) for each ethnoracial group.

Results

The percentage of women experiencing IPV varied across ethnoracial variables. When assessing individuals using the American Indian/Alaska Native (AI/AN) variable, 9.05% of Indigenous women reported experiencing IPV compared to 3.26% of non-Indigenous women (*p*<.0001). Alaska Native women residing in Alaska similarly reported higher rates of IPV (8.81%) compared to other Alaska-residential White (2.80%) and ‘another race/multiracial’ women (4.88%; *p*<.0001). Statistically significant differences were also observed among ethnoracial categories for the monoracial aggregated identity variable provided by PRAMS (*p*<.0001) with women who were AI/AN alone having the highest IPV rate (8.81%). Prevalence of IPV varied broadly across the disaggregated Indigenous groupings with ‘AI/AN, White, Asian, and Native Hawaiian Other Pacific Islander’ women having the highest rates (19.66%) and ‘AI/AN, and Asian’ women having the lowest (2.10%). The remaining rates for Indigenous subgroups ranged from 4.0%-12.97% and did not significantly differ—showing high rates among all sub-groups.

Discussion

Our findings reiterated high rates of IPV among Indigenous women across variations of Indigenous variables within PRAMS. Consequently, IPV rates were not significantly different among single and multi-racial subgroups—demonstrating that the actual incidence of IPV among Indigenous women (AI/AN alone and multi-racial) is likely much higher than traditionally reported counts. Not only do our findings highlight the need for increased surveillance, public health policy reform, and law enforcement interventions, but also the need for additional research and resources to assess population-level data using an inclusive lens to determine if specific Indigenous subgroups are at greater risk for experiencing IPV.

Abstract #39 Investigating Lifetime Adversity, Chronic Pain, and Depression Among People Living with HIV

Authors

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Introduction

People living with HIV (PLWH) disproportionately experience adversity, including adverse childhood experiences (ACEs), discrimination, and HIV diagnosis as a traumatic event which may contribute to poor mental health. Adversity and trauma have been associated with food insecurity (FI) and identified as risk factors for depression among PLWH. The life course theory examines personal, social, and cultural factors over the lifespan, and can be used to contextualize how adversity is associated with FI, depression, and other outcomes. This study aims to describe self-reported adversity among a community-based sample of PLWH and its associations with mental health and chronic pain including the mediating influence of stress and nutritional risks related to FI.

Methods

We conducted a path analysis using data from the NOURISH-OK (Nutrition to Optimize, Understand, and Restore Insulin Sensitivity in HIV for Oklahoma) Aim 1 study. Variables included self-reported measures pertaining to chronic pain, depression, food insecurity, chronic stress, and life adversity including adverse childhood experiences (ACEs), everyday discrimination, and traumatic HIV diagnosis (n=402). We objectively measured dermal carotenoids using the Veggie Meter® to estimate fruit/vegetable intake and as a crude measure of overall dietary quality.

Results

Dysfunction ACEs (B= 0.175, p=<0.0001), Abuse ACEs (B=0.133, p=0.0001), traumatic HIV diagnosis (B=0.351, p=0.002), and everyday discrimination (B=0.033, p<0.0001) were associated with FI. Food insecurity influenced depression (B=1.359, p<0.0001), chronic stress (B=1.295, p=<0.0001), and pain severity (B=0.277, p<0.0001). Smaller associations between chronic stress (B=0.533, p<0.0001), dermal carotenoids (B=-0.014, p<0.0001), and depression were present. FI affected pain severity (B=0.277, p<0.0001), which influenced pain interference (B=-0.014, p=0.0005).

Discussion

Findings support the need for trauma-informed nutrition for PLWH affected by food insecurity. Future studies should examine the benefits of healthy food assistance combined with stress reduction curricula to optimize mental health and/or chronic pain among PLWH.

Abstract #44 Family Medicine Residents’ Perspectives on Providing Maternal Healthcare in Rural Communities

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Introduction

Rural areas face persistent shortages of obstetric providers, which limits access to essential maternal healthcare services, such as prenatal care, labor and delivery support, and postpartum care, in rural communities. While family medicine (FM) physicians are often considered a potential solution to address this gap, little research explores FM residents’ perspectives on providing maternal healthcare in rural settings. This study examined the challenges FM residents perceive in providing maternal healthcare in rural areas and the factors that influence their willingness to practice maternal healthcare in these settings after residency.

