Abstracts of the 53rd Annual Latino Medical Student Association Northeast Research Symposium

Oral Session
ORIGINAL RESEARCH

01. **VALIDATION OF A SPANISH LANGUAGE 5-ITEM TOOL TO MEASURE PATIENT EXPERIENCE OF CLINICIAN COMPASSION**

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BACKGROUND: Researchers previously developed and validated a 5-item compassion measure in English to evaluate patient experience of clinician compassion in the outpatient and inpatient settings. However, there has not yet been a validated version of the measure in any other language. Our objective is to validate the Spanish version of the 5-item compassion measure and test for invariance between the Spanish and English versions. **METHODS**: This cross-sectional study took place from January 2024 to May 2025 with survey enrollment of adult patients who speak English or Spanish in an outpatient primary care clinic within an academic medical center. We performed a stepwise approach to test for invariance between the English and Spanish versions of the 5-item compassion measure using multigroup confirmatory factor analysis. Cronbach's alpha was used to test internal reliability. **RESULTS**: We analyzed 150 English and 150 Spanish responses and found that the model including all patients had good fit. The Spanish and English versions met our criteria for configural invariance, metric invariance, and scalar invariance. The 5-item compassion measure had good internal reliability among the entire cohort, the English speaking, and Spanish speaking patients respectively (each had a Cronbach's alpha of 0.97). **CONCLUSIONS**: The Spanish 5-item compassion measure appears to measure the same construct as the English version, suggesting it can be used alongside the English version to measure patient experience of clinician compassion, while broadening its impact to more patient populations.

02. **EVALUATING THE ROLE OF SYSTEMIC THERAPY TIMING IN BREAST CANCER SURGICAL OUTCOME**

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BACKGROUND: Breast cancer treatment commonly includes surgery and systemic therapy, with many patients undergoing mastectomy and reconstruction. While the oncologic safety of systemic therapy timing is well established, its impact on postoperative surgical complications remains unclear. This study evaluates the association between chemotherapy timing and surgical complication rates following mastectomy with reconstruction. **METHODS**: A retrospective review was performed of 365 patients (median age 48 years; range 21–76) who underwent mastectomy with direct-to-implant or tissue expander–to–implant reconstruction between 2015 and 2021. Patients were stratified by chemotherapy timing into four cohorts: neoadjuvant-only (n=141), adjuvant-only (n=116), both neoadjuvant and adjuvant (n=78), and no chemotherapy (n=90). Complication rates were compared using chi-square testing, univariate analysis, and multivariable adjusted logistic regression controlling for relevant confounders. **RESULTS**: No significant difference in overall complication rates was observed among groups (p=0.57). Most patients underwent bilateral reconstruction (66.6%), and 73.4% received direct-to-implant reconstruction. Crude complication rates were 25.2% (neoadjuvant-only), 25.7% (adjuvant-only), 33.8% (both), and 29.5% (no chemotherapy). Differences in individual complications did not reach statistical significance. **CONCLUSIONS**: Systemic therapy timing does not significantly affect surgical complication rates following mastectomy with reconstruction, supporting the safety of varied treatment sequencing.

Abstracts

03. **EFFECTIVENESS OF COMMUNITY-BASED AND SCHOOL-BASED LATINO-SERVING NUTRITION PROGRAMS**

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BACKGROUND: Latinos are disproportionately affected by nutrition-related risk factors and health inequities. In response, various programs have sought to address these disparities with diverse results. In this review, we explore the impact of different types of Latino-serving nutrition programs through criterion-based measures of effectiveness. **METHODS**: Systematic narrative review was conducted on Pubmed, Scopus, and Google Scholar using a weighted evidence-scoring approach. Of 32 reviewed articles, 10 met inclusion criteria: Latino-serving, non-federal nutrition programs with quantitative assessments. The articles were either home-based, community-based, or school-based programs. Home-based programs were excluded as only one program was identified with insignificant results. Outcomes were grouped into broad categories: dietary intake, nutritional knowledge, and physical health impact. Study-specific measures were weighted using a point-scale coded for effect polarity and statistical significance. Aggregate weight of measures was divided by the maximum total points for each category then translated into percentages. **RESULTS**: Community-based interventions (n=4) showed impacts of 65.0% for dietary intake and 70.0% for nutritional knowledge. School-based programs (n=6) scored slightly less: 57.5% and 43.3% for dietary intake and nutritional knowledge respectively, and had a physical impact of 56.1%. Community-based programs did not include physical health measures. **CONCLUSIONS**: Community-based programs showed greater impact in dietary intake and nutritional knowledge, providing an important area of focus for future interventions. Improving these metrics may reduce risk of chronic health conditions including mental health conditions. Further research would help guide future programs to improve health outcomes for Latinos.

04. **CHRONIC CORTICOSTERONE EXPOSURE MODULATES ADULT NEUROGENESIS IN THE OLFACTORY BULB AND SUBVENTRICULAR ZONE OF MICE**

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BACKGROUND: Adult neurogenesis persists throughout life in the subventricular zone and generates new interneurons to the olfactory bulb, supporting circuit plasticity and sensory function. This is a process that is sensitive to stress. Chronic stress elevates circulating glucocorticoids, which are known to reduce neurogenesis in the hippocampus. However, their effects on neurogenesis in the olfactory system are less understood. Because the olfactory bulb undergoes continuous neuronal turnover, it provides a useful model for examining how stress hormones influence adult brain plasticity. **METHODS**: Adult mice are exposed to chronic corticosterone administration in order to model prolonged stress. Proliferating cells are labeled using 5-ethynyl-2-deoxyuridine, followed by brain tissue collection at defined survival time points. Immunohistochemical approaches and fluorescence microscopy are used to assess cell proliferation and neuronal maturation within the subventricular zone and olfactory bulb across experimental conditions. **RESULTS**: Data collection and analysis are ongoing. Preliminary observations suggest that chronic corticosterone exposure alters adult neurogenesis in both the subventricular zone and olfactory bulb. Early findings indicate trends toward reduced proliferation and changes in immature neuron labeling compared to control conditions, with potential region specific differences. **CONCLUSIONS**: These ongoing studies suggest that chronic corticosterone may negatively influence adult neurogenesis within the olfactory system. This work extends beyond the already known effects of stress hormones on the hippocampus, and highlights the olfactory bulb as another stress sensitive region. Continued analysis will further clarify how chronic stress exposure impacts neuron generation and integration.

05. **FREQUENT MENTAL DISTRESS (FMD), FOOD INSECURITY AND BINGE DRINKING AMONG US PREGNANT WOMEN: 2020-2024 BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)**

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BACKGROUND: Food insecurity (FI) is associated with poorer mental and behavioral health. During pregnancy, FI may increase psychological distress, which could contribute to binge drinking. This study examined whether perinatal frequent mental distress (FMD) mediates this association. **METHODS**: We analyzed 2020-2024 Behavioral Risk Factor Surveillance System (BRFSS) data from respondents who reported being pregnant at the time of the survey. Binge drinking (past 30 days) and FI (past 12 months) were coded as binary variables. Perinatal FMD (past 30 days) was evaluated as a mediator. We described cohort characteristics and tested bivariate associations using chi-square tests. We then fit logistic regression models estimating the FI–binge drinking association with versus without FMD, adjusting for age, income, and home ownership. **RESULTS**: FI was associated with a higher prevalence of binge drinking (6.40% among food-insecurity vs 4.53% among no food-insecurity respondents; χ^2 = 4.236, p = 0.0396). In adjusted logistic regression, FI was associated with increased odds of binge drinking in models excluding FMD (OR = 1.49, p = 0.033). After inclusion of perinatal FMD, the FI association was attenuated and no longer statistically significant (OR = 1.24, p = 0.262), consistent with mediation by perinatal FMD. **CONCLUSIONS**: FI is statistically significantly associated with an increased odds of binge drinking and perinatal frequent mental distress mediates this relationship. Interventions addressing FI and perinatal mental health may reduce alcohol consumption during the perinatal period.

