2026 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 2026 REACH-OUT Poster Forum (**R**esearch **E**xpo **A**bout **C**ommunity and **H**ealth at **OU**-**T**ulsa). This is an annual event to showcase student, staff, and resident research.

In addition to presenting posters 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 2026 REACH-OUT Poster Forum.

I would 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 2026 REACH-OUT Poster Forum.

On behalf of the 2026 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

Contents

Biomedical

Abstract #8: Accidental Cannabis Ingestions in Oklahoma Children under 6

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Introduction

Decriminalization of medical marijuana in Oklahoma in 2018 increased availability of marijuana products, thus increasing the potential for accidental cannabis exposure in children. Our primary objective was to examine the frequency and severity of unintentional cannabis ingestions in children under 6 years based on calls to the Oklahoma Poison Center.

Methods

We conducted a retrospective study of Oklahoma Poison Center calls for unintentional cannabis ingestions in children <6 years from 2014-2024. Cases were limited to edible cannabis formulations. Cases with confirmed effects unrelated to cannabis were excluded. Descriptive statistics were conducted.

Results

Of the initial 1,101 cases involving children under 6 years with unintentional cannabis exposures, 682 met inclusion criteria. One case occurred prior to legalization in 2018 while 681 cases were reported in the following 6 years. Over a quarter of cases (n=185, 27.2%) involved children two years old. Most calls to the Oklahoma Poison Center originated from the child's residence (n=377, 49.4%) or from a healthcare facility (n=295, 43.3%). The primary reported effects were neurologic (n=528, 77.4%), cardiovascular (n=80, 11.7%), respiratory (n=61, 8.9%), and gastrointestinal (n=60, 8.8%). Of the cases presenting to a health care facility, 11.3% (n=66) were admitted to a critical care unit and 37.3% (n=218) to a non-critical unit. The remaining cases were either treated and discharged from the ED (n=155, 26.5%) or stable for home management (n=145, 24.8%).

Discussion

Following legalization in Oklahoma in 2018, reports of accidental cannabis ingestion in young children rose markedly over the subsequent six years. These findings underscore a serious public health concern, as many cases required costly hospital and ICU admissions. Caregiver education on the dangers of cannabis ingestion and the need for appropriate storage are imperative.

Abstract #10: Congenital Melanocytic Nevi and Food Noise in Obesity: Prevalence and Behavioral Insights

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Introduction

Congenital melanocytic nevi (CMN) are collections of the pigment-producing cells, melanocytes, causing hyperpigmentation and typically appearing in the first years of life. At our clinic, we have noticed an increase in CMN among patients being treated for obesity. Furthermore, in these obese populations, there is typically an increase in food noise determined by a validated food noise questionnaire (FNQ). This study aims to assess the prevalence of CMN in our patient population and differences in FNQ scores between patients with and without CMN.

Methods

A survey was conducted among 169 patients at a clinic for individuals with obesity. The survey included information on the presence or absence of CMN and responses to the FNQ. The FNQ contained five statements about attitudes and thoughts toward food; results for each statement were ranked on a scale from 1 to 5, corresponding to the answers "strongly disagree" to "strongly agree." Each statement was weighed equally, and the summation of categories represented their food noise score ranging from 5 (low) to 25 (high). Binomial proportion tests were used to determine if patients in this clinic had a significantly higher prevalence of CMN compared to the general population. An additional independent sample t-test was used within the dataset to compare FNQ results in the group with CMN and the group without.

Results

When compared to the general population, patients at our clinic were found to have an increased prevalence of CMN, with 52.7% (n = 89) of patients reporting CMN. This rate is significantly higher than that of the general population of 1% for small CMN ($p<0.001$) and 0.1% for medium CMN ($p<0.001$). Further analysis revealed no significant differences of FNQ scores between the groups with and without CMN, with the CMN group mean score of 15.45, SD=4.87, and the absent CMN group mean score of 15.85, SD=5.64, with $p=0.621$.

Discussion

Our study suggests an increased prevalence of CMN in our patient population when compared to the general population in both small and medium categories. Additionally, finding no significant difference in FNQ scores between the CMN and no CMN groups suggests that both groups exhibit similar levels of persistent and intrusive preoccupation with food. Further analysis is needed to determine a connection between the increased prevalence of CMN and the patients' underlying genetic predisposition to obesity.

Abstract #12: Adverse Event Reports for Glucagon-Like Peptide-1 Receptor Agonists in Children and Adolescents

Authors

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Introduction

Glucagon-like peptide-1 receptor agonists (GLP-1 RAs) have become an increasingly utilized treatment option for pediatric obesity and type 2 diabetes. Though GLP-1 RA use in children is growing, data on safety and adverse effects is limited in this population. This study aimed to identify and categorize adverse event reports to the FDA related to GLP-1 RA use in children and adolescents.

Methods

A retrospective review of pediatric (0 to 18 years) adverse event reports involving GLP-1 RAs from 01/01/2015-09/25/2025 was conducted using the FDA Adverse Events Reporting System (FAERS). The GLP-1 RAs included were exenatide, liraglutide, semaglutide, dulaglutide, lixisenatide, albiglutide, and tirzepatide, along with their respective brand names. Duplicate reports, reports with unknown age, and fetal exposures were excluded. Cases involving multiple suspected ingredients were reviewed and removed if a GLP-1 was not the offending agent. Since age was not reported consistently, it was transformed into a categorical variable. The defined age groups were 5 or less, 6-8, 9-11, 12-14, 15-17, and 18 years of age. Adverse reactions were categorized according to the affected body systems and/or general concerns. Descriptive statistics were conducted.

Results

A total of 204 adverse event reports met study inclusion criteria with a steady upward trend in number of reports each year. The number of annual reports were low (4-10) until 2021, when reports increased quickly, peaking at 56 in 2024. The most common ages reported were 15-17 years (n=79, 38.7%), 18 years (n=52, 25.5%), or ‘5 or less' (n=41, 20.1%). Most reports were from consumers (n=129, 63.2%) and included semaglutide (n=83, 40.7%) or tirzepatide (n=42, 20.6%). The most common adverse reaction types were gastrointestinal (n=98, 48.0%), administration errors (n=58, 28.4%), nervous system (n=38, 18.6%), and endocrine (n=32, 15.7%). Adverse event outcomes were categorized as serious (n=120, 58.8%) or non-serious (n=84, 41.2%). Outcomes included hospitalization (n=66, 32.4%), life threatening (n=10, 4.9%), required intervention (n=7, 3.4%), disability (n=6, 2.9%), death (n=4, 2.0%), congenital anomaly (n=1, 0.5%), and other outcome (n=65, 31.9%).

Discussion

While gastrointestinal symptoms are a well-known side effect to GLP-1 RA use, the frequency of nervous system side effects as well as administration errors merits further consideration. Additionally, many reports occurred in an age group without FDA approval. While causation cannot be ascertained by FDA FAERs data – it is important that healthcare providers give comprehensive education regarding safe storage and remain vigilant for emergence of adverse effects.

Abstract #24: Real-World Outcomes of Bariatric Surgery and Adjunctive Setmelanotide in Genetic Obesity

Authors

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Introduction

Imcivree (setmelanotide), is a selective melanocortin-4 receptor agonist, approved for chronic weight management in monogenic obesity.[1] While setmelanotide monotherapy has demonstrated variable efficacy in adults, combination pharmacotherapy with tirzepatide has demonstrated enhanced weight loss outcomes in real-world practice. Conversely, bariatric surgery alone has demonstrated suboptimal results, with reports of weight regain and attenuated response in small retrospective cohort studies. [2] This study evaluates the efficacy of combined bariatric surgery and setmelanotide, with or without adjunct glucagon-like peptide-1 (GLP-1) receptor agonist therapy, in achieving sustained weight loss.

Methods

This retrospective cohort study included 24 adults with genetic obesity treated with bariatric surgery and setmelanotide, with or without adjunct GLP-1 therapy, between 2018 and 2025. The mean age was 43 years of age, and the mean baseline weight was 151 kg (range 103.9–222.5), with 95.8% female representation. Bariatric procedures included Roux-en-Y gastric bypass, vertical sleeve gastrectomy, and single-anastomosis duodeno-ileal bypass with sleeve gastrectomy. Patients were followed for at least 12 months postoperatively, with weight outcomes assessed at each patient's most recent follow-up appointment.

Results

The cohort included 24 patients (mean age 43 years, 95.8% female) with severe obesity and a mean baseline weight of 151 kg. Bariatric procedures included RYGB (n=15), VSG (n=7), and staged VSG-to-SADI-S (n=2). Following bariatric surgery combined with setmelanotide, with or without adjunct GLP-1 therapy, the overall cohort achieved a mean weight reduction of 42.0 ± 12.2% over 36 months. Among VSG patients receiving 3 mg setmelanotide, mean weight loss was 36.1 ± 8.6% over 32 months. RYGB patients, four of whom received 1–2 mg setmelanotide, achieved a mean weight reduction of 45.4 ± 9.0% over 40 months. Weight loss was comparable between patients receiving adjunct GLP-1 therapy (42.3 ± 12.6%, n=9) and those treated with setmelanotide alone (41.9 ± 12.5%, n=15). One staged VSG-to-SADI-S patient achieved 64% weight reduction and required maintenance setmelanotide for hyperphagia control.

Discussion

Combined bariatric surgery and setmelanotide therapy demonstrated durable, clinically significant weight loss in patients with genetic obesity. Comparable outcomes regardless of adjunct GLP-1 use suggest that setmelanotide is the principal contributor to sustained weight reduction. These findings support integrated pharmacologic and surgical strategies to optimize long-term outcomes in individuals with genetically mediated obesity, warranting prospective validation in larger cohorts.

Abstract #25: Epidemiology of Electrical Injuries Treated in United States Emergency Departments

Authors

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Introduction

Electrical shock and electrical burns are common chief complaints among patients presenting to emergency departments (EDs) and are challenging to manage because of the complex pathophysiology, variable presentations, and occult injuries. Characterizing the demographics, injury patterns, and outcomes of patients presenting with electrical injuries may improve recognition of higher-risk groups and inform the expected clinical course. The primary aim of this study was to characterize the epidemiology of consumer product-related electrical injuries that presented to EDs in the United States using data from the National Electronic Injury Surveillance System (NEISS).

Methods

We conducted a retrospective, cross-sectional analysis of data from NEISS which is a publicly available database that collects data on consumer product-related injuries treated in EDs across the US. We analyzed NEISS ED visit data from 2014 through 2023. Cases were identified using NEISS diagnosis codes for electrical injuries, including “46 – burns, electrical” and “67 – electrical shock.” All ED visits meeting either diagnosis code during the study period were included. Extracted variables included patient demographics, body part affected, location injury occurred, and patient disposition. Descriptive results are reported as weighted percentages and unweighted counts.

Results

We identified 2,878 patients meeting inclusion criteria. Children aged 0-5 years comprised 17.6% (n=744) of cases, the pediatric (0-17 years) population in general made up 34.9% (n=1,420) of cases, and adults accounted for 65.1% (n=1,456) of cases. Males were more frequently injured than females (58.6%, n=1,634 versus 41.4%, n=1,244). Among reported injury locations, the most common anatomic classifications were “all parts of the body” (68.4%, n=1,846), followed by hand (13.3%, n=459). Most injuries occurred in the home setting (63.8%, n=1,787), with 3.9% (n=147) occurring in schools or daycares. Most patients were treated and discharged from the ED (85.5%, n=2,483), but 10.5% (n=305) required hospital admission, transfer, or observation. Nine patients expired related to their electrical injury.

Discussion

We describe the epidemiology of product-related electrical injuries presenting to US EDs. Young children represent a substantial proportion of cases, highlighting their vulnerability to household electrical exposures. Males were more frequently injured than females, consistent with prior literature. Although most patients were treated and discharged from the ED, 10.5% required higher levels of care and a small number of fatalities occurred. These findings provide emergency physicians with a clearer understanding of the epidemiology and clinical context of product-related electrical injuries.

Abstract #27: Trauma and its effects on pain perception during intrauterine device insertion

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Introduction

Intrauterine Devices (IUDs) serve as a popular and effectual means of reversible contraception in the United States. They are long-lasting and convenient, with procedures that can be performed easily in outpatient settings. However, the pain associated with these procedures can present a significant barrier to those who are considering this option. Adverse childhood experiences (ACEs) are a broad category of events that occur during formative years that can cause later physical and emotional health issues, with a majority of adults in the United States reporting having experienced at least one ACE during their childhood. Individuals who report having experienced ACEs are known to carry a greater risk in later life for a variety of physical and psychological health issues. Despite this, there has never been a study that searches for a potential link between ACEs and a greater risk of increased perception of pain during IUD insertion.

Methods

We asked consenting study participants to fill out an ACEs survey before the procedure and then to rate their pain during each step of the procedure (speculum placement, tenaculum placement, uterine sounding, IUD placement, and overall) on a visual analog scale (VAS). Based on the surveys, patients were categorized into low risk (0), intermediate risk (1-3), and high risk (4+) groups. We conducted a one-way ANOVA test to search for an association between these groups and an increased average pain score.