Methods

We undertook a qualitative study with FM residents recruited from the University of Oklahoma-Tulsa School of Community Medicine. Semi-structured interviews lasting approximately 45 minutes were conducted via Zoom between May and July 2024. Interview questions focused on residents’ training experiences, career aspirations, and perceptions of maternal healthcare in rural and urban areas. All interviews were audio-recorded, transcribed verbatim, and analyzed using Braun and Clarke’s thematic analysis approach. Four independent coders conducted initial coding. The coding team met biweekly to discuss codes, resolve discrepancies in coding, and collaboratively identify themes. NVivo 14 was used to manage data.

Results

The sample included 12 FM residents, with most being in their first (33%) or second (50%) year of residency. The majority of participants were female (67%) and aged 25-29 years (75%). Participants identified numerous challenges to providing maternal healthcare in rural areas. These included a shortage of maternal healthcare resources, such as hospitals and obstetrician-gynecologists, limited training opportunities in rural settings during residency, and concerns about practicing in underserved areas within the current political climate. Participants noted that some incentives exist to encourage rural practice, though most participants felt current incentives were insufficient to offset challenges. Only those with personal ties to rural areas, such as growing up in rural communities or having friends or family from these areas, expressed a strong commitment to working in rural maternal healthcare despite noted challenges

Discussion

FM residents cited limited healthcare infrastructure, inadequate rural training, and political concerns as key barriers to providing maternal healthcare in rural areas. Most felt existing incentives were insufficient to address these challenges. However, residents with strong personal ties to rural communities were more likely to commit to rural practice after residency despite these barriers. Expanding rural FM-obstetric residency training and improving incentives to practice in rural areas may be necessary to increase the number of FM physicians providing maternal healthcare in rural communities.

Abstract #45 Enhancing Nutrition Counseling in Healthcare: The Impact of DUO for Health

Authors

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Introduction

Research suggests over 50% of patients with diabetes and 67% of patients with hypertension have yet to receive any formal counseling on dietary strategies to manage these conditions. Fruits and vegetables (F/V) offer many therapeutic properties yet can be unaffordable for people who receive Supplemental Nutrition Assistance Program (SNAP), who are disproportionately affected by these chronic health conditions. The Double Up Oklahoma (DUO) program provides nutrition incentives to purchase F/V, yet many who are eligible do not participate. Founded in 2022, the DUO for Health program aims to reduce disparities in patient receipt of nutrition counseling while also raising patient awareness of DUO in the context of a brief healthcare encounter. Program components include initial provider training about DUO and free patient education materials that providers can distribute to patients during routine clinical encounters.

Methods

To evaluate the impact of DUO for Health on participating provider's nutrition counseling and provider satisfaction with materials, we administered brief online surveys to providers upon program enrollment (baseline) and quarterly. Baseline survey documented healthcare provider type, and follow up questions specifically evaluated perceived impact of program materials on counseling frequency, provider confidence in counseling, and perceived interest among patients who received materials.

Results

Since May 2022, 40 providers enrolled in the DUO for Health program including physicians (n=10), physician assistants (n=7), nurses (n=14), and care coordinators/health educators (n=9). Among these providers, 18 completed at least one quarterly follow-up survey as of January 2025. Over half of DUO for Health providers agreed or strongly agreed (56%) the program increased how often they advise patients with diabetes or hypertension on nutrition. Two-thirds (67%) of providers agreed or strongly agreed the materials have positively affected their ability to give nutrition advice. A majority (67%) of providers also perceived their patient population found the materials to be very or extremely interesting

Discussion

Findings suggest that DUO for Health supports healthcare providers in delivering nutrition counseling more frequently and with better confidence. By positioning trusted medical professionals as advocates for fruit and vegetable consumption, the program may enhance patient participation in nutrition incentives. Future studies should examine the influence of DUO for Health on DUO participation among eligible patients

Abstract #47 Loneliness and Eating Disorders in LGBTQ+ People as Compared to Cisgender Heterosexual People

Authors

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Introduction

Previous research has established that LGBTQ+ people are at a higher risk for eating disorders than cisgender heterosexual people. Additionally, research shows that loneliness is a strong predictor of eating disorders. A previous study found loneliness to moderate disordered eating in LGBTQ+ people. However, no research to date has compared the role loneliness plays in prevalence of disordered eating in LGBTQ+ people versus cisgender heterosexual people.