06. **EVALUATING THE IMPACT OF CONSECUTIVE SUMMER HEALTH INTERNSHIPS ON THE PROFESSIONAL AND EDUCATIONAL OUTCOMES OF UNDERSERVED STUDENTS**

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BACKGROUND: A diverse healthcare workforce is essential for equitable and culturally competent care. However, racial, ethnic, and socioeconomically marginalized groups continue to be underrepresented. Early exposure programs such as internships have been shown to spark interest in healthcare careers, yet most studies have focused on short-term models. Contrastingly, the Lang Youth Medical Program (LYMP) offers a six-year curriculum including academic enrichment, early clinical exposure, and mentorship to underserved students from the Washington Heights/Inwood area of New York City. This study evaluated the career and educational impacts of LYMP's Internship Model, which matches students with three consecutive summer internships in healthcare settings. **METHODS:** A 20-question survey was administered to 50 students who completed at least one internship. This analysis demonstrates preliminary results, as data collection is ongoing. Quantitative data were analyzed descriptively and qualitative responses were analyzed using thematic coding. **RESULTS:** Participants primarily identified as Hispanic/Latino (83%) and first-generation college students (57%). Preliminary findings show overwhelmingly positive outcomes: 92% disclose greater confidence in professional settings, 94% reported increased feelings of belonging in healthcare settings, and 90% were more likely to pursue healthcare careers. Qualitative analysis revealed repeating themes for improvement including stronger preceptor engagement and more clinically significant tasks. **CONCLUSIONS:** LYMP's longitudinal Internship Model provides a viable blueprint for incorporating underrepresented populations into the healthcare workforce by meaningfully enhancing professional development, confidence, and interest in healthcare careers among marginalized youth. Additionally, changes such as structured clinical engagement as well as mentor preparation and training, can amplify the program's impact.

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07. **EVERY WEEK COUNTS: TIME TO PRESENTATION PROLONGS RECOVERY AFTER PEDIATRIC SPORTS CONCUSSION**

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BACKGROUND: Recovery after pediatric sports-related concussion varies widely, and clinicians need simple, clinic-ready predictors at the initial and 2-week visits. We aimed to identify baseline factors associated with longer recovery and prognosis at 14 days of symptoms. **METHODS:** We conducted an IRB-approved, single-center retrospective cohort study of patients ages 9–17 with sports-related concussion seen 4/2021–4/2025 (n=135). Exposures included age, sex, sport, mechanism, time to presentation (TTP), baseline symptoms, and exam findings (balance, gait, convergence, saccades, cognition). The primary outcome was time to symptom resolution; secondary outcomes were prolonged recovery (≥21, ≥28 days) and, among those symptomatic at 14 days, remaining time to resolution. Accelerated failure-time (log-normal) and logistic models adjusted for age, sex, and TTP. **RESULTS:** Median age was 15 years, TTP 7 days, and time to resolution 15 days. Each 1-week delay to presentation was associated with 3.2 additional days to recovery, and female sex with 6.7 more days than males. By sport, basketball injuries recovered 11.7 days slower and soccer 4.8 days faster; mechanisms were not associated. Balance difficulty was linked to 12.3 additional days, and convergence distance to 5.0 more days per inch. Prolonged recovery occurred in 41.5% (≥21 days) and 25.2% (≥28 days), with higher odds at longer TTP. Among those still symptomatic at 14 days, longer TTP predicted longer remaining recovery; other factors were not significant. **CONCLUSIONS**: Time to presentation is a modifiable, clinic-ready predictor of longer concussion recovery and may serve as a quality metric.

Oral Session
REVIEW

01. **SHARED AND DISEASE-SPECIFIC MICROBIOME ALTERATIONS IN PRE-ECLAMPSIA AND LUPUS NEPHRITIS**

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BACKGROUND: Preeclampsia and lupus nephritis share clinical features including hypertension, proteinuria, and systemic inflammation. Emerging evidence suggests that alterations in the microbiome may contribute to immune dysregulation in both conditions. This review compares the microbiome patterns in preeclampsia and lupus nephritis to identify shared and disease-specific features. **METHODS:** A scoping review of studies published between 2020 and 2025 was conducted using PubMed. Included studies evaluated microbiome composition in human or animal models of lupus nephritis or preeclampsia. Studies unrelated to microbiome composition or not available in English were excluded. **RESULTS:** Both conditions were associated with gut microbiome dysbiosis characterized by enrichment of pro-inflammatory taxa and depletion of immunoregulatory organisms. Lupus nephritis was associated with reduced gut microbial alpha diversity and enrichment of Proteobacteria, particularly Enterobacteriaceae and Escherichia coli, as well as expansion of Ruminococcus gnavus, especially during active disease. In preeclampsia, gut dysbiosis was marked by increased abundance of pro-inflammatory taxa, including Proteobacteria, Fusobacterium, Veillonella, and Prevotella, with depletion of short-chain fatty acid–producing bacteria including Faecalibacterium, Akkermansia, and Lachnospira. Several studies linked reduced SCFA levels to heightened inflammatory signaling, endothelial dysfunction, and disease severity. **CONCLUSIONS:** Lupus nephritis and preeclampsia share a pro-inflammatory microbiome alteration, while distinct microbial signatures suggest disease-specific mechanisms. These findings highlight the microbiome as a potential target for diagnostic biomarkers and treatment. Future longitudinal and interventional studies are needed to clarify causality and evaluate microbiome directed therapies.

02. **DISPARITIES IN CARE FOR HISPANIC PATIENTS WITH BLEEDING DISORDERS: A SCOPING REVIEW**

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BACKGROUND: Latino patients in the United States experience well-documented disparities in emergency care, including delays in evaluation, language barriers, and inconsistent management of acute conditions. Bleeding disorders such as hemophilia A, hemophilia B, and Von Willebrand disease require timely recognition and treatment to prevent morbidity. Little is known about how these disorders are managed among Latino patients in emergency settings. This review aims to map existing evidence and identify gaps in emergency department care for Latino patients with bleeding disorders. **METHODS**: A scoping review will be conducted following PRISMA-ScR guidelines. PubMed, Embase, CINAHL, and Scopus were searched using terms related to Latino populations, health disparities, emergency care, and bleeding disorders. The search returned 114 records. After duplicate removal and abstract prescreening in Covidence, 10 studies met preliminary eligibility criteria. Studies were included if they reported on emergency department evaluation, diagnosis, management, or access to care for Latino patients with bleeding disorders in the United States. Exclusion criteria included non-ED settings, case reports, reviews, conference abstracts, studies without race or ethnicity data, and studies conducted outside the U.S. **RESULTS**: Preliminary screening identified limited literature directly examining emergency care for Latino patients with bleeding disorders. Across the 10 included studies, recurring themes included delayed presentation, language-related communication barriers, underrecognition of bleeding symptoms, and inconsistent access to hematology expertise. **CONCLUSIONS:** This review highlights key disparities in emergency care for Latino patients with bleeding disorders and underscores the need for improved evaluation and access to specialized care.

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03. **FROM BARRIERS TO CULTURALLY INFORMED SOLUTIONS: HPV VACCINE HESITANCY IN HISPANIC POPULATIONS**

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BACKGROUND: In the United States, Latine communities suffer from higher rates of HPV-related cancers, yet continue to have lower HPV vaccination rates. This is in part due to continued vaccine hesitancy, fueled by persistent gaps in access, limited culturally tailored messaging, and misinformation. To best address the underlying barriers to vaccine uptake, it is important to understand the most effective intervention strategies. This review analyzed barriers, facilitators, and intervention strategies aimed at increasing HPV vaccination acceptance in Hispanic communities. **METHODS:** A narrative literature review of peer-reviewed studies published between 2015 and 2025 was conducted utilizing PubMed and Google Scholar. Search terms used to narrow the research included "HPV vaccination," "Hispanic population," "vaccine hesitancy," and "interventions." Studies that evaluated barriers, parental decision-making, cultural influences, and community-based interventions were included. **RESULTS:** Key barriers to vaccination included misinformation, cultural beliefs regarding sexual health, and structural challenges. Some of the most effective intervention strategies included culturally tailored messaging, engagement from community health workers, family-centered messaging, and improved provider communication. However, it was also revealed that there continue to be significant gaps in evaluating the long-term outcomes of these strategies and in studying Hispanic subgroups, including immigrant fathers and young adult males. **CONCLUSIONS:** Culturally tailored, bilingual, and community-based interventions are essential for improving HPV vaccination rates in Hispanic communities. Future research should prioritize subgroup-specific approaches and assess long-term intervention Effectiveness.

Oral Session
SHORT COMMUNICATION

01. **FROM TRANSLATION TO TRUST: A COMMUNITY-BASED QUALITY IMPROVEMENT PROJECT ON PREVENTIVE CARE ENGAGEMENT AMONG SPANISH-SPEAKING PATIENTS IN FAMILY MEDICINE**

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BACKGROUND: Preventive care in primary care settings depends on effective communication, shared understanding, and patient trust. Spanish-speaking patients often receive care through interpreter-facilitated visits, which may ensure linguistic accuracy but do not always promote engagement or confidence in preventive health decisions. Ongoing disparities in screening and vaccination uptake suggest that the quality of communication during clinical encounters may influence how patients understand and act on preventive care recommendations. **METHODS:** This quality improvement project is conducted during an eight-week family medicine rotation at a community-based clinic serving Spanish-speaking patients. Adult patients who prefer Spanish for medical communication are included. Clinical encounters are categorized by communication approach, including Spanish-language clinician encounters and interpreter-facilitated visits. Preventive care discussions, such as cancer screening, immunizations, and chronic disease follow-up, are tracked for patient acceptance, deferral, or completion. Brief, voluntary post-visit feedback assesses patient understanding, perceived respect, and confidence in next steps. Patient and clinic staff input is incorporated iteratively to inform practice-level improvements. Descriptive analyses are performed. **RESULTS:** Preliminary and anticipated findings include higher patient-reported understanding, greater confidence in care plans, and increased engagement with preventive care recommendations in encounters emphasizing direct communication and shared understanding. **CONCLUSIONS:** This project reframes language access as a foundation for trust rather than a transactional service. By centering communication quality as a modifiable factor, this work highlights opportunities to improve preventive care engagement and advance equity for Spanish-speaking patients in primary care settings.