Results

Pain scores during each step of the procedure varied across groups. Mean scores for the overall procedure were 6.43 (low risk), 3.75 (intermediate risk), and 5.62 (high risk). Interestingly, intermediate risk participants had mean pain scores lower than both low risk and high risk participants at every step of the procedure. ANOVA test revealed that none of the steps reached a P-value below 0.05 or an F value greater than the F-critical value, indicating that there is no significant difference between groups at this time.

Discussion

These results serve as a first-round analysis for this study. Our plan is to continue recruiting patients. Our eventual goal is to recruit at least 159 participants, 53 in each ACE category, to reach 80% power at 5% significance. Pain management techniques for patients are either unsatisfactory for patients or inefficient. The goal of this study is to move toward greater trauma informed cared for IUD insertions.

Abstract #29: Impact of Body Mass Index on Pelvic Fracture Patterns and Outcomes

Authors

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Introduction

Obesity is an increasingly common comorbidity among trauma patients, and is associated with playing a role in fracture patterns and recovery times. Body mass index (BMI) is a way to quantify obesity and its associated health risks. The impact of BMI on the characteristics of pelvic fractures and associated outcomes remains poorly understood. This study aims to better understand the relationship between BMI category and pelvic fracture patterns among adult trauma patients using the Trauma Quality Improvement Program (TQIP) database.

Methods

We performed a retrospective observational study using the American College of Surgeons TQIP database (2021–2022). Adult patients aged ≥18 years with complete demographics, Injury Severity Score data, and a pelvic fracture were included. Pelvic fractures were identified using ICD-10-CM codes (S32) and classified by anatomic involvement. Patients with lumbar spine fractures, isolated coccygeal fractures, or severe non-pelvic injuries (AIS >2) were excluded. BMI was categorized per World Health Organization definitions. Acetabular fractures showed consistent variation across BMI categories, and was selected for primary regression analysis using modified Poisson regression to estimate prevalence ratios. Unadjusted models included BMI category only; adjusted models controlled for age and sex. Continuous variables were compared using the Kruskal-Wallis H test and categorical variables were compared using Pearson chi-square tests.

Results

27,000 patients with pelvic fractures met inclusion criteria. Higher BMI was associated with younger age, and higher prevalence of comorbidities. Acetabular fractures were present in 10,189 patients (37.7%) ranging from 24.3% in underweight patients to 61.7% in Class III obesity. Unadjusted analysis demonstrated overweight and obese patients had significantly higher prevalence of acetabular fracture compared to normal-weight patients. Obesity remained independently associated with acetabular fracture, with prevalence ratios increasing across obesity classes: Class I (PR1.28, 95% CI1.23–1.34), Class II (PR1.45, 95% CI1.37–1.53), and Class III (PR1.63, 95% CI1.52–1.75). Underweight patients had a significantly lower prevalence of acetabular fracture compared to normal weight patients (PR0.89, 95% CI0.82–0.96). In-hospital mortality of any type of pelvic fracture demonstrated a U-shaped distribution, with 1.9% in underweight and 3.2% in class III obesity 3.2% patients compared to normal weight patients at 1.0%.

Discussion

BMI appears to influence pelvic fracture patterns with higher prevalence of acetabular fracture seen in higher BMI patients. Additionally, extremes of BMI increase risk of adverse outcomes. These findings suggest BMI may alter the distribution of pelvic force following trauma, necessitating incorporation into risk stratification. This may aid clinical assessment, imaging utilization, and multidisciplinary management of pelvic trauma patients.

Abstract #37: Artificial Intelligence and Machine Learning: an Important New Set of Tools for Clinical Rotator Cuff Research

Authors

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Introduction

Recent studies have used artificial intelligence (AI) and machine learning (ML) to optimize rotator cuff repair outcomes in regards to surgical technique, tear identification, and imaging modalities. However, there is a lack of critical appraisal of adherence to peer-reviewed reporting guidelines in the spaces of AI/ML. The Transparent Reporting of a multivariable prediction model for Individual Prognosis or Diagnosis (TRIPOD+AI) statement provides recommendations for studies developing or evaluating a multivariable prediction model to standardize the reporting of findings. The 27-item checklist evaluates many aspects of the studies; specifically: 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.

Furthermore, we aim to raise awareness of the TRIPOD+AI reporting statement to shoulder surgeons and researchers developing AI/ML algorithms and/or conducting studies evaluating these algorithms. With these aims, we hope to improve future reporting and transparency of AI/ML studies regarding shoulder surgery and pathology.

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 rotator cuff repair. After screening, 25 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 4 (16.0%) studies referenced TRIPOD +AI. The items with the lowest adherence were item 3c, which assesses acknowledgement of health inequalities between sociodemographic groups. The other items with the lowest adherence were items 8c and 9b, which assess actions to blind assessment to the outcome being predicted and blind assessment of predictors for the outcome and other predictors. The methods sections of the analyzed articles were the most inadherent to the guidelines.

Discussion

Overall we found rotator cuff studies regarding machine learning models and artificial intelligence to have suboptimal reporting of TRIPOD +AI items. 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 #41: Feasibility of Using Flow Cytometry to Analyze TLR-4 Signaling in Biobanked PBMC

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Introduction

Lipopolysaccharide (LPS), a Gram-negative bacterial endotoxin, triggers potent immune responses. Monocyte responses to LPS are mediated via the Toll-like receptor (TLR)-4/CD14/MD2 receptor complex which signals production of inflammation-related cytokines. Measuring peripheral blood mononuclear cell (PBMC) cytokine production allows for assessments of innate immunity in a variety of contexts. While typically measured via immunoassay (ELISA) in culture supernatants, a standardized flow cytometry protocol would allow for quick, cell-specific analysis. This project sought to evaluate the feasibility of intracellular flow cytometric staining for the assessment of early and late human PBMC responses to LPS.

Methods

Frozen PBMC were thawed and cultured at a density of 2.5 x 10^5 per well in 1mL cRPMI/10% fetal bovine serum in 24-well plates at 37°C /5% CO_2. Cultures were done +/- 4ng/mL LPS in the presence or absence of Brefeldin A. Cells and supernatants were collected at timepoints ranging from 30 minutes to 24 hours. For intracellular flow cytometry, Brefeldin A-treated cells were labeled with CD14-FITC mAb then fixed and permeabilized in the presence of IL-6-PE and TNFα-APC or IL-10-APC monoclonal antibodies. Data was acquired using a Cytek Aurora spectral flow cytometer. Supernatants, without Brefeldin A, from 2-, 6-, and 24-hour timepoints were analyzed for levels of IL-6, TNFα, and IL-10 using MSD V-PLEX inflammatory cytokine panels and a MESO QuickPlex SQ 120 instrument.

Results

LPS stimulation of $CD14^+$ monocytes showed robust early induction of TNFα and IL-6 that peaked at approximately 6 hours. The anti-inflammatory cytokine IL-10, known to arise later in response, was not evident at the early timepoints. TNFα production occurred earliest with 33.6% of cells positive for production compared to only 1.4% positive for IL-6 at 1-hour post-stimulation. Neither cytokine was evident at the 30-minute timepoint. By 4 hours, both TNFα and IL-6 averaged greater than 75% positive cells across four experiments. The LPS response in the PBMC culture supernatants mirrored the responses seen in the intracellular flow cytometry assay, with TNFα showing the highest response at 2 hours and both TNFα and IL-6 producing levels above the assay maximum by 6 hours. IL-10 levels in the supernatant were minimal at the early timepoints but evident at 24 hours.

Discussion

Intracellular flow cytometric analysis of biobanked PBMC appears to be a feasible method for assessment of monocyte responses to TLR-4 stimulation. Future work will focus on refinement of timing and dosing, and responses to other TLR agonists, to standardized an assay for innate immune responsiveness.

Abstract 48: Predictors of Unplanned ICU Admission in Low-Severity Trauma Patients (ISS<9)

Authors

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Introduction

Unplanned admission to the intensive care unit (ICU) is an adverse hospital outcome. These admissions have been associated with increased healthcare utilization and higher financial burden. Additionally, these patients have a significantly increased risk of morbidity and mortality. This study focuses on admitted trauma patients following trauma bay evaluations who were found to have a low injury burden, defined as an ISS < 9. The Injury Severity Score (ISS) is an anatomical scoring system ranging from 1 to 75, with scores of 1-8 classified as minor injury. We aim to identify common characteristics among patients within this low-ISS cohort who later required unplanned ICU admission.

Methods

We conducted a retrospective cohort study using the American College of Surgeons Trauma Quality Improvement Program (TQIP) database (2021–2022). Adult trauma patients (≥18 years) with complete demographic and injury data were included. Patients initially admitted to non-ICU locations (general floor, observation unit, or telemetry/step-down) were included, with further restriction to anatomically low-severity trauma (ISS <9). Injury patterns were characterized using a dominant injury region defined by the highest Abbreviated Injury Scale score. The primary outcome was unplanned ICU admission. Univariable analyses compare baseline characteristics by outcome. Variables significant on univariable analysis were entered into a backward likelihood-ratio multivariable logistic regression model to identify independent predictors of unplanned ICU admission. Adjusted odds ratios (OR) with 95% confidence intervals were reported.

Results

Among 497,870 low-severity injury trauma patients (ISS <9), 4,241 (0.85%) had unplanned ICU admission. The variables with the highest adjusted ORs included age >40 years (adjusted OR 2.49, 95% CI, 2.22-2.78), alcohol use disorder (adjusted OR 2.47, 95% CI, 2.25-2.70), cirrhosis (adjusted OR 2.26, 95% CI, 1.96-2.61), chronic renal failure (adjusted OR 2.22, 95% CI, 1.97-2.51), and chronic obstructive pulmonary disease (adjusted OR 1.82, 95% CI, 1.68-1.96), each with *P* <.001. A scoring model was developed to predict unplanned ICU admission. The resulting full risk score, accounting for comorbidities, BMI, and anatomy, had an AUC of 0.730 (95% CI 0.723–0.738), indicating possibly helpful to good discrimination. This represents a 73% probability that a randomly selected patient requiring ICU admission will have a higher risk score than one who does not.

Discussion

Comorbidity burden among low-severity injury trauma patients (ISS <9) was the primary predictive factor for unplanned admission to the ICU. While model discrimination was modest, weighted comorbidity stratification meaningfully separated escalation risk and warrants future studies.

Abstract #53: Postoperative Results of Food Noise Questionnaire in a Bariatric Surgery Cohort

Authors

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Introduction

Food noise is described as a continuous inner dialogue about food and eating. The Food Noise Questionnaire (FNQ) is a recently validated tool to assess food noise. While bariatric surgery has a known anorectic effect, to date, there has been no study utilizing the FNQ to analyze food noise in a postoperative bariatric surgery cohort. This study aimed to evaluate postoperative FNQ scores in bariatric patients.

Methods

We conducted a retrospective chart review of patients who underwent bariatric surgery from April 2025 to January 2026. Primary surgery types included Roux-en-Y (RNY) and Vertical Sleeve Gastrectomy (VSG). The FNQ was administered at the first follow-up visit. Patients without a postoperative FNQ score or with illegible FNQ scores were excluded. Independent samples t-tests (JASP software) were run to compare FNQ scores by RNY vs VSG, postoperative appointment timing (≤ 30 days vs >30 days), BMI ≥50 kg/m², sex, prior GLP-1 use, and anti-obesity medication (AOM) reinitiation at postoperative visit. $P < .05$ was considered significant.

Results

Among 114 patients who underwent bariatric surgery, 68 patients (59.6%) had postoperative FNQ scores. The mean (SD) postoperative follow-up in the bariatric clinic was 39.8 (23.4) days. Mean FNQ scores were 5.0 (4.2) for RNY (n = 19, 27.9%) and 4.6 (4.3) for VSG (n = 43, 63.2%). There was no significant difference in FNQ scores between RNY and VSG ($P = .75$). Among patients with postoperative FNQ scores, patients who restarted AOMs (n = 11) had a mean FNQ of 9.3 (3.2), while patients who did not (n = 57) had a mean FNQ of 3.8 (3.7) ($P < .001$). There was no significant difference in FNQ scores by postoperative follow-up ≤ 30 days ($P = .25$), BMI ≥50 kg/m² ($P = .20$), sex ($P = .27$), or prior GLP-1 use ($P = .63$). Eleven patients had a FNQ > 8 (16.2%).

Discussion

This is the first study to examine postoperative FNQ scores in a bariatric surgery cohort. There was no significant difference in FNQ scores after the RNY vs VSG procedures. However, patients who restarted AOMs had significantly higher FNQ scores at the first postoperative visit, indicating that the FNQ may be useful as a screening tool to identify candidates for AOM therapy. In the initial FNQ study, the mean (SD) FNQ score for a population of 400 patients tested was 7.39 (5.37). Further research is needed on factors that affect postoperative food noise.

Education

Abstract 11: More Than a Bounce: Rethinking Regulation and Relationality with BAVX

Authors

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Introduction

Traditional educational models often overlook children's holistic development, particularly in areas such as coordination, focus, and self-regulation. Highly structured academic environments may limit engagement and marginalize students who benefit from embodied, sensory, or movement-based learning. Bal-A-Vis-X (Balance–Auditory–Vision Exercises; BAVX) is a rhythmic, movement-based program designed to integrate body and mind through coordinated ball, balance, and rhythm activities. This study explores teachers' perceptions of BAVX implementation and its influence on classroom relationships, learning processes, and power dynamics.