Methods

A survey was administered via a snowball sampling approach. 111 participants (52.9%) were LGBTQ+ and 99 (47.6%) were cisgender and heterosexual. There were 100 (47.6%) heterosexual participants and 108 (52.4%) LGB+ participants, and there were 179 (87.3%) cisgender participants and 26 (12.7%) gender diverse participants. The primary measures were the UCLA Loneliness Scale and the Eating Attitudes Test (EAT-26). On the EAT-26, if a person meets a threshold score, they receive a positive screen for disordered eating behavior requiring further evaluation from a health profession.

Results

30.5% (n=64) screened positive for disordered eating behavior on the EAT-26. LGBTQ+ participants had a significantly higher proportion of screening positive (37.3% n=41) compared to cisgender heterosexual participants (23.0%, n=23), p=0.031. They were also significantly more lonely, t(208)=3.79, $p<0.001$. The effect of loneliness on likelihood of screening positive on the EAT-26 significantly differed by LGBTQ+ identity (p=0.049), and a crossover interaction was observed. When loneliness was low, LGBTQ+ people were somewhat more likely to screen positive as compared to cisgender heterosexual people. However, when loneliness was high, cisgender heterosexual people were much more likely to screen positive as compared to LGBTQ+ people.

Discussion

Loneliness played a much larger role in the probability of whether a cisgender heterosexual people screen positive on the EAT-26, requiring further professional evaluation for the presence of disordered eating behavior, as compared to LGBTQ+ people. LGBTQ+ people with lower levels of loneliness may be at an elevated risk of disordered eating due to other factors like minority stress. However, cisgender heterosexual people could be more likely to develop disordered eating when experiencing high levels of loneliness because they have not developed the same kinds of coping skills that LGBTQ+ use to cope with marginalization and discrimination. These findings, collected from a single study with a snowball sampling approach, are preliminary. Further research is needed to better examine the intersection of loneliness and disordered eating in LGBTQ+ people as compared to cisgender heterosexual people.

Abstract #52 Inadequate Fruit and Vegetable Intake and Nutrition-Related Chronic Diseases Among SNAP Households

Authors

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Introduction

In 2024 Oklahoma ranked among the lowest in nutrition-related chronic conditions, including 43rd for adult obesity, 38th for cardiovascular diseases, and 32nd for diabetes. Both low household income and food insecurity are associated with inadequate fruit and vegetable (F/V) intake, which may contribute to chronic disease development and an increased risk of premature mortality. While the Supplemental Nutrition Assistance Program (SNAP) and nutrition incentive programs, such as Double Up Oklahoma (DUO), aim to improve access to healthy foods, including F/Vs, among low-income households, little is known about the relationships between food insecurity, F/V intake, hypertension, and diabetes mellitus in the SNAP population. Therefore, we examined these relationships among SNAP recipients recruited into the **Pro**duce is **V**ital **I**n **D**iverse **E**nvironments (PROVIDE) Study, which is designed to assess the impacts of the DUO program.

Methods

These analyses used cross-sectional data from PROVIDE baseline surveys collected between April 2024 and January 2025. Eligibility criteria included adults (18+ years) who received SNAP benefits and spent at least 25% of their SNAP benefits at a PROVIDE study grocery store in DUO expansion or matched-control communities. The survey included self-reported diagnoses of prediabetes, diabetes, and hypertension, the USDA 10-item adult food security survey, and the Block Fruit/Vegetable/Fiber Screener validated to estimate daily F/V servings. All statistical analyses were performed in SAS v9.4.