02. **A COMMUNITY-BASED PARTNERSHIP SUPPORTING INTERNATIONAL MEDICAL GRADUATES AND MEDICAL STUDENT MENTORS**

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BACKGROUND: International Medical Graduates contribute to workforce diversity and help address national physician shortages. Yet, they face barriers when attempting to practice in the United States, including prolonged credentialing processes, immigration challenges, language and cultural adjustment, and limited academic support. In 2024, their residency match rate was 62% compared to 93.5% for domestic graduates. To address these challenges, Penn State College of Medicine students partnered with the Literacy Council of Lancaster-Lebanon to implement a unique model focused on communication competence, professional identity reconstruction, and academic navigation. **METHODS:** An innovative educational framework was developed and implemented through weekly interactive sessions emphasizing clinical language practice and collaborative reasoning using standardized medical content. Experiential learning components included clinical simulation conducted in English and a pilot medical interpreter certification pathway for the combined group. Reflective identity development was incorporated through opportunities to present experiences at academic events. **RESULTS:** As an ongoing program, the framework engaged approximately ten International Medical Graduates and ten medical student mentors in 2025. Observational themes for International Medical Graduates included increased confidence using clinical English, improved articulation of prior training, reduced professional isolation, and greater clarity regarding academic pathways. Medical student mentors demonstrated enhanced cross-cultural communication skills and strengthened professional identity through service-based leadership and scholarly work. **CONCLUSIONS:** Culturally responsive partnership models can yield clear bidirectional educational value. This framework supports International Medical Graduate development while simultaneously cultivating leadership, communication, and professional identity formation among medical students.

Abstracts

Oral Session
CASE REPORT

01. **BULLOUS IGA DERMATOSIS FOLLOWING ORAL CONTRAST IN A PATIENT WITH DERMATITIS HERPETIFORMIS**

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BACKGROUND: Linear IgA bullous dermatosis (LABD) and dermatitis herpetiformis (DH) are rare IgA-mediated subepidermal blistering disorders with overlapping histology but distinct clinical features. Drug- induced LABD is most classically associated with antibiotics, whereas oral contrast has not been reported as a LABD trigger and has been only rarely linked to DH. **CASE:** We present the case of a 66-year-old female with known celiac disease and DH on dapsone who developed a painful, pruritic blistering rash within 24 hours of receiving first-time oral iodinated contrast. She was initially treated for erythema multiforme, with oral and mucosal involvement raising concern for Stevens-Johnson syndrome (SJS). Examination showed edematous plaques on the trunk and extremities that evolved into grouped tense vesicles and bullae on an erythematous base involving the face and upper extremities. Biopsy revealed a subepidermal blister with dense neutrophilic infiltrate, and direct immunofluorescence demonstrated strong granular IgA along the dermal-epidermal junction. She improved with topical corticosteroids and an increase in dapsone, with resolution leaving postinflammatory hyperpigmentation. **CONCLUSIONS:** This case suggests oral iodinated contrast as a novel precipitant of IgA-mediated subepidermal blistering. SJS and bullous EM were considered but were less likely given the absence of widespread epidermal detachment, hemorrhagic mucosal crusting, and classic target lesions. The tense bullae with facial and mucosal involvement supported linear IgA bullous dermatosis, whereas severe pruritus and granular IgA deposits, in the setting of known DH and rapid onset after exposure, favored DH. This case highlights a potential novel trigger and the difficulty of distinguishing these related conditions.

Poster Session
ORIGINAL RESEARCH

01. **CLINICAL SIGNIFICANCE OF AVID LUNG LESIONS IN PSMA PET SCANS**

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BACKGROUND: Prostate-specific membrane antigen (PSMA) is widely used to image metastatic prostate cancer due to normally expressing at low levels but it becomes highly upregulated in tumors, making PSMA PET/CT a sensitive and specific diagnostic tool. However, PSMA is not prostate-specific; it is also expressed in epithelial cells and can increase with inflammation, benign growths, or angiogenesis. PSMA uptake has been reported in several non-prostatic cancers, including lung, breast, pancreas, and thyroid. Although prior studies examined PSMA uptake in incident lung nodules, none have evaluated PSMA-avid lung lesions without solid correlates. **METHODS**: All adult PSMA PET scans from January to May 2024 at Mount Sinai Hospital were reviewed, and clinical and radiology data were extracted from the electronic medical record (EPIC). Patients were categorized into PSMA-avid lung uptake with nodules, non-avid lung nodules, and PSMA-avid uptake without nodules. Lesions were classified as solid or subsolid. Data were cleaned and analyzed using R. **RESULTS**: Among 432 PSMA PET scans from 429 adult male patients (median age 70), 58 (13.5%) showed PSMA-avid lung lesions with nodules, 83 (19.3%) showed non-avid lung nodules, and 11 (2.6%) showed PSMA-avid lesions without nodules. Of 141 scans with nodules, 76 (53.9%) were solid and 34 (24.1%) were subsolid, totaling 108 lesions (76.6%) with solid or subsolid morphology. **CONCLUSIONS**: PSMA avidity can occur in lung lesions with or without solid correlates. Recognizing these patterns is important for distinguishing metastasis from benign findings and guiding evaluation.

02. **A LONGITUDINAL MEDICAL SPANISH CURRICULUM TO ENHANCE CULTURAL AND LINGUISTIC COMPETENCE IN FIRST-YEAR MEDICAL STUDENTS**

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BACKGROUND: In NYC, over 2.5 million people have limited English proficiency, of whom 47.6% are Spanish-speakers. NYUSoM serves a large portion of this population at Bellevue Hospital, where 35% of patients list Spanish as their preferred language. With the aim of teaching pre-clerkship students Spanish-language and Hispanic/Latine culture to care for this population, the LMSA chapter continued and expanded the beginner Spanish classes introduced in Fall 2024. **METHODS:** In Fall 2025, LMSA held four monthly in-person classes for pre-clerkship students, comprising both lectures and practice scenarios led by native Spanish-speaking students. After these sessions, students completed a midpoint self-reported survey to assess their progress in Spanish-language acquisition, recognition of medically relevant Spanish terms, and cultural understanding of the Hispanic/Latine community. **RESULTS:** Twenty-nine students responded to the mid-year survey, of whom 37.9% had no prior Spanish learning experience. 89.7% of students indicated that improving rapport with Spanish-speaking patients was their motivation for course participation. Participants self-reported significant differences in pre- and post-class confidence in medical Spanish, engagement with Spanish-speaking patients, and competence in Hispanic/Latine culture. **CONCLUSIONS:** The results suggest that lessons in Spanish-language and Hispanic/Latine culture increase first-year medical students' confidence in interacting with Spanish-speaking patients. This data is consistent with results from the inaugural Fall 2024 LMSA Spanish educational sessions. Continuing this program may help prepare students to care for our large Hispanic/Latine patient population.

Abstracts

03. IMPACT OF UNIVERSAL SCREENING ON MANAGEMENT OF BLUNT CEREBROVASCULAR INJURY AT A LEVEL I TRAUMA CENTER

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BACKGROUND: Blunt cerebrovascular injury (BCVI) is an uncommon but serious complication of blunt trauma with significant stroke risk. Selective screening using the expanded Denver criteria may miss injuries, prompting adoption of universal CT angiography (CTA) neck screening. The impact of universal screening on BCVI detection remains uncertain. **METHODS:** We conducted a retrospective cohort study of adult trauma patients diagnosed with BCVI at a single Level I trauma center between 2020 and 2024. Universal screening was implemented in 2023. Collected variables included demographics, injury mechanism, Glasgow Coma Scale, BCVI risk factors, imaging findings, treatment strategies, ischemic events, and outcomes. BCVI incidence was defined as the number of BCVI diagnoses divided by total blunt trauma encounters. Incidence rates were compared between the pre-universal screening period (2020–2022) and the universal screening period (2023–2024) using Poisson regression with blunt trauma volume as the offset. **RESULTS:** A total of 7,403 blunt trauma admissions occurred during the pre-universal screening period and 7,270 during the universal screening period. BCVI incidence increased from 0.80% (59 cases) prior to universal screening to 1.16% (84 cases) following implementation. Universal screening was associated with a significantly higher BCVI detection rate (incidence rate ratio 1.45, 95% CI 1.04–2.02; p = 0.03). Final analyses will evaluate diagnostic yield, non–Denver criteria injuries, and secondary outcomes. **CONCLUSIONS:** Universal screening demonstrated a significantly higher detection of BCVI at a Level I trauma center. Ongoing analyses will further clarify its diagnostic yield and clinical impact, informing optimal BCVI screening and treatment strategies.