Methods

This qualitative study was guided by a postmodern paradigm to examine how teachers experience and interpret BAVX in educational settings. Data were collected through multiple sources to capture diverse perspectives. Participants included 32 educators who completed an anonymous online survey about their knowledge and perceptions of BAVX. In addition, four semi-structured interviews were conducted with a school administrator with extensive experience implementing BAVX since 2017, and a virtual focus group was held with five educators from different U.S. states who had implemented BAVX in Pre-K or elementary classrooms. The researcher also maintained a field notebook to document observations and reflections during the data collection process. Data were analyzed using thematic coding following a two-cycle coding process informed by postmodern theory and principles of BAVX.

Results

Three primary themes emerged from the analysis: power sharing, co-constructed knowledge, and pluralism in learning. Participants described how BAVX activities redistributed classroom authority by allowing children to take leadership roles and participate in reciprocal teacher–child interactions. Educators also emphasized the collaborative nature of learning within BAVX, where knowledge developed through shared movement, rhythm, and interaction rather than direct instruction. Finally, teachers highlighted the program's support for pluralistic learning environments by incorporating non-verbal, embodied forms of participation that helped improve focus, emotional regulation, and inclusion for diverse learners.

Discussion

Findings suggest that BAVX may challenge traditional instructional hierarchies by fostering shared authority and collaborative learning processes. The movement-based and rhythmic nature of the program appears to support multiple modes of engagement, particularly for students who benefit from sensory and relational learning experiences. These findings also suggest that embodied learning practices may disrupt rigid academic norms and create more responsive classroom environments. Integrating BAVX activities may therefore help educators support self-regulation, relational trust, and inclusive participation in early learning settings.

Abstract #13: A Student Needs Driven Transformation to a Professional Identity Formation Curriculum

Authors

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Introduction

Professional identity formation (PIF) is a vital yet underdeveloped aspect of medical education. PIF is the process through which medical students navigate the complex demands of medical school and develop a sense of professional belonging and identity. The University of Oklahoma College of Medicine established a working group to create a PIF curriculum and address this gap. Initial objectives included mentor-led group sessions and a reflective journal to facilitate self-directed identity exploration. We sought student feedback on the initial curriculum to target interventions to student needs. We describe changes to a proposed PIF curriculum at the University of Oklahoma College of Medicine based on a student needs assessment.

Methods

We administered an IRB-exempt (#19516) Qualtrics survey (August 25 – October 6, 2025) including free text and structured survey questions with a 5-point Likert scale. Questions evaluated markers of impostor phenomenon, student perceptions of current PIF support, most-valued facets of professionalism, and preferred resources. We summarized closed-ended responses descriptively and synthesized free text responses with thematic analysis.

Results

The survey was distributed to 235 preclinical students, with 41 responses (17.4%). Students reported feelings strongly correlated with impostor phenomenon such as self-criticism (90.2%), perfectionism (75.6%), and social anxiety (56.1%). For program effectiveness, students rated commitment to lifelong learning highest (3.95/5) and selflessness and humility lowest (3.20/5). Clinical reasoning (4.63/5) and communication skills (4.54/5) were the most desirable PIF programming, while navigating self-doubt was the least (3.71/5). Mentor-led discussions were a preferred resource (73.2%), while few desired a reflective journal (22%). Thematic analysis revealed preference for clinical experiences in fields of interest, small-group mentorship, resources for professional exploration, and no mandatory additions to the curriculum.

Discussion

The needs assessment demonstrated a preference for no additional curricular requirements, driven by concerns over already demanding workloads. Few students were interested in a reflective journal, a major part of the working group's PIF development plan. We pivoted to a digital PIF handbook with professional topics, optional reflective prompts, and resources for self-directed professional exploration. Integrating PIF competencies into existing curriculum such as case-based learning will facilitate PIF while minimizing additional work. Students valued mentorship highly; we will emphasize this in the PIF curriculum. These changes reflect the importance of including student opinions to avoid incorporating well-intentioned changes that may hinder student growth. Study limitations include modest response rate and single institution sample. Future directions include assessing student responses and pre-post PIF competencies to evaluate curricular effectiveness.

Abstract #17: vNOTES to Self: Rethinking Vaginal Hysterectomy in Residency Training

Authors

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Introduction

Hysterectomy is one of the most commonly performed surgeries in the U.S., with over 600,000 cases annually. Vaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES) offers several benefits over traditional laparoscopic and vaginal approaches, including reduced postoperative pain and quicker recovery. However, adoption remains limited, in part due to teaching challenges in residency programs.

Methods

This is a prospective cohort study conducted at both the Tulsa and Oklahoma City campuses of a university-affiliated OB/GYN residency program. We are comparing surgical outcomes between vNOTES and traditional vaginal hysterectomy with adnexal removal. Data collection includes chart reviews, pain scores via the Visual Analogue Scale (VAS), and complication tracking. Resident case logs are reviewed pre- and post-vNOTES implementation to evaluate its effect on surgical exposure. Data collection is currently ongoing at both sites.

Results

Preliminary findings support vNOTES as a safe and effective alternative to conventional vaginal hysterectomy. Early analysis demonstrates comparable intraoperative and postoperative complication rates, estimated blood loss (45.3 mL vs 34.6 mL), length of stay (0.6 vs 0.5 days), and 24-hour pain scores (6 vs 8) between groups. Although postoperative analgesic use varied, with vNOTES patients less likely to receive PO NSAIDs ($p=0.03$) and more likely to receive IV paracetamol ($p=0.02$) and PO opioids ($p=0.04$), reported pain remained similar. In addition to favorable clinical outcomes, these data suggest vNOTES may provide meaningful resident exposure to vaginal surgical techniques at a time when such opportunities are declining nationally. Continued enrollment will further clarify its educational and clinical impact.

Discussion

Integrating vNOTES into residency training shows strong potential to enhance gynecologic surgical education by expanding resident exposure to vaginal hysterectomy while maintaining favorable clinical outcomes. Early findings support vNOTES as a safe, effective approach and a valuable addition to resident training. With only a few patients remaining before dataset completion across both campuses, final analysis is expected to provide a more comprehensive assessment of its educational and clinical impact in graduate medical education.

Abstract #20: Assessing OB/GYN Resident Knowledge and Perceptions of Continuous Glucose Monitoring in Pregnancy

Authors

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Introduction

OB/GYN residents play an essential role in the care of individuals with diabetes during pregnancy. The goal of this study was to 1) assess OB/GYN resident knowledge and perceptions of continuous glucose monitoring (CGM) for diabetes and 2) determine didactic and education available to OB/GYN trainees related to CGM use.

Methods

This study employed a 21-question cross-sectional survey design. The survey was divided into three sections: 1) demographics and educational opportunities, 2) clinical experiences, and 3) knowledge/perceptions. Current OB/GYN residents from accredited residency programs across the US were recruited through the APMOG and CREOGPD listservs. Respondents with incomplete responses or that indicated they were not residents were removed for the purpose of analysis (n=11). Descriptive statistics were utilized.

Results

Among the 65 responses included in the analysis, 30.8% (n=20) were PGY-3 residents with 69.2% (n=45) managing 50+ patients with pre-existing or gestational diabetes during pregnancy. Residents strongly agreed/agreed (n=38, 58.5%,) with being comfortable with interpreting CGM data, and strongly agreed/agreed with CGMs being acceptable for monitoring diabetes in pregnant patients (n=61, 93.8%).

Over half of the residents (n=44, 67.7%) reported no formalized curriculum in their program. For those that did (n=8, 12.3%)– lectures were the most common format (n= 8, 100%) followed by simulations (n=2, 25%), and modules (n=1, 12.5%)

Discussion

Most residents perceived CGM as a valuable management tool for diabetes in pregnancy. Despite this, most residents reported not having a formal CGM curriculum in their residency program – suggesting the need for formalized CGM curriculum development.

Abstract #28: Methods for Usability Testing an Educational Simulation: A Case Study

Authors

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Introduction

Many women lack access to high-quality prenatal care – particularly those in rural and underserved communities. This gap may be addressed by training obstetricians and family practitioners in telemedicine best practices. Therefore, we developed an instructional simulation involving a standardized patient to train residents in this modality. Residents needed to identify a potential medical emergency and escalate care to protect patient safety. Before piloting the simulation with target learners, we conducted usability tests with expert faculty. Our goal was threefold: (1) to accurately replicate a high-stakes encounter, (2) teach telehealth competencies, as outlined by the AAMC, applicable to maternal care, and (3) ensure faculty could accurately and reliably evaluate resident performance.

Methods

The learners needed to interview a patient during a video-call, correct a technology problem, diagnose an emergency, locate the closest hospital with obstetrics capabilities, and resolve patient transportation barriers. We leveraged usability evaluation methods used in developing health technologies. We began by counting the number of telemedicine steps completed during direct observation. A structured rubric was used to evaluate the competencies satisfied by the learner. We also monitored the competency-related tasks that observers were unable to score due to usability or implementation issues.

Results

We recruited five faculty testers to use the simulation. Four of the five testers were able to identify the main clinical issue, make a provisional diagnosis, and refer the patient to the emergency room. One of the five testers did not complete all simulation components because the scheduled technology failure did not occur, as it was linked to the physical exam portion of the simulation, which the tester did not initiate.

Discussion

We successfully measured seven of the ten telehealth competencies during simulations using our structured rubric, demonstrating that the simulation is effective, but has room for improvement before piloting the program. Usability testing allowed for identification of areas in which learner competencies could not be evaluated; one of these competencies was the learner's ability to troubleshoot a technology failure. Though this was intended in the script, it was initially dependent on learner behavior, which is variable. This highlighted the need for an independently scripted prompt at an unavoidable milestone, which would allow the observer to reliably evaluate the learner's competency in this area. Future simulations will incorporate this and other changes in order to successfully evaluate all ten of the essential telehealth competencies for the future purpose of piloting an obstetric telehealth curriculum.

Abstract #30: Weaving Peace and Design: Integrating the Engineering Design Process with Navajo Peacemaking Values in an Early Childhood STEM Classroom

Authors

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Introduction

Peer conflict is a natural part of early childhood classrooms, yet it is typically addressed separately from academic learning. The Engineering Design Process (EDP), with its iterative steps of Define, Learn, Plan, Try, Test, and Decide, shares a structural logic with conflict resolution. This qualitative action research study explored how aligning the EDP with Navajo peacemaking values (*hózhó*, *k'é*, *na'nitin*) could support both engineering thinking and culturally grounded conflict resolution in a K–2 STEAM classroom on the Navajo Nation.

Methods

As a teacher-researcher, I adapted the *PictureSTEM* "Designing Baskets" unit over 16 weeks, applying the same six EDP steps to both design challenges and peer conflict. Data sources included teacher reflections, analytic memos, and annotated curriculum documents. Analysis followed a three-cycle coding process (Saldaña, 2016) guided by a tri-theoretical framework: sociocultural theory, the ethic of care, and culturally relevant pedagogy.

Results

Two central themes emerged from the data, each operating on multiple levels: relationship and reflection. First, the concept of relationship transformed the curriculum from a technical sequence into a lived communal practice. Guided by the Navajo values of *k'é* (relational accountability) and *hózhó* (restoring harmony), the student-student relationship evolved as children learned to use the EDP to navigate peer conflict and prioritize communal repair over winning. Simultaneously, the teacher-student relationship became the driving force behind the curriculum's adaptation; recognizing the students' desire for connection, I learned to prioritize relational trust over strict adherence to lesson plans. This relational work was sustained by the second theme, reflection, which mirrored the Navajo value of *na'nitin* (learning through listening and observing). In the classroom, student reflection flourished as children internalized engineering vocabulary to independently evaluate their material designs and regulate their own social behaviors. Parallel to this, iterative teacher reflection served as the engine for the action research, allowing me to critically examine my own pedagogy, adjust the pacing, and progressively ground the instruction in the cultural realities of the students.

Discussion

These findings suggest that culturally responsive STEM curriculum must be lived rather than delivered. Notably, both themes operated in parallel at the student and teacher level; relationship and reflection were active processes for the teacher-researcher as much as outcomes for children. This symmetry affirms that relational trust is a precondition for meaningful teaching (Noddings, 1984) and that learning is co-constructed (Vygotsky, 1978). That children applied EDP vocabulary to both material design and social behavior suggests the framework became a shared language for thinking.

Abstract #33: Patient Safety Escape Room: A Graduate Medical Education Simulation for Event Reporting

Authors

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Introduction
Residents and third-year medical students provide frontline patient care yet consistently submit the fewest patient safety event reports. At the OU-TU School of Community Medicine, internal review in the Department of Obstetrics and Gynecology demonstrated that these learner groups report only a small fraction of adverse events and near misses. This underreporting may stem from insufficient hands-on training and limited familiarity with electronic reporting systems. Traditional didactics often fail to engage learners or reinforce patient safety priorities. Evidence from innovative patient safety training strategies suggests that interactive, learner-centered education improves outcomes. To address reporting gaps at our institution, we developed a gamified escape room simulation designed to increase awareness of patient safety hazards and build competency in completing event reports.