Results

Among the 595 initial PROVIDE participants, the majority were female (80.64%), had incomes below $20,000 (78.8%), and reported food insecurity (78.1%). Their mean age was 39.9 years and almost one in three reported diagnoses of hypertension (32.6%) while over one-quarter had prediabetes or diabetes (28.6%). Although most reported eating F/V at least once per day (71.1%) the estimated mean daily F/V intake was 3.5 servings, which is below the daily recommendations of 5-9 for optimal health. Additionally, F/V intake was lower among participants with food insecurity compared to those who were food secure (M=3.2 vs. M=4.4; p=0.0028). Furthermore, participants with prediabetes or diabetes consumed fewer F/V servings on average compared to those without these conditions (M=3.2 vs. M=3.6; p=0.0309). Similarly, individuals with hypertension had a lower mean intake than those without hypertension (M=3.0 vs. M=3.7; p=0.0002).

Discussion

Among SNAP households, those with diabetes, hypertension, and food insecurity had lower mean F/V intake, which is similar to previously reported relationships in low-income populations. Future research should investigate the impact of nutrition incentive programs, such as DUO, on F/V consumption and nutrition-related health disparities.

Abstract #61 Nutrition Incentives Improve Fruit-Vegetable Intake Among SNAP Households: PROVIDE Study Preliminary Analysis

Authors

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Introduction

Low-income households have a higher prevalence of nutrition-related chronic conditions, such as hypertension and diabetes, and over one-third experience food insecurity. While the Supplemental Nutrition Assistance Program (SNAP) and complementary nutrition incentive programs, such as Double Up Oklahoma (DUO), aim to reduce health disparities by increasing spending capacity for fresh produce among low-income households, research is limited regarding the impact of incentive programs on fruit and vegetable (F/V) intake. DUO provides incentives to purchase fresh produce by matching SNAP dollars spent (up to $20/day) at participating grocery stores. As part of the **Pro**duce is **V**ital **I**n **D**iverse **E**nvironments (PROVIDE) study, we explored changes in F/V intake at baseline and 3-months post-DUO implementation among SNAP shoppers at DUO expansion and control stores.

Methods

These preliminary analyses included 306 PROVIDE participants with baseline and 3-month follow-up surveys collected between April 13, 2024 and January 27, 2025. Demographics, self-reported diagnoses, and food security were assessed at baseline. F/V intake was estimated using the validated Block Fruit/Vegetable/Fiber screener at baseline and 3-months. Mean changes in F/V intake from baseline to 3-months were estimated and compared between DUO expansion and control communities. All statistics were performed in R.

Results

Most participants were women (80.1%), had a high school education/GED or less (53.6%), experienced very low food security (60.8%), and had a mean age of 40.2 years. Additionally, over one in three participants reported a diagnosis of hypertension (35.0%) and over a quarter reported having diabetes or pre-diabetes (27.5%). All demographics and diagnoses were similar between participants in DUO expansion and control communities. While baseline data revealed no significant differences in median F/V intake among participants in DUO expansion compared to control communities (2.73 vs 3.38 servings/day; $p = 0.10$), from baseline to 3 months post-implementation median F/V intake increased among participants in DUO communities and decreased in control communities (+0.37 vs –0.37 servings; $p = 0.01$).

Discussion

These preliminary analyses indicate a high prevalence of nutrition-related chronic diseases among SNAP households in Oklahoma**.** However, access to DUO increased F/V intake in SNAP households, even during a period with grocery price inflation. Future analyses are needed to explore whether these increases in F/V intake will translate into improved clinical measures (e.g. HbA1c, blood pressure) over a longer period to support the impact of nutrition incentive programs on health.

Abstract #63 Goals Related to Increasing Health-Promoting Daily Activity in Older Adults with Multimorbidity

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Introduction

This study reports the baseline characteristics and types of goals that are set by individuals with multiple chronic conditions (MCC) in an intervention to improve performance of health-promoting daily activity. The ActiveOT intervention uses a combination of occupational therapy (OT) and behavioral activation (BA) techniques to help older adults with MCC improve health-promoting daily activity . During the baseline visit for the ActiveOT study, licensed occupational therapists conducted semi-structured interviews to facilitate client-centered problem areas, which were used for setting personal and meaningful goals. This research aimed to identify what types of health-promoting goals adults with multimorbidity's are setting and the importance of client-centered interventions.