04. CARDIOMETABOLIC HEALTH DISPARITIES AMONG DOMINICAN ADULTS IN NEW YORK CITY: A COMMUNITY-ENGAGED PUBLIC HEALTH ANALYSIS

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BACKGROUND: Dominicans comprise approximately twenty-five percent of the Latinx population in New York City, yet subgroup-specific cardiometabolic health data remain underrepresented. Existing evidence suggests elevated risk for preventable chronic diseases driven by structural inequities and barriers to preventive care. **METHODS**: A cross-sectional analysis was conducted using New York City population health datasets and community survey data from predominantly Dominican neighborhoods. Outcomes included prevalence of diabetes, hypertension, and obesity, insurance status, and access to primary care. Dominican adults were compared to non-Latinx White adults citywide. **RESULTS**: Diabetes prevalence among Dominican adults was twenty-two percent, compared to eleven percent among non-Latinx White adults. Hypertension affected thirty-eight percent of Dominican participants, while obesity prevalence reached thirty-four percent. Approximately thirty-two percent of Dominican adults lacked consistent access to a primary care provider, and twenty-seven percent reported delaying medical care due to cost or language barriers. Neighborhoods with high Dominican density had fewer than six primary care physicians per ten thousand residents and demonstrated increased emergency department utilization for cardiometabolic conditions. **CONCLUSIONS**: Dominican adults in New York City experience disproportionate cardiometabolic disease burden linked to systemic barriers rather than individual behaviors. Targeted, culturally responsive prevention strategies and improved access to primary care are critical to reducing these inequities.

05. **PREVALENCE AND PATTERNS OF HEALTH BEHAVIOR AMONG DIVERSE, UNDERSERVED CANCER PATIENTS COMPLETING AN INTAKE FOR THE BOLD CANCER WELLNESS PROGRAM IN THE BRONX, NEW YORK**

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BACKGROUND: Cancer survivors in the Bronx face barriers to health-promoting behaviors like exercise, diet, and stress management. The Good Health Practices Scale (GHPS) offers a measure of these behaviors; however, it's application in cancer populations remains underexplored. This study examines the prevalence and patterns of GHPS-assessed health behaviors among Bronx cancer patients who completed a psychosocial intake for the Montefiore Einstein Cancer Center's BOLD Cancer Wellness Program, offering support and health promotion services. **METHODS**: GHPS subscales related to exercise, nutrition, and psychological well-being (1-5 scores) were analyzed for associations with race, ethnicity, and gender for participants completing an intake for the BOLD cancer wellness program (2020-2024). **RESULTS**: Overall, 648 cancer patients/survivors were 77% female, predominantly Black 68.5% (Whites, 31.5%) and predominantly non-Hispanic 75%. The sample reported moderate-high (M=3.6) weight management, moderate exercise (M=3.1), moderate-high checkups (M 3.3-4.6), variable healthy eating habits (M= 2.6-4.0) consistent with national averages, and higher than average (M=3.6-4.1) psychological wellbeing practices. Women were more likely to report taking vitamins (p<.001, M=3.79), seeing a dentist (p=.033, M=0.38) and doctor (p=.035, M=4.58) for regular checkups (3.38), discussing health with friends, neighbors and relatives (p=.008, M=3.81). Blacks more reported limiting intake of food like coffee, sugar and fats (p=.001, M=3.79). Hispanics more reported taking health food supplements (p=.001, M=3.0) and discussing health with friends, neighbors and relatives (p=.035, M=3.9). **CONCLUSIONS**: GHPS scores revealed notable differences in health behaviors based on sex, race and ethnicity among cancer survivors, emphasizing the need for culturally tailored interventions. Understanding these differences can inform the development of targeted strategies to enhance engagement in wellness programs and improve long-term cancer outcomes in underserved populations.

06. **RETROSPECTIVE ANALYSIS OF RADIAL SCAR MANAGEMENT AND PREDICTORS OF MALIGNANT UPGRADE**

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BACKGROUND: Radial scars (RS) are benign breast lesions composed of glandular and epithelial proliferations with stellate architectural and fibroelastic stroma that may mimic invasive breast cancer on imaging. Optimal management of RS remains controversial. **METHODS**: We retrospectively analyzed imaging and pathology data from patients with RS identified on percutaneous biopsy between 2017 and 2023 to determine predictors of malignant upgrade and evaluate indications for management, including surgical excision or active surveillance (AS) with imaging. Data were analyzed using feature importance, with Student's t-test and Fisher's exact test performed when appropriate. **RESULTS:** The final cohort consisted of 114 patients with RS demonstrating radiologic-pathologic concordance. Mean patient age was 56 years, and mean lesion size was 8.0 mm (range 2-25 mm). 80 biopsies (70%) demonstrated RS without additional high-risk findings, while 34 biopsies (30%) yielded RS with high-risk findings at a separate site, including atypical ductal hyperplasia, atypical lobular hyperplasia, lobular carcinoma in situ, ductal carcinoma in situ, and invasive breast cancer. Surgical excision was performed in 110 cases (96%), and 4 cases (4%) were managed with AS. Overall, 4 cases (3.51%) were upgraded at excision. **CONCLUSIONS:** All malignant upgrades occurred in RS with additional high-risk findings. Despite this, most patients with additional high-risk findings did not demonstrate RS upgrade, including those with coexisting breast cancer at a separate site. No upgrades were identified in RS without additional high-risk findings, including those managed with AS. These findings suggest that most patients with RS may be safely managed with AS, with surgical excision reserved for higher-risk cases.

Abstracts

07. ACUTE OTITIS MEDIA IN CHILDREN WITH REPAIRED CLEFT PALATE

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BACKGROUND: Cleft palate is an embryologic craniofacial defect that can cause Eustachian tube dysfunction. This study evaluated the association between repaired cleft palate (CP-R) and otitis media (OM) using a national database. **METHODS:** A retrospective analysis (2016-2024) was conducted using TriNetX. Patients <18 years with CP-R were identified using ICD-10 and procedural codes and compared to age-matched patients without cleft palate. Propensity score matching controlled for age, sex, ethnicity and race. Outcomes included overall occurrence of OM, acute OM, OM with effusion and ventilation tube placement. **RESULTS:** After matching, each cohort included 9100 patients, with a mean age of 5.4 years (SD=5.0). CP-R patients were more likely to develop OM overall (N=4454, 48.9% vs. N=2020, 22.2%; OR=3.4, 95% CI=3.2-3.6, p<.001). When stratifying by OM type, CP-R patients showed higher odds of AOM (N=1493, 16.4% vs. N=1142, 12.5%; OR=1.4, 95% CI=1.3-1.5, p<.001) and over 10 times the odds of OME (N=3150, 34.6% vs. N=428, 4.7%; OR=10.7, 95% CI=9.6-11.9, p<.001). CP-R patients were also more likely to receive ventilation tubes (N=4147, 45.6% vs. N=346, 3.8%; OR=21.2, 95% CI=18.9-23.8, p<.001). **CONCLUSIONS:** Children with CP-R are more likely to develop AOM versus children without cleft palate, highlighting the need for careful monitoring for these disorders and their associated long-term complications.

08. ETHNIC DIFFERENCES IN NEURAXIAL ANESTHESIA UTILIZATION FOR PRIMARY TOTAL KNEE ARTHROPLASTY

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BACKGROUND: Total knee arthroplasty (TKA) are common procedures in the United States. Neuraxial anesthesia is associated with improved perioperative outcomes when compared with general anesthesia, however minority patients receive regional anesthesia at lower rates. This study explored variation in anesthetic choice between Hispanic and non-Hispanic patients who underwent primary total knee arthroplasty. **METHODS:** A retrospective cohort study of adults undergoing elective primary total knee arthroplasty between August 2015 and August 2025 within a multihospital health system. Emergent, revision, and bilateral cases were excluded. De-identified electronic medical record data included demographics, race/ethnicity, clinical characteristics, hospital factors, and anesthetic techniques. The primary outcome was neuraxial versus general anesthesia. Mixed-effects logistic regression clustered by surgeon, adjusted for patient, procedural, and hospital-level covariates. **RESULTS:** A total of 78,690 procedures were included. Overall, 41.7% of patients were female, median age was 67 years (IQR 61–74), 53.5% were ASA III or higher and 0.38% identified as Hispanic. 75.1% of cases were neuraxial anesthesia with variability between hospitals in neuraxial use (range 1.5%–97.1%; IQR:18.4%–57.1%). Hispanic populations were associated with higher odds of receiving general anesthesia (OR 1.60; 95% CI:1.07–2.39; p=0.023). Anticoagulation use, bleeding disorders, and higher ASA were related with higher odds of general anesthesia (all p<0.001). **CONCLUSIONS:** Hispanic patients were more likely to receive general anesthesia when compared with non-Hispanic patients undergoing primary total knee arthroplasty. This suggests possible non clinical decision-making factors to anesthetic modality and highlights opportunities to improve future perioperative equity.