Methods
Two immersive escape room scenarios, an inpatient internal medicine case and an emergency medicine case were created, each containing predetermined safety hazards. Incoming PGY-1 residents and medical students were placed into teams and tasked with identifying hazards and completing an event report within 20 minutes. The simulation applied adult learning theory and Kolb's experiential learning cycle to emphasize active engagement and applied learning. Each session included a pre-survey, a brief didactic, participation in two escape rooms, team-based debriefings, and a large-group discussion. Participants completed pre- and post-surveys, with SASCQ follow-up surveys at 6 months and 1 year to assess retention.

Results
From June 2022 to April 2024, 89 participants, including medical students, residents, and physicians, completed the simulation. Post-session evaluations showed high satisfaction with session clarity, organization, and relevance, with more than 90 percent affirming its value. Participants reported increased confidence in identifying safety hazards and using the reporting system. Safety Attitudes and Safety Climate Questionnaire. comparisons demonstrated improvement across all domains at 6-month and 1-year follow-up. Teamwork climate showed statistically significant improvement at both time points ($p = 0.001$ at 6 months; $p = 0.013$ at 1 year). Although other categories did not reach statistical significance, all trends reflected improved safety attitudes and awareness.

Discussion
The patient safety escape room provided an engaging, interprofessional, and practical alternative to traditional didactics. It effectively strengthened learner awareness of safety risks, improved teamwork climate, and increased comfort with the event-reporting system. This simulation shows promise as a sustainable training strategy to support a stronger safety culture and improve event reporting among trainees. Continued data collection will allow further evaluation and program enhancement.

Abstract #44: The Prompt Architect: A Systematic Review of Pre-service Teachers Using Generative AI to Design Homework for Dual Language Learners

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Introduction

Generative artificial intelligence (AI) is rapidly influencing educational practice, particularly in supporting teachers with instructional planning and resource development. Pre-service teachers are encouraged to integrate technology while meeting the needs of diverse learners, including dual language learners (DLLs), yet many feel underprepared to design learning supports that extend beyond classroom instruction. Prompt engineering, the ability to create clear instructions that guide AI systems toward useful output, has emerged as an important skill because the quality of AI-generated content depends heavily on how prompts are structured. Although research has examined AI in education broadly, limited research focuses on how generative AI may support homework creation for young DLLs in early childhood contexts. This systematic review explores how generative AI and prompt engineering may support pre-service teachers in designing developmentally appropriate homework for DLL students.

Methods

A systematic search was conducted across PsycINFO, ERIC, and Google Scholar to identify research on generative AI in teacher preparation using keywords such as generative AI, pre-service teachers, early childhood, and dual language learners. The search initially yielded 24 records and was expanded to include gray literature to reduce publication bias and capture emerging developments in AI research. After removing four duplicates, 20 articles were screened and 10 were excluded due to their focus on K–12 contexts or general AI applications. The final review included 10 peer-reviewed studies. No studies addressed pre-service teachers using prompt engineering to design homework for early childhood DLLs. Therefore, a thematic synthesis was conducted to develop a conceptual framework while maintaining strict selection criteria to reduce bias and ensure the relevance of selected studies.

Results

The literature from 2014–2025 highlights three major themes: the potential of generative AI to support instructional planning and learning materials, the importance of teacher AI literacy and prompt design skills, and the need for scaffolded language support for young dual language learners in early childhood. While these studies provide useful insights, none directly examine how pre-service teachers use prompts in generative AI to design homework for DLLs in early childhood contexts, revealing a clear research gap.

Discussion

These findings suggest that integrating prompt engineering into teacher preparation may guide pre-service teachers in using AI tools to design accessible learning experiences for dual/multilingual children beyond classroom . Positioning AI as a tool that complements teacher expertise aligns with recommendations emphasizing responsible and developmentally appropriate technology use in early childhood setting(Holmes et al., 2023; Zosh et al., 2018).

Abstract #46: Faculty-Led Coaching And Benchmark Testing To Improve NPTE Outcomes

Authors

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Introduction

Since 2020, declining National Physical Therapy Exam (NPTE) pass rates have prompted Doctor of Physical Therapy (DPT) programs to strengthen licensure readiness efforts. DPT programs have addressed preparedness through various methods, including practice exam use, resource sharing, faculty advising, coaching, and NPTE readiness graduation requirements; however, none address how to facilitate students' accountability in their self-guided preparation. This study examines a yearlong NPTE preparation program featuring faculty-led coaching, practice exams, reflection, and benchmark-guided study plans.

Methods

Participants were 131 DPT students: Class of 2024 (control, n=65) and Class of 2025 (intervention, n=66). The intervention, launched in summer 2024, integrated five elements: faculty-led coaching, four timed exams, structured reflection, performance benchmarks, and personalized study plans. Students attended an orientation on program expectations, score report interpretation, and common barriers to NPTE success. Faculty were trained to coach students to identify gaps, use active study strategies, and build study schedules. Following a baseline practice exam, students met with faculty to review results and create a study plan. Reflection surveys administered before and after each exam assessed perceived preparedness, satisfaction, and strategy effectiveness. Benchmarks were set using prior cohort data and NPTE literature. Students below benchmarks received targeted coaching to revise study plans and assess NPTE readiness. Students below the final benchmark were not approved for pre-graduation NPTE testing. This structured, feedback-driven model replaced a previously informal approach with limited testing and no consistent coaching.

Results

The Class of 2025 outperformed the Class of 2024 across all metrics. Benchmark attainment increased from 37% to 68%. Eighty-nine percent of the Class of 2024 tested before graduation, compared with 68% of the Class of 2025, despite 70% meeting the early benchmark, reflecting a faculty-guided shift from student-selected to readiness-based testing decisions. Perceived preparedness (1–10 scale) increased from 3.28 to 6.67; satisfaction with performance rose from 5.16 to 6.71; strategy utilization improved from 4.64 to 6.51. Finally, mean scores on the NPTE rose from 67.5% to 78%; first-attempt pass rates increased from 78% to 95% and ultimate pass rates increased from 89% to 98.5%. Ongoing analysis continues for the Classes of 2026 and 2027.

Discussion

Embedding faculty coaching promoted student accountability, improved learning strategies, and supported NPTE success. Faculty gained valuable insight from performance data and student feedback, informing curriculum and advising. This model fosters professional development through accountability, self-assessment, and licensure readiness. Yearlong coaching and data-informed feedback supported student success and guided testing decisions.

Quality Improvement

Abstract #2: Body Mass Index and Risk of Decubitus Ulcers in Hospitalized Trauma Patients

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Introduction

Complications following traumatic injuries are common, with a serious risk of injury to patients. Decubitus ulcers (DU) are a frequent and potentially serious complication associated with trauma injuries. It is established that a decreased body mass index is associated with DU incidence through a proposed mechanism of torsion, and there is minimal consensus on relative rates in populations with elevated BMI. However, the influence that BMI has on these factors is not well understood in the context of trauma injuries, nor in obesity subclass differentiation. This study aimed to assess the incidence rates of DU and the effect of discrete BMI categories on their occurrence.

Methods

Using the Trauma Quality and Improvement Program (TQIP) Database 2022 data, we screened 1,232,956 cases, limiting them to individuals aged > 18, with complete records on sex, weight, height, and the presence of injury severity score (ISS), resulting in n=907,985 cases suitable for further analysis. The data set was further queried to identify cases of decubitus ulcer development during the hospitalization (n=4,274). Additionally, ICD-10 codes were used to identify cases with pre-existing conditions with known associations for decubitus ulcer formation. BMI classes followed the World Health Organization classification, with additional consideration, specifically for BMI >50. A multivariable logistic regression model was used to determine adjusted odds ratios and 95% confidence intervals for the presence of DU in BMI subclasses across the given conditions.

Results

Adjusted odds ratios when referenced to Normal BMI Class showed an increase in decubitus ulcer incidence rate of 46.9% for Underweight, 17.0% for Obesity Class II, 34.6% for Obesity Class III, and 129.2% for BMI > 50, a decrease in ulcer incidence rate of 8.9% for Overweight, and no difference in Obesity Class I. Additional adjusted odds ratios showed an increase in DU incidence rates for immobilizing injury OR: 2.054, chronic renal failure (CRF) OR: 1.900, peripheral artery disease (PAD) OR: 1.864, congestive heart failure (CHF) OR: 1.627, and diabetes mellitus (DM) OR: 1.604.

Discussion

Our study suggests decubitus ulcer risk may have a U-shaped correlation in relation to BMI among trauma patients, with the largest increases being above a BMI of 50 or below a BMI of 18.5. Additionally, further considerations are needed when providing post-trauma care for these populations, especially when coupled with immobilizing injuries, CRF, PAD, CHF, or DM.

Abstract #3: Improving Diabetic Retinopathy Screening Adherence in Rural Populations Through Staff Education

Authors

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Introduction

Diabetes remains a global health burden, affecting over 11% of the U.S. population and contributing to severe complications such as diabetic retinopathy (DR). DR is the leading cause of new cases of blindness among adults aged 20–74 years and is largely preventable through timely detection and intervention. Annual retinal screening is a cornerstone of diabetic care and is strongly recommended by national and international guidelines. However, screening adherence among individuals with a diagnosis of diabetes is suboptimal, particularly in rural populations who face systemic, geographic, and educational barriers. The purpose of this Doctor of Nursing Practice (DNP) quality improvement (QI) project is to increase diabetic retinopathy screening adherence among adults with diabetes in a rural primary care clinic by implementing a structured staff education intervention.

Methods

This project employed the Plan–Do–Study–Act (PDSA) model to deliver and evaluate a 60-minute evidence-based staff education program focused on DR pathophysiology, ADA screening guidelines, communication strategies, motivational interviewing, and referral workflows. Pre-and post-intervention data were collected through electronic health record (EHR) audits to measure changes in DR screening adherence, along with staff knowledge surveys. Interdisciplinary collaboration among nursing staff, medical providers, quality improvement leaders, and clinic administration supported implementation and sustainability.

Results

DR screening adherence increased by 43% over the three-month post-intervention period. Staff knowledge scores in providing DR education and referrals also showed statistically significant improvement. There were 54% fewer missed DR screenings.

Discussion

This project offers a scalable, cost-effective strategy to strengthen preventative diabetes care in rural settings. Enhanced communication was demonstrated through consistent DR patient education. Missed screening opportunities were reduced, and timely eye-care follow-up was increased. By equipping clinical staff with structured, evidence-based education and workflow tools, primary care clinics can improve care coordination, reduce preventable vision loss, and advance health equity. Findings may inform broader system-level adoption of staff-led educational interventions across additional rural and underserved clinics.

Abstract #14: Facilitators and Barriers to MCED Testing in Primary Care: A Scoping Review

Authors

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Introduction

Multi-cancer early detection (MCED) tests use a single, venous blood test to identify biomarkers associated with multiple cancers, often before symptoms appear. These tests have generated significant interest. MCED tests may enable earlier detection of cancers that currently lack routine screening options; however, they also raise concerns about test accuracy, diagnostic burden, cost, and the overall integration into clinical workflows. We aimed to understand facilitators, barriers, and perspectives on MCED test implementation in primary care settings.

Methods

PubMed, Scopus, and Web of Science databases were searched systematically for articles published in English prior to December 5, 2025 using a combination of Medical Subject Headings (MeSH) terms and keywords for MCED tests and primary care. The articles were then reviewed by two members of the research team and included if they explored barriers, facilitators, and/or perspectives on the implementation of MCED tests in a United States (US) primary care setting. Disagreements were addressed through discussion. Descriptive data and key implementation findings were summarized.

Results

Systematic searching identified 35 articles. After review, 23 articles were excluded: 9 were conducted outside the US, 3 were not conducted in primary care settings, 8 did not address MCED implementation in primary care settings, and 3 met multiple exclusion criteria (not conducted in primary care settings and did not address primary care implementation).

Twelve studies met the selection criteria. Overall, primary care providers (PCPs) viewed MCED tests positively and showed interest in using them. Despite this interest, multiple barriers to routine use were reported. The most common concerns included a lack of clinical trials conducted for MCED tests, high out-of-pocket costs for patients, and uncertainty around how to clinically navigate false positives and negatives. Across all studies, knowledge of the equity and cost-effectiveness of MCED tests remains extremely limited. Providers also cited time constraints and low confidence in managing follow-up care after abnormal results as barriers to implementation. Providers newer to practice and those in rural settings with limited resources reported feeling particularly unprepared to order tests and coordinate follow-up care. Facilitators to implementation included online training and streamlined electronic health record ordering processes. In fact, educational sessions were shown to improve clinicians' knowledge and confidence when discussing cancer screening and MCED testing with patients.

Discussion

Although PCPs demonstrate enthusiasm for MCED testing, there are current financial, evidence, and workflow barriers to suggest that implementation is still premature without additional support in primary care settings.