Methods

40 participants (n=21 Tx, n=19 Control) were randomly assigned to the ActiveOT or the brief education control group. The Canadian Occupational Performance Measure (COPM), a semi-structured interview used to identify problem areas in daily activity, was administered at baseline to both groups to assess participants' current performance and satisfaction with their daily activity. Data collected from the baseline COPM assessment directed the focus for each participant's goals. Participants' goals were categorized using the Occupational Therapy Practice Framework (OTPF) areas of occupation. Authors 1 and 2 categorized the goal areas through an iterative process of discussion and comparison to assign each goal to the most fitting category. The last author served as final reviewer and determined consensus when there were discrepancies.

Results

There were 40 participants (n=19 male, n=21 female) with a mean age of 73.0 years old (SD=7.1), 4.02 health conditions (SD=1.31), and 1.6 functional limitations (SD=1.5). Participant goals set in this study fell under these seven categories: Health Management (50.3%), Instrumental Activities of Daily Living (16.2%), Activities of Daily Living (13.6%), Rest and Sleep (9.4%), Social Participation (7.3%), Leisure (2.6%), and Work (0.5%).

Discussion

Intervention goals focused on health-promoting daily activities hold significant value when managing MCC. Impactful health-promoting goals can range from health management to social connection and leisure pursuits. This allows individuals with MCC autonomy to choose from the breadth of health-promoting goals available, leading them to set more meaningful and individualized goals.

Abstract #66 Food First Pharmacy's Impact on Nutrition Security among OU Family Medicine Patients

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Introduction

The University of Oklahoma Food First Pharmacy (FFP) provides nutrition security support services to patients receiving care at OU Family Medicine (Tulsa, OK). Established in 2021, services include free, fresh produce every Tuesday for any Family Medicine patient combined with Supplemental Nutrition Assistance Program (SNAP) and Double Up Oklahoma (DUO) outreach to help support long-term food security. Additional medically-tailored groceries (MTGs) are provided to uninsured, medically-complex patients receiving care at the Bedlam-Longitudinal Clinic (Bedlam-L).

Methods

To evaluate the impact of the FFP on food security and dietary intake, we administered baseline and 3-month follow up surveys to MTG recipients during 2023 and 2024. Additionally, we tracked visits to the fresh produce table and changes in self-reported SNAP and DUO utilization among patients receiving services in 2024 to better understand how this service may be supporting nutrition security.

Results

During 2024, an estimated 26,969 pounds of fresh produce were provided to an estimated 1,606 unique patients including 147 unique patients who also accessed MTGs. Approximately22.8% of patients (n=346) received produce twice or more over the program year and 3.6% of patients (n=55) received produce 7 or more times/year. Only 33% of produce table visitors reported receiving SNAP benefits at their first visit. FFP staff provided SNAP enrollment hotline outreach to most of the remaining produce table visitors (n=1074), but only 2.0% later reporting receipt of benefits. DUO program outreach was provided to 347 produce table visitors who were eligible but not yet participants. Of these, 9% later reported accessing DUO.
Among MTG recipients, intake of fruits and vegetables averaged only 3.5 servings/day at baseline. At 3-month follow-up, 44.0% of MTG recipients reported an average increase of 1.8 servings of fruit and vegetables and nearly half (46.8%) reported an average increase of 5.4 grams fiber. Patients reporting food insecurity at baseline reported reduced food insecurity (3.9 to 3.2 points; 0-6 scale, p=0.008), and over half (52.4%) of these patients reported a food security score improvement of at least 1 point. Qualitative survey feedback underscored the program’s direct impact on dietary diversity, quality, and diabetes management.

Discussion

Findings suggest fresh produce and MTGs can support health behavior change among select patients. Future studies should examine potential barriers to long-term food insecurity, such as hesitancy or ineligibility for SNAP. These findings underscore the vital necessity of FFP services to support more immediate nutrition security needs among OU Family Medicine patients.