09. PERCEIVED INCLUSIVITY AND SPECIALTY CHOICE AMONG LGBTQ+ MEDICAL STUDENTS IN PUERTO RICO: A SURGICAL VS NON-SURGICAL COMPARISON

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BACKGROUND: LGBTQ+ medical students face challenges during specialty selection and the residency match process, particularly related to disclosure of sexual orientation and gender identity. Surgical specialties are often perceived as less inclusive, which may influence specialty avoidance. This study compared perceptions of inclusivity, discrimination, and mentorship between surgical and non-surgical specialties among LGBTQ+ medical students in Puerto Rico. **METHODS**: A cross-sectional study was conducted using an anonymous online survey of LGBTQ+ medical students enrolled in Puerto Rican medical schools (n=23). Participants rated perceived inclusivity across medical specialties using Likert-scale responses. Survey domains included perceived inclusivity, experiences of discrimination during clinical rotations, visibility of LGBTQ+ role models, and accessibility of mentorship. Specialties were categorized as surgical or non-surgical. Descriptive statistics summarized responses. **RESULTS**: Non-surgical specialties were perceived as more inclusive than surgical specialties. General Surgery demonstrated markedly lower perceived inclusivity than Family Medicine (mean score 1.61 vs 4.28). Over half of respondents reported experiencing or witnessing discrimination during surgical rotations, while most reported neutral or inclusive experiences in non-surgical settings. Mentorship was perceived as less accessible in surgical specialties, and over half of the participants considered changing their specialty preference due to discrimination concerns. **CONCLUSIONS**: LGBTQ+ medical students perceive surgical specialties as less inclusive than non-surgical fields. These disparities may influence specialty choice and contribute to the underrepresentation of LGBTQ+ individuals in surgical careers, underscoring the importance of institutional accountability, faculty training, and structured mentorship initiatives.

10. BRIDGING GAPS IN BEHAVIORAL HEALTH CARE: SYMPTOM SEVERITY AND RECEPTIVITY TO BEHAVIORAL HEALTH REFERRAL IN A DIVERSE URBAN EMERGENCY DEPARTMENT

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BACKGROUND: Anxiety and depression are highly prevalent among emergency department (ED) patients, yet these conditions frequently go undetected and untreated in acute care settings. ED-based screening may offer a critical opportunity to identify unmet mental health needs and facilitate linkage to behavioral health services, particularly for patients who face structural barriers to outpatient care. Limited evidence exists regarding how symptom severity relates to patient receptivity to behavioral health referrals. We aimed to evaluate the association between anxiety and depression severity and interest in behavioral health referrals. **METHODS:** We conducted a cross-sectional study using a convenience sample of patients aged 18–75 years receiving care at an academic ED in New York City between March-December 2025 (N=294). Eligible patients were fluent in English/Spanish. Surveys collected sociodemographic data and assessed Generalized Anxiety Disorder (GAD) and depression using the Patient Health Questionnaire (PHQ-8). We examined associations between symptom severity and interest in behavioral health referral. **RESULTS:** Of 454 eligible patients, 294 (65%) completed the surveys. Mean age was 38.1 years; 56% identified as female and 56% as Hispanic/Latino. Moderate to severe anxiety (GAD >10) was identified in 26% of participants, of whom 65% expressed interest in referral. Similarly, 26% screened positive for moderate to severe depression (PHQ-8 >10), with 64% amenable to referral. Comorbid moderate to severe anxiety and depression occurred in 8% of participants, with 67% expressing referral interest. **CONCLUSIONS:** Clinically significant anxiety and depression were common, and most affected patients were receptive to behavioral health referrals. These findings underscore the ED's role as an equity-promoting access point for identifying unmet mental health needs and initiating pathways to care.

Abstracts

11. MAPPING ANTI-VIRAL TARGETING REGIONS IN THE SARS-COV-2 NSP14/NSP10 EXONUCLEASE COMPLEX

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BACKGROUND: Since 2020, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has resulted in over 779M confirmed cases and more than 7M deaths globally (World Health Organization; https://www.who.int/), highlighting the pandemic's profound impact. Despite the development of vaccines and antiviral therapies, multiple Variants of Concern (VOCs) have been reported by the CDC (https://www.cdc.gov/), with new variants and sublineages continuing to emerge. This persistent public health threat underscores the need for broadly effective therapeutics that remain active across variants and closely related coronaviruses. Central to viral replication is the proofreading activity of the SARS-CoV-2 exonuclease nsp14 (ExoN), which requires its cofactor nsp10 to maintain genome integrity and viral viability. Here, we computationally analyzed the nsp14/nsp10 complex, conserved across coronaviruses and SARS-CoV-2 variants, to identify critical regions for antiviral targeting. **METHODS**: We characterized the nsp14/nsp10 complex to identify potential ligand-binding regions at the protein–protein interface. Multiple sequence alignments and phylogenetic reconstructions identified conserved residues and provided evolutionary context. Coevolution analysis highlighted correlated residues, and molecular docking explored potential "ligandable" sites around conserved and coevolving residues to pinpoint hotspots for small-molecule targeting. **RESULTS**: Several ligands were docked to nsp14/nsp10 across multiple functional states (e.g., bound to RNA and nsp10, or alone). Ligandable sites—selected for coevolution, structural, and functional relevance—are under investigation for potential allosteric modulation. **CONCLUSIONS**: Ligand docking at the nsp14/nsp10 interface provides a foundation for drug discovery; future work using molecular dynamics (MD) simulations and AlphaFold models will explore additional antiviral binding sites across VOCs and closely related coronaviruses.

12. DYNAMIC CHANGES IN FRAILTY AS PREDICTORS OF OUTCOMES AFTER TRANSCATHETER AORTIC VALVE REPLACEMENT

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BACKGROUND: Frailty is increasingly recognized as a critical determinant of outcomes in patients undergoing transcatheter aortic valve replacement. Traditional pre-procedural risk stratification tools often fail to capture dynamic physiologic changes following intervention, limiting prognostic accuracy and individualized patient counseling. **METHODS:** A retrospective cohort analysis was performed on 272 patients undergoing transcatheter aortic valve replacement. Frailty was assessed using the Risk Assessment Index prior to the procedure, and the 30-day change in Risk Assessment Index was calculated. Receiver operating characteristic analysis evaluated predictive performance for mortality. Patients were categorized into frailty trajectory groups: deteriorated (Risk Assessment Index increase of 2 or more), no change, and improved (Risk Assessment Index decrease of 2 or more). Survival outcomes were analyzed using Kaplan-Meier methods with log-rank testing. **RESULTS:** Thirty-day change in Risk Assessment Index was predictive of mortality (area under the curve = 0.621, 95% confidence interval 0.553–0.689; $p < 0.001$). Survival differed significantly between frailty trajectory groups (log-rank χ^2 = 19.913, $p < 0.001$). Patients with frailty deterioration had markedly worse survival (mean survival 34.1 months), compared to no change (52.2 months) and improved frailty (60.5 months). Median survival was lowest in the deteriorated group (26 months) and highest in the improved group (64 months). **CONCLUSIONS:** Early post-procedural changes in frailty are significant predictors of mortality and long-term survival. Dynamic frailty assessment provides clinically meaningful prognostic information beyond pre-procedural risk stratification alone. Incorporating post-procedural frailty assessment into follow-up after transcatheter aortic valve replacement may improve outcome prediction, patient counseling, and individualized post-procedural care planning.