Abstract #15: Oklahoma Families' Experiences in Accessing Quality Care for their Infants and Toddlers

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Introduction

Quality infant and toddler (IT) care supports children's development beyond early childhood and enhances families' well-being (Hart et al., 2023; Horm et al., 2022). Yet families face persistent challenges accessing quality IT care as access is shaped by the interaction of family decision-making and structural constraints such as affordability, availability, and administrative burden, with disparities by income, geography, and child age (Savage & Robeson, 2025; Thomson et al., 2020). In Oklahoma, these challenges are pronounced: a 34% gap in available slots coincides with high rates of economic vulnerability among families with infants and toddlers (Schilder et al., 2025). This study examines system-level barriers to accessing quality IT care in Oklahoma and explores how families navigate local early childhood systems.

Methods

Our mixed methods study included electronic surveys of families (*n* = 154) and focus groups with parents (*n* = 33) to examine their experiences, priorities, and challenges in accessing childcare for children under three via zoom and in-person discussion. Participants were recruited using email, flyers, and social media. Survey data were analyzed using descriptive statistics, and qualitative data were analyzed by two researchers using systematic coding, with findings triangulated to ensure accuracy and a comprehensive understanding of family experiences.

Results

Families' childcare decisions were shaped by cultural fit, logistics, trust, and affordability. Sixty percent reported that family–provider partnerships were strongly influenced by employment stability, particularly variable and inconsistent work schedules. Access to information was a major barrier, with families preferring personalized guidance on availability and eligibility. Decision-making involved tradeoffs among cost, availability, logistics, and employment demands, leading many to rely on informal networks. Barriers included waitlists, complex subsidy processes, high costs, and schedule misalignment

Discussion

Families consistently described quality as a safe environment with trusting, respectful relationships that fostered children's development and learning. However, these preferences are often constrained by system-level barriers, including long waitlists, high costs, complex administrative processes, and misalignment between program schedules and work demands. Findings underscore that access to quality IT care is influenced by both family decision-making and system conditions, highlighting the need for coordinated, family-centered approaches to improve access. Creating a centralized, plain-language-portal with information on program availability, eligibility, and enrollments supported by trusted community touchpoints would enhance access. Aligning program logistics with family needs, including flexible scheduling, reduced waitlists, and increased slots, can address care mismatches. Additionally, a family-centered access roadmap would improve coordination across programs and help families navigate the early childhood system more effectively.

Abstract #21: Self Monitored Blood Pressure in High Risk Obstetric Patients: A Lifestyle Rx Quality Improvement Clinical Training Program

Authors

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Introduction

Hypertensive disorders of pregnancy are a leading contributor to maternal morbidity and mortality, with cardiovascular disease and stroke among the top causes of pregnancy-related death. Early detection and monitoring of blood pressure are critical for improving maternal and fetal outcomes in high-risk populations. Self-measured blood pressure (SMBP) improves hypertension management in nonpregnant populations and is recommended by the World Health Organization for chronic disease self-management. However, evidence regarding SMBP in pregnant populations remains limited. The University of Oklahoma Schusterman Center Women's Health Care Specialists Clinic implemented the American Heart Association Lifestyle Rx program as a quality improvement and clinical training initiative to enhance resident education and promote patient engagement in blood pressure self-monitoring during pregnancy.

Methods

This quality improvement project included pregnant patients aged 18 years and older receiving prenatal care at a high-risk obstetric clinic with chronic hypertension, gestational hypertension, preeclampsia, or a history of hypertensive disorders of pregnancy. Residents and staff were trained to educate patients on SMBP techniques using an approved blood pressure cuff. Participating patients received a loaner cuff, educational materials, and a blood pressure log and were instructed to measure blood pressure twice daily. Demographics, clinical characteristics, and blood pressure readings were collected into REDCap. Patients who declined SMBP but continued routine care served as a comparison group. Pre- and post-participation surveys assessed attitudes toward lifestyle changes and self-monitoring. Statistical analyses included descriptive statistics, Fisher's exact test, Student's t-tests, and paired t-tests to evaluate differences in blood pressure outcomes.

Results

Fifty patients were included in the analysis, with 23 participating in home blood pressure monitoring and 27 receiving clinic-only monitoring. Baseline characteristics were similar, although the home monitoring group had higher rates of antihypertensive use and diabetes. No statistically significant differences were observed in systolic or diastolic blood pressure between groups from baseline to the last clinic measurement. Within-group analyses showed no significant changes. Patients participating in SMBP demonstrated increased engagement in their care and improved understanding of blood pressure management, and residents reported enhanced experience interpreting home blood pressure data and providing lifestyle counseling.

Discussion

Implementation of a self-monitored blood pressure quality improvement and clinical training program in a high-risk obstetric clinic was feasible and enhanced patient engagement and resident education. Although no significant differences in blood pressure outcomes were observed, SMBP provided opportunities for patient self-management and clinical training. Future efforts should focus on improving measurement accuracy, refining patient selection, and evaluating long-term maternal health outcomes.

Abstract #22: Optimizing Oral Care Practices in the NICU to Improve Neonatal Outcomes

Authors

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Introduction

Necrotizing enterocolitis remains a significant cause of morbidity among preterm infants. Early oral colostrum administration is an evidence based intervention associated with improved immune and gastrointestinal outcomes in this population. Despite established recommendations, inconsistent adherence to oral colostrum practices was identified in a level IV neonatal intensive care unit. Chart audits and stakeholder discussions revealed workflow variability and lack of standardized supplies as primary barriers to consistent implementation. This quality improvement initiative aimed to strengthen adherence to early oral colostrum practices by introducing standardized colostrum care kits and reinforcing a consistent nursing workflow.

Methods

The Plan Do Study Act quality improvement model guided project development and evaluation. The intervention consisted of implementing standardized colostrum care kits to support colostrum collection, storage, and administration within the first seven days of life. Education was provided through unit-based communication and informal nursing instruction. Outcomes were measured using retrospective chart review for the preimplementation group and prospective chart review for the implementation group. Descriptive statistics, including frequencies and percentages, were used to compare rates of early oral colostrum administration before and after implementation.

Results

Sixteen neonates comprised the pre implementation control group. Among these infants, 27 percent received oral colostrum within the first seven days of life. Following implementation of the colostrum care kits, 42 percent of neonates in the intervention group received oral colostrum during their first week. This represents a 15 percentage point absolute increase and approximately 56 percent relative improvement, exceeding the predefined project goal of a 10 percent increase.

Discussion

Findings suggest that standardized colostrum care kits support improved adherence to early oral colostrum practices in the neonatal intensive care setting. The intervention was low cost, feasible, and easily integrated into existing nursing workflows. Results indicate that process variability, rather than lack of staff knowledge, was a primary barrier to early colostrum administration. Future efforts should expand implementation duration, strengthen documentation practices, and incorporate interdisciplinary collaboration to enhance sustainability and optimize outcomes for preterm infants.

Abstract #32: Improving Documentation of Pediatric Exercise and Nutrition Counseling: A Quality Improvement Project1

Authors

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Introduction

According to the CDC, the prevalence of obesity among U.S. children and adolescents was 19.7% in 2017-2020. Healthcare providers are crucial to counteract the obesity epidemic by providing guideline-directed lifestyle recommendations. Our quality improvement (QI) project goal was to increase implementation and documentation of exercise and nutrition counseling in children aged 3-17 years at OU Tulsa Family Medicine Clinic by 5% by February 2026.

Methods

On November 17, we initiated the first Plan-Do-Study-Act (PDSA) cycle during a staff meeting, which included a brief educational session for staff and residents on appropriate ICD-10 billing codes for exercise and nutrition counseling (Dietary counseling: Z713.2, Exercise counseling: Z71.82) provided during well-child visits. The second PDSA cycle began on January 14 with an email to residents and attending physicians reiterating this information and reaching individuals unable to attend our original session. The third PDSA cycle involved distributing nutrition and exercise handouts for patients and posting the ICD-10 codes in clinical work areas as reminders for consistent documentation. Data were collected via Epic, where we tracked usage of these ICD-10 codes.

Results

Prior to the first PDSA cycle, nutrition counseling using the Z713.2 code was only utilized in 4% (19/190) of all clinic visits for children aged 3-17 years old, while exercise counseling using the Z71.82 code was only utilized in 6% (15/190) of visits of children in the same age range. After the first PDSA cycle (November-December 2025), documented nutrition counseling increased to 8% (27/344) and exercise counseling increased to 7% (25/344). After the second PDSA cycle (January 2026), documented nutrition counseling increased to 13% (19/149) while exercise counseling increased to 11% (17/149). After the third PDSA cycle (February 2026), nutrition counseling held steady at 13% (21/165) and exercise counseling increased to 12% (19/165).

Discussion

After the completion of our third PDSA cycle, we had achieved our goal of improving implementation and documentation of nutrition and exercise counseling by 5%. We suspected that this counseling was already being completed at a higher rate than what was originally reflected in the trackable data due to documentation in free-text rather than using the ICD-10 codes we encouraged our peers to use. Proper documentation improves tracking of quality metrics and may impact reimbursement. Limitations include monthly-level data that did not align precisely with PDSA cycles, time constraints within visits, and incomplete staff exposure to verbal project announcements.

Abstract #45: Increasing Osteoporosis Screening in Primary Care: A Quality Improvement Project

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Introduction

Osteoporosis is a major contributor to morbidity among older female adults, with hospitalization rates for osteoporotic fractures exceeded those for stroke, myocardial infarction, and breast cancer among women aged 55 years and older. Often considered a “silent” disease, osteoporosis typically remains undiagnosed until fracture occurs. Despite guideline recommendations for dual-energy X-ray absorptiometry (DEXA) screening in at-risk populations, many eligible patients remain unscreened. This quality improvement project aimed at a relative increase of 20% to DEXA screening ordered among eligible patients at the Tisdale Clinic.

Methods

The first PDSA cycle started in November with an education session during our clinic staff meeting, where nurses and physicians were present, on the importance of osteoporosis screening and was reinforced by a follow-up email with an attached DEXA education pamphlet. Our second PDSA cycle began in January with emphasis on physicians pre-identifying eligible patients prior to their appointments. In addition,a DEXA educational presentation was displayed in the front lobby, PSRs used standardized scripts, educational pamphlets with visual prompts were placed in the patient room, and visual reminders (e.g., bone-shaped balloons) were used to reinforce osteoporosis screening. With the clinic manager’s support, DEXA screenings ordered for eligible patients were monitored using the EHR system.

Results

Before initiating PDSA cycle 1, the baseline rate of DEXA screening ordered for eligible patients was 41.5%. By the end of the first cycle, that number improved to 42.4%. Following implementation of the second cycle, the overall rate increased to 43.9%, with February alone reaching 48%.

Discussion

This quality improvement project highlights the gap between guideline-recommended osteoporosis screening and real-world practice, with baseline data demonstrating that approximately one-third of eligible patients had DEXA screening addressed. An initial awareness-based intervention during PDSA Cycle 1 showed minimal improvement, suggesting that education alone is insufficient to change screening behavior. The transition to structured, multidisciplinary workflows incorporating visual cues and repeated point-of-contact reinforcement appear to represent a more effective strategy for improving osteoporosis screening rates. Although the overall rate of DEXA screening addressed remained relatively stable, an upward trend was observed during targeted intervention periods. Continued implementation and refinement of team-based approaches may be necessary to achieve long-term, sustained improvement and reach target screening goals.

Abstract #47: Improving Lead Screenings in Pediatric Patients: A Quality Improvement Project

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Introduction

Pediatric patients are a vulnerable population and addressing gaps in care — such as lead screening — helps reinforce standardized care. Lead exposure is often asymptomatic and can have detrimental effects on neurocognitive and behavioral development if left untreated. Our quality improvement (QI) project aimed to increase lead screening completions rate of pediatric patients aged 24 months old at OU Tulsa Family Medicine by 10% by February 2026.

Methods

The first PDSA cycle was initiated on September 1 by creating and implementing a longitudinal care plan for pediatric patients. This care plan included a standardized checklist of routine pediatric screenings and tracking of chronic conditions. This project and its goals were introduced to residents at didactics. The second PDSA cycle began November 1 when the QI team acquired a list of children under the age of one and uploaded the care plan for the residents to review and expand during follow-up visits. The third PDSA cycle started January 1 by adding a dot phrase for after-visit summaries to educate parents on the importance of lead screenings. Data was anonymously extracted from Epic.

Results

Prior to PDSA cycle 1, 115 children aged 24 months were due for lead screening. This number decreased to 113 after the first PDSA cycle and remained unchanged following PDSA cycle 2, indicating no further improvement. The intervention in PDSA cycle 3 decreased the number of children due for lead screenings from 113 to 95, representing a 15.9% reduction. Because of data extraction limitations and changes in the patient population due to children aging into or out of the eligible age range and new patients joining the clinic, the total number of children included in the measure could not be consistently tracked across the study period.

Discussion

Gaps in preventive care within the OU Tulsa Family Medicine Clinic pediatric population can contribute to missed lead screenings. Following the third PDSA cycle, the interventions implemented were associated with a 15.9% improvement in lead screening completion among children aged 24 months. Informal resident feedback regarding the longitudinal care plan was positive, with residents reporting improved familiarity with patients during well-child visits and fewer redundant orders for care previously completed. Tracking lead screening completion remained challenging because children continually aged into and out of the recommended screening window. Continued implementation, particularly emphasizing the care plan during newborn establish care visits at OU Tulsa Family Medicine, may further improve screening completion rates over time.