13. **ENHANCING ENGAGEMENT AND UNDERSTANDING OF CLINICAL RESEARCH IN CHILDREN: OBSERVATIONAL INSIGHTS FROM THE SOFIA LEARNS ABOUT RESEARCH INTERACTIVE SIMULATION**

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BACKGROUND: Age-appropriate and interactive digital learning tools make complex topics like clinical research more accessible to children. Sofia Learns About Research, originally developed as an activity book, was adapted into a video game installment at a children's museum to teach about clinical trials, consent, assent, and participant rights. The game has been played over 200,000 times since 2021. This project analyzes children's interactions with this digital game to identify engagement patterns and areas for improvement. **METHODS**: Observations were conducted at the Ralph C. Wilson Explore & More Children's Museum in Buffalo, NY. Estimated age, gender, accompaniment status, progression through the simulation, whether they read on-screen text, and qualitative indicators of engagement were recorded. **RESULTS**: Data collection is ongoing. Thus far, 101 children have been observed, most between approximate ages 2–9 years (range 1–13). About three-quarters were accompanied by adults or peers. Accompanied users progressed farther and engaged longer, with adults often redirecting focus or helping interpret content, compared to unaccompanied users. Pages featuring bright colors, movement, and interactive elements held attention better than static or text-heavy pages. Older children (approximately ages 8–14) were more likely to read and demonstrate comprehension compared to younger users (approximately ages 2-7). **CONCLUSIONS**: Sustained engagement increased with visual appeal, interactivity, age-appropriate literacy, and adult guidance. Future design refinements should emphasize color, simplified text, and encouragement of adult-assisted engagement. These insights will guide the development of a mobile app version of *Sofia Learns About Research* to enhance accessibility and deepen children's understanding of clinical research.

14. **GEOGRAPHIC DISTRIBUTION OF AMENABLE MORTALITY AMONG HISPANICS IN NEW JERSEY**

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BACKGROUND: The "Hispanic paradox," is a popular phenomenon that suggests lower overall mortality among Hispanics in the US, despite lower socioeconomic advantage–however, it doesn't hold for amenable deaths (ex: diabetes, cardiovascular disease) which depend on access to preventive and continuous healthcare. Hispanics constitute 21% of the New Jersey population, yet little work has been done to study the geographic distribution of preventable chronic disease mortality within this group. Identifying spatial patterns of mortality can highlight counties where place-based factors, including healthcare access, neighborhood resources, and structural conditions, may contribute to elevated preventable deaths, informing targeted public health interventions. **METHODS**: We conducted a descriptive, ecological analysis of county-level, age-adjusted mortality among Hispanics in New Jersey for diabetes, cardiovascular disease, and premature mortality using NJ State Health Assessment Data (2019-2023). Geographic distributions of deaths were visualized using choropleth mapping. High-burden counties were identified and spearman rank correlation coefficients were calculated to evaluate county-level concordance. Data analysis was conducted in R. **RESULTS**: Among Hispanics, mortality ranged from 8–36/100,000 (diabetes), 62–162/100,000 (cardiovascular disease), and 400–770/100,000 (premature death). Cumberland, Camden, and Atlantic counties consistently ranked in the highest quartile across outcomes. Diabetes mortality was strongly positively correlated with premature deaths ($\rho = 0.934$). **CONCLUSIONS**: The geographic clustering of diabetes, cardiovascular disease, and premature mortality among Hispanics in NJ highlighted several counties with compounded preventable disease burden, suggesting there are place-based factors that may influence prevalence, underscoring the need for targeted public health interventions for preventable diseases in these counties.

Abstracts

15. **STRUCTURAL AND IDENTITY-BASED DETERMINANTS OF HEALTHCARE ACCESS AND QUALITY AMONG TRANSGENDER ADULTS**

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BACKGROUND: Transgender individuals experience persistent barriers to healthcare access and quality due to intersecting economic and structural factors. Prior research has examined variables such as income and insurance; however, their specific impact on healthcare access and outcomes among transgender individuals remains underexplored. **METHODS**: Cross-sectional survey data from 166 transgender-identifying participants in the Transgender Unique Resources and Networking through Internet Technology (TURN IT UP) study were examined. Primary outcomes included access to care, perceived provider bias, and quality of care. Income was the primary exposure variable. Multivariate logistic regression models examined relationships between income, insurance status, gender presentation, history of sex work, and healthcare outcomes. **RESULTS**: Income was not a statistically significant predictor of healthcare access or quality of care. Insurance status emerged as a key structural correlate of healthcare access, with uninsured participants demonstrating significantly reduced odds of accessing care compared with insured participants. Quality of care was driven by discrimination-related factors, including insurance denial due to transgender identity and a history of sex work, which were associated with lower odds of reporting high-quality care. Despite relatively high reported rates of respectful care, experiences of mistreatment were common, with a substantial proportion reporting multiple forms of mistreatment. **CONCLUSIONS:** Economic and structural identity-based determinants among transgender individuals contribute to barriers such as insurance gaps and stigmatized contexts (i.e. sex work history), which influence healthcare access and quality independent of income alone. Policy efforts should prioritize insurance protections and gender-affirming provider training to improve care quality and reduce discrimination for marginalized transgender populations.

16. **INFECTION AND NONUNION RATES IN PEDIATRIC PATIENTS UNDERGOING ORTHOPEDIC SURGERY FOR MALIGNANT VS. BENIGN LONG BONE TUMORS: A SYSTEMATIC REVIEW**

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BACKGROUND: Pediatric orthopedic oncology encompasses unique challenges as it must balance aggressive surgical management with preservation of musculoskeletal function and growth. This study compares infection and nonunion risks in benign versus malignant long bone tumors in developing Children. **METHODS**: A PRISMA-compliant systematic review and comparative analysis were performed using Pubmed, Embase, CENTRAL, CINAHL, and Web of Science (inception to June 20 2025). Inclusion criteria included patients age 20 and below, long bone tumors, malignant bone tumors defined as osteosarcoma and ewing sarcoma, and benign bone tumors defined as osteochondroma, non-ossifying fibroma, unicameral bone cysts, osteoid osteoma, giant cell tumor, and exostoses. Infection and nonunion rates were compared between groups using the chi-square test and risk-ratios (RRs) with corresponding 95% confidence intervals (CIs). **RESULTS**: Of 602 records identified, 50 met inclusion criteria. A chi-square test confirmed a statistically significant difference between groups for infection (χ^2 = 10.52, p = 0.0012) and nonunion (χ^2 = 15.70, p <0.001). The relative risk (RR) for postoperative infection in malignant versus benign lesions was 2.24 (95% CI, 1.36–3.70) and for nonunions was 6.97 (95% CI, 2.22–21.88). Across malignant surgical techniques, the majority of infections occurred following endoprosthetic reconstructions, with allograft/autografts (16.9%) having the highest nonunion rates. **CONCLUSIONS**: Surgical resection of pediatric bone tumors carries elevated infection and nonunion risks in malignant lesions. Although benign bone tumors rarely require surgical intervention, limited data on these procedures restrict further comparison.

17. **CROSSROADS OF CARE: BUILDING CONVERSATIONS FOR UNDERSTANDING AND SUPPORT AMONG IMMIGRANT FAMILIES**

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BACKGROUND: A child's mental health is heavily impacted by the ways their families navigate emotions at home. In many immigrant households, cultural stigma can limit the ways children approach their own mental health. In NYC, immigrant families make up a large population, yet they continue to face structural barriers in accessing effective mental health support and education. **METHODS**: Crossroads of Care proposes a pilot workshop specifically designed to strengthen parent-child communication on mental health. To build upon foundational knowledge while also incorporating cultural perspectives, the following objectives are emphasized: (1) Recognizing emotions and when to ask for help, and (2) Addressing stigma and normalizing support-seeking behaviors. To support these objectives, guided experiential activities and take-home multilingual resource guides will be provided to families. **RESULTS**: Estimated outcomes include improved parent-child communication, an increase in mental health education and resources, and reduced stigma. Families are anticipated to gain practical tools to recognize and respond to emotional challenges. **CONCLUSIONS**: This pilot aims to create a welcoming, community-driven space where conversations can begin, continue, and extend beyond the workshop and be integrated into homes across the city. The long-term goal is to build a community that integrates experiential learning, accessible resources, and community outreach strategies (such as WhatsApp, flyers, and community partnerships) to further support immigrant parents and their mental health needs. Crossroad of Care emphasizes how culturally responsive interventions can bridge gaps in mental health accessibility and education.

18. **ALGINATE HYDROGEL WITH NITRIC OXIDE DONOR MODIFIED ASPIRIN-LIKE LIPID NANOEMULSION FOR BIOMEDICAL APPLICATION**

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BACKGROUND: Nitric oxide (NO) regulates inflammation, angiogenesis, and tissue repair, while acetylsalicylic acid (ASA) is a widely used anti-inflammatory and analgesic. However, ASA is limited by renal and gastrointestinal toxicity, and both NO and ASA exhibit short biological half-lives and limited stability. To address these limitations, we developed an alginate-based hydrogel incorporating solid lipid nanoparticles (SLNs) loaded with a NO–donating ASA-like derivative (NO-ASA-like). **METHODS**: NO-ASA-like compound was synthesized following published protocols and confirmed by NMR spectroscopy. SLNs composed of tripalmitin and Poloxamer 188 were prepared by hot homogenization and characterized for particle size, polydispersity index (PDI), and zeta potential. Particle morphology and drug encapsulation were evaluated by transmission electron microscopy and Fourier-transform infrared spectroscopy. SLNs were incorporated into alginate hydrogels via $CaCl_2$-mediated ionic crosslinking. Rheological properties were assessed for topical suitability. In vitro release studies were performed using Franz diffusion cells under skin-mimicking conditions (pH 5.5, 32.5 °C) with a Strat-M® membrane. Cytotoxicity was evaluated in human keratinocyte (HaCaT) cells (ISO 10993-5 guidelines). **RESULTS**: NO-ASA-like–loaded SLNs exhibited a mean hydrodynamic diameter of 162.6±8.3 nm and a PDI of 0.315±0.079, indicating a relatively monodisperse population and smaller size than ASA-loaded SLNs. Nanoparticles displayed uniform spherical morphology, and FTIR confirmed successful drug encapsulation. Drug release followed diffusion-controlled Higuchi kinetics. The hydrogel exhibited suitable viscoelastic properties and maintained 75–85% HaCaT cell viability, exceeding the non-cytotoxicity threshold. **CONCLUSIONS:** The NO-ASA-like–loaded alginate hydrogel provides a stable and biocompatible platform for localized, sustained delivery of anti-inflammatory and tissue-protective therapeutics.

Abstracts

19. **EXAMINING SPINA BIFIDA PREVALENCE IN A DIVERSE STATE: RACIAL AND ETHNIC TRENDS IN NEW JERSEY**

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BACKGROUND: Spina Bifida (SB), (3.5/10,000 US live births) is a congenital neural tube defect that disproportionately affects Hispanic newborns in the US (3.8/10,000). Folate deficiency is a known modifiable risk factor and rates of SB have decreased since folic acid supplementation guidelines. We explore NJ prevalence rates, given its diverse population with varying access to care, to see if the national trends hold true. **METHODS:** This retrospective analysis uses data from CDC National Environmental Public Health Tracking Network (2000-2022). Prevalence of SB per 10,000 live births was stratified by maternal race/ethnicity [Hispanic, Non-Hispanic White (NHW), Non-Hispanic Blacks (NHB), Non-Hispanic Other (NHO)]. Prevalence disparities between Hispanics and Non-Hispanics were assessed using Wilcoxon rank-sum tests, while comparison between all racial/ethnic groups utilized Kruskal-Wallis tests with pairwise Wilcoxon comparisons and adjusting for false discovery rate. **RESULTS:** Prevalence rates of SB were 8.47, 9.68, 3.21, 1.79 for Hispanic, NHW, NHB, NHO, respectively. Prevalence was significantly higher among Hispanics compared to NHB, and NHO ($p<0.001$). Hispanics compared to NHWs had no statistically significant difference. Hispanics compared to all Non-Hispanic racial groups demonstrated a significant increase ($p<0.001$). This disparity remains persistent throughout all years analyzed excluding 2004. **CONCLUSIONS:** This study demonstrates Hispanic newborns have increased SB prevalence–similar to national trends. The 3-fold (3.80:8.47) increase of SB prevalence in Hispanic newborns in NJ highlights the need for targeted research and initiatives to address socioeconomic and healthcare inequities.

20. **EFFECTIVENESS OF COMMUNITY-BASED, SCHOOL-BASED AND HOME-BASED LATINO-SERVING NUTRITION PROGRAMS**

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BACKGROUND: Latinos are disproportionately affected by nutrition-related risk factors and health inequities. In response, various programs have sought to address these disparities with diverse results. We explore the impact of different types of Latino-serving nutrition programs through criterion-based measures of effectiveness. **METHODS:** Systematic narrative review was conducted on Pubmed, Scopus, and Google Scholar. Of 32 reviewed articles, 10 met inclusion criteria: Latino-serving, non-federal nutrition programs with quantitative assessments. The articles were either community-based, school-based programs, or home-based programs. Outcomes were categorized as dietary intake, nutritional knowledge, or physical health impact. Study-specific measures were weighted on a 0-1 scale and coded for effect polarity and statistical significance. Aggregate weight of measures was divided by the maximum total points for each category and placed on the scale. **RESULTS:** Community-based programs (n=3) showed impacts of 1.0 for dietary intake and 0.92 for nutritional knowledge. School-based programs (n=5) scored less: 0.70 and 0.88 for dietary intake and nutritional knowledge respectively, and had a physical impact of 0.55. Home-based programs (n=2) demonstrated effects of 0.38 for dietary intake and 0.75 for physical impact. Community-based programs lacked physical health measures. Home-based programs lacked nutritional knowledge. **CONCLUSIONS:** Community-based programs showed greater impact in dietary intake and nutritional knowledge, providing an important area of focus for future interventions. Improving these metrics may reduce risk of chronic health conditions including mental health conditions. Further research would help guide future programs to improve health outcomes for Latinos.

21. **DIABETES ASSOCIATION WITH CERVICAL CANCER MORTALITY AGE IN HISPANICS VS OTHER RACE/ETHNICITY GROUPS**

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BACKGROUND: Cervical cancer (CC) is the fourth most common cancer among women worldwide. Co-occurrence with diabetes is associated with increased cancer risk and worse survival outcomes and both conditions disproportionately affect Hispanic/Latino populations. Controlling diabetic status has been linked to improved outcomes. This analysis explores whether diabetes influences earlier CC mortality in Hispanics as compared to other races/ethnicities.

METHODS: We conducted a retrospective, population-based cross-sectional analysis of the CDC U.S. Mortality Public Use File (2023). We looked at adult women with CC as death cause (ICD-10 C53), co-occurring diabetes (ICD-10 E10-E14), and race/ethnicities (Hispanic, White, Black, Asian, and "others"). Mean death ages within racial/ethnic groups were compared by diabetes status. Multivariable regression models adjusted for age differences and socioeconomic factors (education, marital status, death location). **RESULTS:** Those with diabetes across all groups exhibited older CC mortality ages compared to those without–with significant differences in Hispanics, Whites, Blacks and Asians. After socioeconomic status (SES) adjustment, only Hispanic and Blacks continued to demonstrate significant differences (Hispanic: 6.87 years, p=0.00266; Black: 7.75 years, p=0.000461). No significant differences were noted in "others".

CONCLUSIONS: Contrasting previous literature, Black/Hispanic women with diabetes continued to showed older CC mortality ages after SES adjustment. These results call into question previously published literature, underscoring the need to explore additional confounding factors–including healthcare access and glycemic control in future studies. Results highlight persistent racial/ethnic disparities in CC mortality, emphasizing the need for further research.

22. **METHIMAZOLE INDUCED OLFACTORY INJURY ALTERS ADULT NEUROGENESIS IN THE OLFACTORY BULB AND SUBVENTRICULAR ZONE OF MICE**

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BACKGROUND: Adult neurogenesis persists throughout life in the subventricular zone and generates new interneurons in the olfactory bulb, supporting circuit plasticity and sensory function. This is a process that allows for the study of regeneration after an injury due to the ability of neurogenesis to constantly remodel neural circuits. Methimazole is a chemical that selectively ablates olfactory sensory neurons within the olfactory epithelium, inducing neuron loss and a regenerative neurogenesis. Because olfactory sensory neurons provide sensory input to the olfactory bulb, this is a useful model to examine how injury impacts neurogenesis within the subventricular zone, where neurons originate before migrating to the olfactory bulb. **METHODS:** Adult mice are treated with methimazole to induce olfactory sensory neuron injury. Proliferating cells are labeled using 5-ethynyl-2-deoxyuridine, followed by brain tissue collection at defined survival time points. Immunohistochemistry and fluorescence microscopy are used to assess cell proliferation and neuronal maturation within the subventricular zone and the olfactory bulb across experimental conditions. **RESULTS:** Data collection and analysis are ongoing. Preliminary observations suggest that methimazole induced injury alters adult neurogenesis in both the subventricular zone and olfactory bulb. Early findings indicate that injury alters proliferation and immature neuron labeling compared to uninjured controls, with potential region-specific differences. **CONCLUSIONS:** These ongoing studies suggest that methimazole induced olfactory injury alters adult neurogenesis within the central nervous system. This work highlights the relationship between olfactory sensory neuron loss and neurogenic responses. Additionally it showcases the use of the olfactory system as a model for studying injury induced plasticity within the brain.