Abstract #52: Improving Patient Safety Outcomes Through Nursing Informed Consent Education

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Introduction

The objective of the quality improvement project was to improve informed consent completion rates and increase safe patient outcomes through nursing education and training.

Methods

The AHRQ questionnaire included 14 items using 5 to 7 point Likert scales and multiple response options. It was administered on September 22, 2025, to 43 staff members: 7 scrub technicians, 21 registered nurses, 3 clinical staff, 4 unit secretaries, and 2 APRNs; 6 surveys were not returned. The training intervention consisted of a three part, 55 minute video available via YouTube or PowerPoint. Unstructured interviews were conducted before and after the training. Data analysis used the PDSA model, descriptive and inferential statistics, and Microsoft Excel. Statistical tests included a Chi Square Goodness of Fit test, a collapsed chi square analysis of role clarity, and a chi square test of independence. HIPAA and PHI protections were observed; confidential data was secured in a locking file cabinet to house respondents personal surveys and information.

Results

EPIC EHR audits from September to December 1, 2025 showed a statistically significant difference ($p < .001$) regarding in clinic versus pre operative completion of informed consent. A total of 4.7% of respondents reported no involvement or awareness of when informed consent occurs, while 23.35% were aware of the process. Additionally, 14.0% provided information on tests, treatments, risks, benefits, and alternatives; 11.6% conducted informed consent discussions; and 7.0% used aids to support patient decision making. A larger group (41.9%) obtained patient signatures on consent forms. Overall, 21 of 43 respondents (48.8%) confirmed that patients had provided informed consent, and 23.3% indicated that informed consent was a priority due to its role in patient safety.

Discussion

Project outcomes were limited by the small sample size and the fact that the training was neither mandatory nor delivered in a single day. Using an electronic Likert scale survey would have strengthened data quality and simplified analysis. Furthermore, training materials tailored to specific staff roles may have increased relevance and improved learning outcomes. Nursing actions related to informed consent appeared to reflect prior education rather than the training modules. When rating how well they ensured patients made informed choices (1–10 scale), respondents had a mean score of 8.61 ± 1.37, suggesting confidence yet highlighting the need for further education to support patient comprehension and autonomy. Additional intervention is needed to clarify the nurse's role in informed consent processes.

Social/Behavioral and Community Service

Abstract #1: Is Sleep Quality Associated with Subjective and Physiological Markers of Pain Risk in Native Americans

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Introduction

Native Americans (NAs) have the highest rates of chronic pain in the US, and we have previously shown that poor sleep quality may contribute to this pain disparity. To better understand the mechanisms linking sleep and pain in NAs, this study examined the relationship between self-reported sleep quality and subjective and physiological markers of chronic pain risk.

Methods

Participants were 112 currently pain-free NA adults who participated in the Oklahoma Study of Native American Pain Risk III. The Pittsburg Sleep Quality Index (PSQI) was used to assess past-month sleep quality. Laboratory based markers of pain risk were assessed from nociceptive flexion reflex (NFR) threshold, suprathreshold pain ratings, temporal summation of pain (TS-pain) and NFR (TS-NFR), and condition modulation of pain (CPM-pain) and NFR (CPM-NFR).

Results

Regression analyses were performed on each pain risk outcome using the PSQI as the focal predictor, controlling for age, sex, and income. None of the regression models yielded significant results, suggesting past month's sleep quality did not influence subjective and physiological markers of chronic pain risk.

Discussion

Future studies are needed to examine the role of other sleep variables (e.g., sleep architecture, sleep continuity) and/or utilize sleep assessments more proximal to the pain testing session (e.g., previous night) on chronic pain risk among NAs.
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Abstract #5: Understanding Administrative Staff Turnover at a Satellite Campus: A Self-Determination Theory Approach

Authors

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Introduction

Administrative staff comprise 80% of the higher education workforce yet face persistently elevated turnover; nearly 20% between 2013 and 2021, moderating to 16% post-COVID. These rates are especially disruptive on satellite campuses, where one-person department structures amplify the impact of any departure. Despite their essential role in student services and financial aid, administrative professionals remain underrepresented in turnover research. Empirical evidence links frustration of SDT's three basic psychological needs of autonomy, competence, and relatedness which reduced commitment and increased turnover intention (Van den Broeck et al., 2016; Vansteenkiste et al., 2020). This case study examines how former satellite campus administrative professionals describe the factors that drove their decision to leave.

Methods

This bounded qualitative case study used hybrid thematic analysis to explore voluntary turnover among former administrative professionals at a satellite campus post-COVID. Nine former staff were purposefully sampled across functional areas and tenure lengths; though single-institution sampling constrains transferability. Data were collected through semi-structured Zoom interviews using open-ended questions about work experiences, psychological need satisfaction, and motivations for leaving. Analysis combined deductive coding guided by SDT's three basic psychological needs with inductive coding to capture emergent constructs. Credibility was enhanced through a documented codebook, reflexive memoing, an audit trail, and member checking with a subset of participants.

Results

Competence was undermined by insufficient training, unclear advancement pathways, and chronic boredom from repetitive tasks. Autonomy was constrained in seven of nine cases by centralized control that removed local decision-making. Participants reported relational isolation and communication barriers contributing to marginalization. Structural deficits such as one-person departments and atypical reporting lines, further limited effectiveness.

Discussion

Frustrated autonomy, competence, and relatedness formed a cycle of demotivation consistent with SDT's prediction that chronic need thwarting erodes intrinsic motivation (Vansteenkiste et al., 2020). Meta-analytic evidence confirms need frustration predicts turnover intention and voluntary exit (Van den Broeck et al., 2016; Deci et al., 2017). Two findings of merit emerged: asymmetric power dynamics stripped staff of agency, and benign neglect rendered them institutionally invisible rather than deliberately excluded.

Retention strategies include: auditing flexible work policies for equity and creating local decision-making opportunities support autonomy; dedicated onboarding and defined advancement pathways address competence frustration; and visible leadership presence counteracts geographic invisibility. These findings extend SDT-grounded turnover research to an understudied context and invite future inquiry.

Abstract #6: Does Cultural Connectedness Buffer the Relationship between Adverse Childhood Experiences and Pain Catastrophizing?: Findings from the Oklahoma Study of Native American Pain Risk III

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Introduction

Native Americans (NAs) experience higher rates of chronic pain. Higher risk of chronic pain in NAs may be due to pain catastrophizing that is promoted by exposure to Adverse Life Events (ALEs). NAs also report the greatest average number and variety of Adverse Childhood Experiences (ACEs) than the general US population. However, culture connectedness (CC) has also been seen to shield against negative health outcomes. This study examined whether experiencing ACEs is associated with greater pain catastrophizing, and whether CC buffers against the potential negative effects of ACEs.

Methods

Participants were 105 healthy, chronic pain-free NAs from the Oklahoma Study of Native American Pain Risk III who completed the Adverse Childhood Experiences questionnaire, as well as measures associated with CC facets (American Indian Enculturation Scale, Cultural Connectedness Scale, NA Spirituality Scale, Vancouver Index of Acculturation). A principal components analysis was used to combine all CC facets into a single variable. The Pain Catastrophizing Scale was used to assess situational pain catastrophizing using modified instructions to report on cognitions that occurred during laboratory pain tasks. A moderated regression was conducted predicting pain catastrophizing from ACEs, CC, and the interaction, after controlling for sex, age, and income.

Results

The regression model was non-significant *(R^2*=.11, *p*=.08) and sex was the only significant predictor (*p*<.05).

Discussion

These findings suggest that ACEs and CC are not associated with pain catastrophizing among pain-free NAs. Future research should examine whether CC moderates the impact of other types of adversity (e.g., discrimination, historical trauma) on pain risk mechanisms.

Abstract #9: The Effect of Acetaminophen on Painful Emotions: A Scoping Review

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Introduction

Painful emotions activate neural networks associated with physical pain. In 2010, a research team administered acetaminophen to people not currently experiencing physical pain and conducted two social rejection experiments. They found that acetaminophen reduced hurt feelings, blunting their intensity. These results sparked interest in whether acetaminophen could blunt other social emotions, especially those with a painful component. This scoping review examines common threads in the limited but emerging research on acetaminophen and social emotions and behaviors.

Methods

A systematic search across multiple databases identified experimental research examining how acetaminophen influences multiple types of social emotions. Studies were included only if acetaminophen was experimentally administered and the outcome involved a behavior related to social emotions. The search produced 2,287 records which were screened through a multi-stage review conducted by independent coders. Each coder extracted key details on participants, dosing protocols, experimental design, outcome variables, and risk of bias.

Results

Twenty-two studies were included in this scoping review with a median sample size of 127. Most studies examined behavioral outcomes only, though some also had physiological components. They most often used a 1000mg dose of acetaminophen and included placebo control groups. Several social behaviors were examined. Six studies examined social pain, reporting mixed effects of acetaminophen on feelings of hurt and rejection. Five studies assessed empathy, yielding mixed findings, including one study that reported increased empathy and others that reported decreased empathy compared to controls. Two studies found a modest but statistically significant increase in risk-taking behavior, and two reported increased trust relative to controls. Two studies evaluated aggression with conflicting results. Other studies addressed a variety of outcomes, suggesting that acetaminophen may reduce the pain of decision-making, blunt emotional reactivity, or exacerbate certain emotional responses. Risk of bias was assessed as low in seven studies, moderate in twelve, and high in three.

Discussion

This scoping review suggests that acetaminophen may be associated with modest effects on a range of social, emotional, and decision-making processes; however, findings across studies were inconsistent and mixed. Overall, the literature does not show clear, reliable effects, but it does raise the possibility of subtle, context-dependent effects that warrant further investigation. The observed effects, when present, were generally small, suggesting limited clinical or real-world impact at typical dosing. Publication bias may further influence the available literature. Future, larger studies that reliably replicate are needed to better understand whether acetaminophen meaningfully influences social emotions and behaviors.

Abstract #16: Feasibility of an Occupational Therapy Program for Exercise in Breast Cancer Survivors

Authors

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Introduction

Breast cancer and its treatment commonly reduce aerobic physical activity (PA) and muscle-strengthening exercise (MSE), and many breast cancer survivors are unable to integrate these health-promoting behaviors into their daily lives after transitioning out of formal care settings. As a result, fewer than 20% of breast cancer survivors meet recommended PA guidelines. To address this gap, we developed a novel telehealth occupational therapy (OT) program that is guided by Self-Determination Theory (SDT) and promotes self-regulatory strategies to promote PA (e.g., self-monitoring via a wearable PA tracker). In this study, we aimed to assess intervention feasibility and implementation fidelity.

Methods

Participants engaged in an eight-week, Zoom-delivered OT program with a licensed and lymphedema-certified occupational therapist (*N*=20). Weekly sessions focused on improving knowledge and skills for (1) reducing functional limitations associated with cancer and its treatment and (2) developing behavioral skills for maintenance of aerobic PA and MSE. Participants were urban and rural breast cancer survivors within Oklahoma City and the surrounding area. We recruited participants via local survivorship organizations and the Stephenson Cancer Center Clinical Trials Office. Eligible participants were adults (≥18 years) with invasive breast carcinoma who completed primary treatment and/or surgery within 24 months of the enrollment date. We examined feasibility and reach via recruitment and retention rates, intervention dosage, urban vs. rural breakdown, and a program evaluation survey (*n*=17). We assessed fidelity by randomly selecting 20% of sessions and applying a predetermined fidelity checklist to evaluate the occupational therapist's adherence to the intervention protocol and program delivery competence.

Results

Recruitment rates averaged approximately two participants per month over the first 15 months, with five enrolled participants (25%) being rural-dwelling Oklahoma residents. The retention rate was 85% over this period. Participants completed 97.8% of expected OT sessions (133/136 total sessions; mean session duration: 40 minutes, *SD* =12.38). Ninety-four percent of participants reported increased ability to be physically active. Observations indicated 98% adherence to the OT session protocol by the occupational therapist. Mean competence across sessions for the occupational therapist was 1.4 on a 0-2 scale (0 = inadequate, 1 = adequate, 2 = exceptional).

Discussion

Observations suggest that the remotely delivered, SDT-informed OT program is feasible among breast cancer survivors. Furthermore, results suggest that the program can be delivered with high-fidelity following the provision of basic training to the occupational therapist. Final study results will allow us to refine this program for fully powered efficacy testing and broader dissemination.

Abstract #19: Exploring Comfort to Provide Support for Quitting Using Qualitative Analysis

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Introduction

Receiving positive support during smoking cessation from friends, family members, or a romantic partner is associated with abstinence. However, people may differ in willingness to provide such support. In this study, we aimed to explore comfort providing support for smoking cessation and willingness using qualitative analysis.

Methods

In this study, we used mixed methods combining quantitative surveys with open-ended prompts to understand participants' (*N*=196) comfort with providing support for quitting. Eligible participants were 18 years or older living in the United States who knew someone who currently smoked cigarettes. In this project, we focus on a qualitative analysis of the open-ended response. Approximately half of the sample (*N*=88) completed the open-ended response. We conducted a thematic analysis on these responses. After reviewing each response, we created an initial set of 11 codes with definitions. Members of the research team (*N*=5) then individually applied each code to each response. For each response, we identified whether the response contained each code (0=No, 1=Yes). We met as a team to review individual coding to ensure consistency and decided on final codes to apply to each response. We used descriptive analyses to identify the frequency with which each code and subcode was observed. We also explored whether participant smoking status predicted frequency of using each code.

Results

Analysis of the written responses revealed five primary themes that characterize factors influencing participants' comfort in offering support, including recipient smoking behavior, relationship factors, health benefits, provider smoking behavior, and facilitators and barriers. The largest percentage of responses mentioned facilitators and barriers to support (48.54%), with participants identifying knowledge barriers and a facilitator of comfort providing unconditional support. The second most frequent theme was the recipient's smoking behaviors (24.51%), where many responses mentioned the importance of the quitter's willingness and motivation to stop smoking.

Discussion

Participants frequently mentioned that they are willing to provide unconditional support, but others were hesitant due to lack of knowledge on how to provide sufficient support Among potential support providers, participants generally felt more comfortable supporting someone with a clear motivation to quit. A consistent theme we observed is the role that personal experiences (e.g., perceived hypocrisy, understanding of the situation) influence comfort providing support. These qualitative findings can inform the development of effective interventions that address barriers and capitalize on facilitators for individuals who might support others who are trying to quit smoking.

Abstract #26: An Examination of Social Norms and Alcohol-Induced Blackout Risk in Young Adults

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Introduction

Alcohol-induced blackouts, defined as periods of complete or partial memory loss during a drinking episode, are a common and serious consequence of alcohol use and are associated with increased alcohol-related harms. Understanding factors that place individuals at increased odds of experiencing blackouts is critical to inform interventions aimed at reducing alcohol-related harms. Supported by theory (e.g., Prototype Willingness, Social Learning), this study seeks to examine the association between social norms and increased risk for experiencing blackouts, over and above drinking. We hypothesize that participants with higher/more positive perceived social norms about drinking and blackouts will have a higher likelihood of reporting blackouts.

Methods

Young adults (*n* = 175, 52.6% female, 86.9% White, *M*age = 20.8) with a past 3-month history of heavy drinking (4+/5+ drinks per day for females/males) and blackouts wore wrist-worn alcohol biosensors and completed twice-daily surveys about previous day alcohol use and blackouts over six weekends (18 days). Social norms were measured at baseline, assessing descriptive norms (perceptions of peer drinking amount and blackout frequency) and injunctive norms (perceptions of peer approval of drinking and of blackouts). Multilevel structural equation models were conducted to test for direct and indirect effects (through biological alcohol exposure) of social norms (peer norms of drinking and blackouts) on blackout risk.

Results

Participants reported an average of 9.40 (SD=4.17) drinking days and 3.17 (SD=3.04) blackouts over the 18-day study period. One in every three drinking days (*n*=535, 33.8%) resulted in a blackout. Social norms were not significantly associated with biological alcohol exposure (*OR*=0.20, 95% CI: -0.01, 0.42). Social norms were significantly associated with increased odds of experiencing blackouts (*OR*=1.72, 95% CI: 1.16, 2.56). No significant indirect effects were observed.

Discussion

In this theory-based examination, higher/more positive social norms increased the odds of experiencing blackouts. This may be explained by the effects of social norms on willingness or expectancies to experience blackouts. Our findings suggest that interventions focusing on correcting perceived norms of peer drinking, such as personalized normative feedback, may help reduce blackout risk.

Abstract #34: Chronic Pain Among Native Americans: Patterns and Treatment Approaches

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Introduction

Native Americans (NAs) face the highest chronic pain risk among U.S. racial and ethnic groups yet remain markedly underrepresented in pain research. This limited representation has constrained understanding of NA pain experiences, treatment access, and clinical needs. This study begins to this gap by characterizing 136 NAs living with chronic pain, focusing on sociodemographic characteristics, pain presentations, and treatment utilization.

Methods

Participants completed mail-in surveys. The average age was 50.76 years (SD = 14.91), and 67.6% were female. Providing detailed descriptive data, this study aims to strengthen understanding of chronic pain in NA communities and inform culturally responsive clinical and public health approaches.

Results

Findings indicate a substantial pain burden. Participants reported moderately high pain intensity over the past week (M = 6.42, SD = 2.45), and pain comorbidity was common, with 83.8% diagnosed with two or more pain conditions. Although general healthcare access was high (91.9%), only 64.7% reported access to pain-specific treatment, indicating gaps in specialized care. Nearly half (44.9%) expressed interest in a culturally tailored pain intervention, highlighting unmet needs and openness to culturally aligned strategies.

Discussion

These results underscore the urgent need to improve understanding of chronic pain among NAs and expand access to culturally responsive, community-informed pain treatments. Enhanced research and tailored interventions may help reduce longstanding disparities in pain burden and treatment opportunities.

Abstract #35: Perceived Organizational Support as a Stronger Predictor of Lower Burnout Relative to Self-Care

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Introduction
Oklahoma's child welfare system faces a workforce crisis, with state employee turnover rising to 22.42% in 2024 from 16.42% the prior year, and national child welfare staff turnover averaging 42% annually. Ranking 46th nationally in child well-being, Oklahoma urgently needs evidence-based strategies to retain experienced supervisors to safeguard child safety and family stability. Grounded in theory emphasizing both individual coping and systemic responsibility, this study addresses a gap in the literature by comparing the relative impact of self-care strategies and perceived organizational support on child welfare supervisor burnout to inform targeted retention efforts.

Methods
Supervisors (N = 231) from Oklahoma Human Services Child Welfare completed an anonymous online Qualtrics survey using standardized measures of burnout, self-care activities, and perceived organizational support (POS). We tested a multiple regression model with POS scores and the endorsement of self-care activities as independent variables with burnout as the dependent variable. Prior to interpreting the results, each variable was tested for internal consistency.

Results
Reliability analyses demonstrated good internal consistency for the selected variables ($\alpha > .70$), supporting their use as composite variables. Both self-care and POS were significantly and negatively associated with burnout. An examination of the standardized beta values of the model indicated that POS demonstrated a substantially stronger relationship ($\beta = -.564$; $p < .001$) to lower burnout in relation to the relationship of self-care activities to lower burnout ($\beta = -.222$; $p < .001$). Combined, POS and self-care activities accounted for robust variance in lower burnout ($R^2 = .404$).

Discussion
Findings underscore that reducing child welfare supervisor burnout requires systemic investment in organizational support rather than reliance on individual self-care alone. Supervisor burnout can compromise decision-making, continuity of care, and responsiveness to risk, with implications for child abuse and neglect outcomes, child protection effectiveness, and family well-being. As a result, the current results suggest future research into lowering burnout should prioritize longitudinal and multilevel designs to better understand how organizational factors influence lower burnout relative to self-care.

Abstract #36: Thematic Characterization of Emotional Safety in Women's Health Narratives: A Qualitative Trauma-Informed Care Analysis

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Introduction

Oklahoma ranks among the highest states in the nation for interpersonal violence, sexual assault, and adverse childhood experiences (ACEs), all of which are associated with poor health outcomes. Thus, healthcare professionals must be well-versed in trauma-informed care (TIC) principles, which include emotional safety. This project began as an outgrowth of the OU-Tulsa ACEs Team in 2025. It seeks to understand how the presence or absence of trauma-informed care-related behaviors shape female patients' experience and perception of emotional safety during healthcare encounters.

Methods

To gather patient narratives, 1286 posts on the Reddit forum "r/TwoXChromosomes" from 2013-2023 were collected. 433 posts containing descriptions of personal healthcare encounters were identified. Using NVivo 14 (Lumivero), these cases were coded for negative and positive presence of TIC principles. For example, part of an encounter that diminished emotional safety was coded as emotional safety negative. The coding team met weekly for discussion and 34% of the cases (n=147) were double coded. A thematic analysis was conducted on all cases coded for emotional safety, involving an iterative process with two investigators and artificial intelligence textual analysis. Themes were reviewed by members of the research team not involved in the theme generation.

Results

Emotional safety was coded in both positive and negative forms across the dataset. Negative emotional safety was identified in 82 cases with 138 individual references (15 excluded), while positive emotional safety was coded in 61 cases with 91 references (10 excluded).

Positive emotional safety was most often characterized by a compassionate and attentive demeanor (n=21) and feeling heard and believed (n=17), followed by physical comfort and emotional presence (n=11) safe and welcoming environments (n=3), non-judgmental and dignifying care (n=9), respect for autonomy (n=9), and clear communication (n=5).

In contrast, negative emotional safety was most frequently associated with shaming, judgment, or humiliation (n=34), minimization of concerns and feeling dismissed (n=27), and iatrogenic anxiety or distress (n=21), with additional patterns including minimization of pain (n=13), inappropriate sexual comments or behavior (n=11), lack of compassion (n=11), and breaches of privacy or confidentiality (n=6).

Discussion

Cases characterized by negative emotional safety themes exhibited poor patient experiences and outcomes, with pervasive sentiments of dissatisfaction, dismissal, and disincentivized care seeking. Inversely, cases showing strong clinician engagement with TIC demonstrated improved patient experiences and outcomes, with many narratives demonstrating relief at receiving patient-centered care. Future studies should examine effective implementation of the TIC model and how it improves outcomes for all patients, especially women.

Abstract #38: Lifestyle Medicine in Oklahoma: Utilization and Perceptions Among Healthcare Providers

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Introduction

Oklahoma faces a significant health crisis, marked by a high burden of lifestyle-related chronic diseases and disparities in life expectancy. Lifestyle Medicine (LM) concepts offer an evidence-based approach to preventing and managing chronic conditions such as cardiovascular disease, type 2 diabetes, and obesity. However, its implementation and utilization among healthcare providers in Oklahoma remains unexplored. This study evaluated primary care providers' perceptions, comfort, utilization, and perceived barriers related to LM practices in Oklahoma.

Methods

A cross-sectional electronic survey was administered from July 2024 to July 2025 to primary care physicians, physician assistants, and nurse practitioners practicing in Oklahoma (n=114). The instrument, adapted from a previously published national survey, evaluated LM practice patterns, domain-specific comfort, and perceived barriers to LM interventions. Internal consistency was adequate (Cronbach's $\alpha = 0.82$). Descriptive analyses and linear regression examined associations with demographic and practice characteristics.

Results

Respondents were predominantly female (62.5%), physicians (92.0%), and under 45 years (50%). Most practiced in non-rural settings (77.7%), had more than eight years since residency (69.3%), and lacked formal LM training (85.1%). Participants strongly valued LM competencies, with near-universal recognition of the importance of tailoring care to patient context and ordering lifestyle-related tests. However, gaps existed between perceived importance and reported practice, especially for community- and systems-oriented competencies such as policy advocacy (32.7% gap) and partnering with public health organizations (31.0% gap). Comfort addressing LM domains was high for sleep (99.1%), physical activity (98.3%), and diet/nutrition (97.4%), yet reported routine use was substantially lower, especially for stress management (40.4% gap), sleep (38.9% gap), and social connection (33.9% gap). Rural practice, fewer years since residency, and prior LM training were associated with higher LM utilization in univariate analyses but not in adjusted models. Barriers included difficulty changing patient behavior (86%), poor compliance (83%), limited time (82%), and inadequate reimbursement (52%).

Discussion

Similar to national data findings, Oklahoma primary care providers demonstrate strong endorsement and comfort with LM principles. These perceptions do not translate into routine clinical practice, highlighting structural and systemic barriers. Expanding formal training, team-based care, and supportive reimbursement models may improve LM integration, potentially reducing the state's chronic disease burden. Future research should focus on implementation strategies, workforce training, and policy-level interventions that support sustainable integration of LM into everyday primary care practices.

Abstract #39: Digital Health Equity and Wearables: How Social Determinants Shape Access, Acceptance, and Data Sharing

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Introduction

Wearable and remote health monitoring technologies are increasingly promoted as tools to enhance population health and personalized care; however, their adoption and data-sharing patterns are shaped by social determinants of health (SDoH), including income, education, geography, housing stability, and health literacy. This comparative analysis examined ownership, acceptance, and data-sharing behaviors related specifically to wearable and home health monitoring devices across demographic and community groups (N ≈ 600+), with a focus on structural inequities in digital health engagement.

Methods

Data were drawn from a survey assessing participant perspectives on data sharing, device use, and motivators for participation. Descriptive analyses were conducted to examine levels of concern across data domains, comfort factors that increase willingness to share, device-specific sharing patterns, and ranked incentives for participation in data-driven health research.

Results

Findings demonstrate a social gradient in wearable technology ownership. Ownership was higher among younger and middle-aged adults, individuals with higher income and education, homeowners, and those reporting better self-rated health, while lowest among older adults, lower-income participants, renters, and those experiencing financial strain. Adoption of fitness trackers, smart rings, glucose monitors, and smart scales increased with educational attainment and financial security, indicating a persistent digital divide in wearable technologies.

Geographic context emerged as a structural determinant of wearable engagement. Urban residents reported higher ownership across wearable and monitoring devices compared to rural and mid-sized communities, with urban–rural gradients. Rural residents also reported lower ownership and greater financial vulnerability, suggesting structural inequities may limit access to wearable tools and sustained digital health engagement.

Technology acceptance and data-sharing patterns reflected broader SDoH. Individuals with greater ownership, health literacy, and financial stability reported higher perceived usefulness, self-efficacy, and behavioral intention to use wearable devices. Lower-resource and rural populations demonstrated more cautious acceptance, consistent with reduced access. A health literacy gradient emerged: greater literacy was associated with lower data concerns, increased willingness to share data, and stronger perceived benefits.

Willingness to share data with researchers was driven primarily by technology ownership and acceptance rather than demographics. Individuals in poorer health and those with greater technology exposure were more likely to share data, suggesting perceived relevance and familiarity enhance engagement.

Discussion

These findings suggest that wearable technologies, while promising for preventive and personalized care, are currently embedded within existing SDoH-driven inequities. Without targeted strategies addressing affordability, digital literacy, and rural access, the expansion of wearable health monitoring may reinforce rather than reduce disparities in digital health participation and data-informed care.

Abstract #40: Operationalizing Trauma-Informed Supportive Birth Settings: Application of the Theory of Supportive Care Settings

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Introduction

Trauma-informed care in maternity settings requires operational clarity regarding what constitutes a supportive birthing environment. Drawing on the Theory of Supportive Care Settings (TSCS) (Maxwell et al., 2024), this study examines how supportive birth environments manifest across five domains: safety, welcoming, recognizing oneself, social relations, and willingness to serve.

Methods

A qualitative dataset was deductively coded using TSCS constructs. Frequencies reflect both the number of unique cases in which a construct was coded (# Cases) and the total number of coded instances (# References). Because individual cases could contain multiple references to the same construct, cases represent thematic breadth while references represent thematic intensity.

Results

Safety-related constructs demonstrated the greatest breadth and intensity. “Being informed about care” was coded in 325 cases (588 references), followed by “honest conversations” (294 cases; 488 references) and “freedom to move” (220 cases; 337 references). Adherence to birth plans appeared in 179 cases (262 references). Negative coding clustered around autonomy-related constructs, particularly honest conversations (57 cases), being believed about labor pain (56 cases), and mobility restrictions (38 cases).

Social relational constructs were similarly widespread. Availability of social support was coded in 325 cases (492 references), and inclusion of support persons appeared in 253 cases (485 references). Inclusion of doulas and midwives demonstrated high intensity (549 references across 193 cases), suggesting depth of relational salience.

Recognition-related constructs appeared in fewer cases. Personalization indicators (music, familiar objects, food) were more prevalent than structural equity indicators. Language translation services were not coded positively and appeared negatively in four cases. Cultural and racial safety appeared in six positive and five negative cases.

Welcoming constructs, though less prevalent overall, demonstrated relatively high proportions of negative coding, particularly being believed at triage.

Discussion

Trauma-informed supportive birth environments are defined less by aesthetic modifications and more by communication transparency, preservation of autonomy, relational inclusion, and validation. Autonomy violations, dismissal, and communication breakdown emerged as concentrated trauma risk pathways. These findings provide an operational framework for evaluating and redesigning maternity care environments to enhance psychological safety and equity.

Abstract #42: Trauma-Informed Care Gaps in Women's Health Care Narratives

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Introduction

Patient narratives provide critical insight into how trauma-informed care (TIC) principles are experienced in real-world health encounters. This preliminary study examines how women describe trust, safety, collaboration, empowerment, cultural awareness, and peer support within health care interactions.

Methods

A total of 433 health care narratives were analyzed using qualitative coding aligned with SAMHSA trauma-informed care principles. Narratives were primarily first-person accounts (95.4%), predominantly U.S.-based (93%), and included multiple encounter experiences (20%) and reproductive health contexts (25%). Trauma-related experiences were identified in approximately 5% of cases.

Results

Negative trauma-informed care indicators were more common than positive indicators across all domains. Trust violations were most frequent (35.6% of cases), followed by safety concerns (32.6%) and lack of collaboration (26.3%). Positive indicators were present but less frequent, with trust (26.3%), safety (25.9%), and collaboration (21.9%) most commonly described. Cultural responsiveness and peer support were rarely discussed, appearing in fewer than 7% of cases overall. Thematic analysis of trust narratives identified communication failures, system barriers, symptom dismissal, pain minimization, and autonomy violations as primary drivers of mistrust.

Discussion

Findings suggest persistent gaps between trauma-informed care standards and patient experiences. Improving communication transparency, diagnostic validation, and system reliability may be critical to strengthening trust and safety in women's health care encounters.

Abstract #43: National Analysis of Age-Related Trauma Mortality, Ages 14–40

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Introduction

Trauma remains a leading cause of death in young adults, with mortality varying by age, mechanism, and comorbidities. Understanding age-specific risk factors in adolescents and young adults (14-40 years) may inform targeted prevention. The objective of this study is to examine associations between age group and mortality in trauma patients aged 14-40 years, adjusting for sex, race, ethnicity, injury mechanism, intent, trauma type, alcohol use disorder (AUD), and substance use disorder (SUD).

Methods

We performed a retrospective cross-sectional analysis of the 2022 Trauma Quality Improvement Program (TQIP) database. From 1,232,956 patients, we excluded those <14 or >40 years (n=903,174), then excluded fire/flame, overexertion, and bites/stings mechanisms (n=4,074), yielding 325,708 patients. Age groups were 15-18, 19-22, 23-30, and 31-40 years. Mortality was defined as death in the emergency department or later during hospital admission. Predictors evaluated include gender, race, ethnicity, mechanisms of injury, intent, AUD, and SUD. Multivariable logistic regression (using Python 3.11) estimated odds ratios (OR) with 95% CI.

Results

Out of 325,708 patients with traumatic injury, mortality occurred in 3.9% (12,865). Patients 19–22 and 23–30 years had higher odds of mortality (OR = 1.31 and OR = 1.32, respectively; $p < 0.001$). Male gender was also associated with increased mortality (OR = 1.61; $p < 0.001$). Additionally, Black patients had greater odds of mortality (OR = 1.91), and those with missing or unknown race had even higher odds (OR = 3.84). Non-Hispanic patients demonstrated higher odds of mortality (OR = 1.20). Firearm injuries demonstrated the highest mortality risk (OR = 13.34; 95% CI 12.64–14.16). Penetrating trauma was strongly associated with death compared with blunt trauma (OR = 4.00). Self-inflicted, assault-related, and undetermined injuries had higher mortality than unintentional injuries. Higher odds of mortality were also observed among patients without alcohol use disorder (OR = 1.91) or substance use disorder (OR = 1.96). Among decedents 15–40 years (n = 12,468), younger groups bore a disproportionate burden of firearm mortality: ages 15–18 accounted for 11.4% of all trauma deaths but 13.8% of firearm deaths, and ages 19–22 accounted for 17.3% and 19.0%, respectively.

Discussion

In 14-40-year-old trauma patients, mortality varies significantly by age group, with firearm mechanisms disproportionately contributing to mortality among younger age groups. Younger adolescents show lower mortality representation, potentially reflecting differences in injury severity or access to care. These findings support age-stratified trauma prevention. Future work should incorporate injury severity scoring for risk-adjusted models.

Abstract #49: Impact of Double Up Oklahoma on Fruit and Vegetable Intake Among SNAP Participants: Differences by Food Security Status

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Introduction

Food insecurity affects approximately 1 in 6 Oklahoma households and is associated with lower fruit and vegetable (F/V) intake and increased chronic disease risk. Nutrition incentive programs, such as Double Up Oklahoma (DUO), provide households receiving SNAP with additional resources for F/Vs. This study explored whether F/V intake increased among those shopping at DUO stores compared to matched-control communities, and if this relationship differed by baseline food security and baseline F/V intake.

Methods

We analyzed data from the PROVIDE study, which is a longitudinal study to explore the impact of DUO, collected between April 2024 and January 2026. Eligibility criteria included adults who received SNAP benefits and spent at least 25% of their SNAP at a PROVIDE study grocery store in DUO expansion or matched-control communities. The survey included the USDA 10-item adult food security survey, and the validated Block Fruit/Vegetable/Fiber Screener to estimate daily F/V servings. Change in F/V intake was calculated as the difference between baseline and 3-month follow-up servings/day. Baseline F/V intake was categorized as none, 1–4 servings/day, or ≥5 servings/day. Mean change in F/V intake was compared among DUO and control groups overall and using stratified analyses by baseline food security status and baseline F/V intake. All statistical analyses were performed in SAS v9.4.

Results

Among the 808 PROVIDE participants with baseline and 3-mo follow-up, most were female (83%), food insecure (76%), and reported consuming 1–4 servings/day of F/Vs at baseline (76%). Overall, changes in F/V intake did not significantly differ between DUO and control communities. However, when stratified by food security status, among those experiencing food insecurity at baseline(n=615), the DUO intervention resulted in a significantly greater increase in daily F/V intake compared to controls (m=0.57 vs m=0.14, p=0.019). Further exploring changes in F/V intake by baseline F/V categories among participants reporting food insecurity, the mean change in F/V intake increased more in DUO communities than control communities among those consuming 1–4 servings/day at baseline (m=0.86 vs m=0.58; p=0.0015). There were no significant differences among other groups.

Discussion

DUO participation was associated with improvements in F/V intake among those receiving SNAP and still experiencing food-insecurity, particularly those with low baseline F/V consumption. These findings suggest that nutrition incentive programs may be most effective among those experiencing food-insecurity consuming some F/V but not meeting recommendations. Consistent with prior literature demonstrating responsiveness among food-insecure populations, these results support the expansion of produce incentive programs to reduce diet-related disparities.

Abstract #51: Goal Directed Imagination's Impact on Flourishing for Childhood Trauma Survivors

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Introduction

Childhood trauma is widespread in our society. According to the CDC, approx. 17 percent of the adult population report experiencing at least a 4 on the Adverse Childhood Experiences Scale (also known as ACE, the most universally used childhood trauma scale). While research all over the world shows that childhood trauma is correlated with many negative mental health outcomes in life, the precise nature of this link remains unknown (Feliti et. al 1998) (Yin et. al 2024)(Abate et. al 2024). The current study sought to test existing theory on the impact of both rumination and goal directed imagination on psychological flourishing among ACE survivors.

Methods

To test the relationship of rumination and goal directed imagination to psychological flourishing among childhood trauma survivors, we administered a Qualtrics survey to individuals who reported a score of at least 4 on the Adverse Childhood Experiences (ACEs) scale (N = 108). Standardized scales to measure rumination and goal directed imagination were included along with a measure of psychological flourishing. We performed a regression analysis using rumination and goal directed imagination as independent variables with flourishing as the dependent variable. Flourishing was selected as the dependent variable of the model because of flourishing's established place as an indicator of psychological well-being.

Results

Reliability analyses demonstrated good internal consistency for all the relevant variables ($\alpha > .70$). An examination of the standardized beta values of the model indicated that goal directed imagination was positively and robustly correlated with psychological flourishing ($\beta = .509$; $p < .001$). In contrast, rumination was negatively correlated with psychological flourishing ($\beta = -.255$; $p < .001$). Combined, goal directed imagination and rumination accounted for robust variance in flourishing ($R^2 = .301$).

Discussion

The current results suggest that goal directed imagination and rumination are both correlated to flourishing among ACE survivors. Goal directed imagination contributes to flourishing, while rumination detracts from flourishing. The implication of the current study is that goal directed imagination may be an important skill to develop within interventions for childhood trauma survivors. By developing programs that work to stimulate goal directed imagination, providers may be able to help trauma survivors overcome the negative effects of rumination and promote greater flourishing. Given that it is established that goal setting is a learned skill that can be both taught and developed, such programs would likely be feasible to implement.

Abstract #54: From Harm to Habit: ACE's and Substance Use in Adults Experiencing Homeless

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Introduction

Substance abuse among individuals who are unhoused represents a significant issue associated with increased morbidity and mortality. In fact, research suggests that substance use rates are higher among unhoused individuals than among the general population. Understanding the potential contributors to substance abuse within this population may help professionals develop more effective interventions aimed at reducing substance abuse. Research also indicates that individuals who are unhoused report higher rates of childhood trauma compared to the general population. As a result, childhood trauma may play a role in the elevated substance use rate observed in adults among this population. The current study examined the relationship between childhood trauma scores and substance abuse among a sample of unhoused individuals.

Methods

In partnership with a social service agency serving unhoused individuals, we administered a survey to participants who identified as unhoused (N = 79). The survey included the Adverse Childhood Experiences Scale (ACEs), an established substance usage scale, and demographic items. Data were analyzed using a hierarchical regression model. Demographic variables were entered in step 1 to serve as covariate controls. ACE scores were entered in step 2. Substance use served as the dependent variable.

Results

After controlling for race, age, and gender, the results indicated that ACE scores were a positive predictor of higher substance use *(R^2* = .42; *p* < .001). The standardized beta coefficient between ACEs and higher drug usage was moderate to high (*β* = .437; *p* < .001).

Discussion

The results indicated that ACE scores were a significant predictor of increased substance use among this sample of unhoused individuals. These findings suggest that professionals seeking to assist the unhoused population in reducing substance use may benefit from implementing trauma-informed approaches that address the long-term impacts of childhood trauma.