Abstracts

23. **UTILITY OF GENERATIVE AI FOR SPANISH TRANSLATION AND QUALITY IMPROVEMENT OF PEDIATRIC ORTHOPAEDIC PATIENT EDUCATION MATERIALS**

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BACKGROUND: Spanish-speaking families have limited access to pediatric orthopaedic patient education materials (PEMs), and existing Spanish resources often exceed recommended literacy levels. Generative AI tools such as ChatGPT may expand Spanish-language access, but their performance compared to existing materials is unclear. **METHODS:** We evaluated ChatGPT-4 by translating 59 pediatric orthopaedic PEMs from OrthoInfo (AAOS), including 9 with official Spanish versions. AI-generated translations were evaluated across validated measures of readability, usability, actionability, translation fidelity. Readability was assessed with Simple Measure of Gobbledygook & Flesch Reading Ease for English PEMs, and Spanish Orthographic Length & Fernández–Huerta indices for Spanish PEMs. Understandability and actionability were assessed with the Patient Education Materials Assessment Tool (PEMAT). Translation fidelity was evaluated with Multidimensional Quality Metrics (MQM), using official Spanish PEMs as comparators. **RESULTS:** AI-generated Spanish PEMs preserved expected readability after translation (mean residual 0.06 grades; 74.6% within ±1 grade; TOST p<0.001). English PEMAT scores were higher than both official and AI-generated Spanish versions, indicating that translation alone did not improve understandability or actionability. AI-generated Spanish PEMAT scores were comparable to official Spanish PEMs, while MQM scores favored AI translations (93.7 vs 76.6), indicating fewer severity-weighted errors. **CONCLUSIONS:** ChatGPT preserved readability and produced Spanish translations with higher fidelity than official versions, without worsening usability compared with existing Spanish PEMs. Given the limited supply and poorer quality of Spanish PEMs, AI-assisted translation may improve the current status quo for Spanish-language access. Pairing AI workflows with clinician review and plain-language editing could improve equity for Spanish-speaking families.

24. **REAL WORLD EXPERIENCE OF ADVANCED MELANOMA AT A SINGLE-CENTER ACADEMIC INSTITUTION**

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BACKGROUND: Melanoma, a highly aggressive skin cancer, is projected to rise in prevalence and mortality by 2040. Despite advances in immunotherapy and targeted treatments, many patients experience progression or severe toxicities. This study created a comprehensive UT Southwestern (UTSW) database to better understand treatments, disease progression, toxicities, and patient outcomes. **METHODS:** We retrospectively identified patients with advanced melanoma treated with systemic therapy at UTSW from 2018–2024. Demographics, clinicopathologic features, treatments, and toxicities were collected. Statistical analyses included descriptive and inferential tests to assess survival, outcomes, and correlations between treatment patterns and recurrence rates. **RESULTS:** We identified 199 patients. 67% were male and 92% Caucasian. Most (79.9%) were non-acral, non-desmoplastic cutaneous melanoma. 45% (n=89) had BRAF V600 mutation. Nine patients received neoadjuvant therapy, and 127 received adjuvant therapy. 103 had metastatic disease. Median overall survival (mOS) was 89.4 months (m) (95% CI 57.0 – 145.3). Those received adjuvant therapy, mOS was not reached, with a 5-year OS rate of 70%. Patients with metastatic disease, mOS was 41.6 m (95% CI 20.6 – 89.4) with a 5-year OS rate of 38%. No significant mOS difference found in metastatic patients with BRAF V600 mutations vs WT (41.6 vs 33.1 m, p=0.69). In BRAF V600 mutant patients with metastatic disease, those receiving immunotherapy first trended towards significant mOS benefit (41.6 vs 14.2 m, p=0.13) **CONCLUSIONS:** This initial analysis details demographic and clinical outcomes of patients treated at UTSW. These real-world findings reflect similar findings in clinical trials, highlighting clinical need and help to educate the field and the community.

25. **TREATMENT FACTORS ASSOCIATED WITH HUMERAL SHAFT FRACTURE NONUNION**

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BACKGROUND: Humeral shaft fractures are managed non-operatively or surgically. The cause of nonunion is multifactorial. Transverse displaced fractures and middle to distal third fractures of the humerus are reported with higher nonunion rates. Age, infection, and comorbidities (diabetes and osteoporosis) are contributors. Modifiable factors (smoking, NSAID/corticosteroid use, and poor patient compliance) worsen outcomes. The aim of this study was to describe factors associated with risk of nonunion, and the characteristics and treatment of nonunion in patients treated for humeral shaft fracture. **METHODS:** Adults treated for humeral shaft fracture at one Level 1 center from December 2009-July 2020 were retrospectively reviewed. **RESULTS:** 386 patients were included. 15.3% developed nonunion. Patients with nonunion were more likely to have comorbid alcoholism (p <0.001) and hypothyroidism (p=0.048) and were significantly more likely to have been initially managed nonoperatively (p <0.001). Mechanism was significantly associated (p=0.008). Of those with nonunion treated surgically initially, there were differences in the number and positioning of screws utilized in ORIF, including more screws distally (p=0.048) to the fracture, and fewer screws outside of the plate (p=0.045) in diagnosed nonunion. 11 patients required more than 1 revision. **CONCLUSIONS:** Our population demonstrated increased risk of nonunion with initial nonoperative management. Alcoholism and hypothyroidism were significant risk factors. Surgical technique played a role in nonunion risk. More screws distal to the area of fracture increased risk. Screws outside of the plate decreased risk. The risk of post-surgical infection more than doubled in patients needing more than 1 revision, demonstrating the patient morbidity associated with nonunion.

26. **MID-TERM OUTCOMES BETWEEN INTRA-ANNULAR VERSUS SUPRA-ANNULAR SELF-EXPANDING TRANSCATHETER AORTIC VALVES**

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BACKGROUND: Intra-annular (IA) self-expanding (SE) valves are a relatively recent addition to transcatheter heart valves in the United States compared with the more established supra-annular (SA) SE valve. While many studies have compared outcomes between SE and balloon-expanding valves, evidence specifically comparing IA and SA SE valves is sparse. **METHODS:** All patients who underwent transcatheter aortic valve replacement (TAVR) with a SE valve were identified in our institutional Transcatheter Valve Therapy (TVT) registry between 2014 and 2024. Patients were grouped between the IA and SA groups. **RESULTS:** Of 5470 patients undergoing TAVR, 2294 underwent TAVR with SE valves, including 356 (18.4%) with IA and 1938 (84.5%) with SA. The mid-term survival was comparable between groups at 1 year. Propensity-score matching (PSM) provided 354 patients per group. After PSM, the incidence of new permanent pacemaker placement was higher in the IA group (11.9% vs. 3.4%, P < 0.001). Mild or greater paravalvular regurgitation (PVR) was more frequent in the SA group at 1 year (32.5% vs. 24.9%, P = 0.02) while moderate or greater PVR occurred in only 1.6% (n = 11) overall. Cox Hazard analysis showed valve type was not associated with all-cause mortality (HR 1.06, 95% CI 0.72-1.57, P = 0.77). **CONCLUSIONS:** Permanent pacemaker placement was significantly higher with IA valves, while PVR was more frequent with SA valves. This may be related to only high-risk approval for IA valves. Survival and other complications were comparable between groups.

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27. EPIDEMIOLOGIC TRENDS IN TIANEPTINE ("ZAZA") USE: A RETROSPECTIVE COHORT ANALYSIS FROM THE TRINETX GLOBAL COLLABORATIVE NETWORK (2010-2024)

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BACKGROUND: Tianeptine, commercially known as "Zaza," "Red," and "Tianaa," is an atypical tricyclic antidepressant with unique opioid receptor activity. Although approved internationally for major depressive disorder, it remains unapproved in the U.S. due to significant potential for misuse and dependence. Recent surges in recreational use, withdrawal symptoms, and overdose events have sparked urgent public health concerns, yet large-scale epidemiological data on its prevalence remain scarce. This study analyzed the incidence and prevalence of Tianeptine use within the massive TriNetX Global Collaborative Network to assess demographic shifts and usage trends between two distinct periods: 2010–2017 and 2018–2024. **METHODS:** We conducted a retrospective cohort analysis on 129,740,865 patients. Incidence and prevalence were stratified by age, sex, race, and ethnicity. Patients with documented Tianeptine exposure were identified to compare trends across the pre- and post-2018 timeframes. **RESULTS:** Tianeptine-related encounters rose significantly between periods. The incidence proportion increased from 5.76×10^{-7} to 4.30×10^{-6}, while the incidence rate jumped from 4.54×10^{-10} to 4.31×10^{-9} cases per person-day. While usage among the oldest adults (85+) declined by 54%, incidence notably shifted to younger elderly populations (70–84), nearly doubling in the 70–74 age group. Furthermore, new cases emerged in adolescents (10–19) and young adults (20–24). **CONCLUSIONS:** Tianeptine exposure has surged over the last decade, with data revealing a disproportionate impact on Black older adults and females. Given its opioid-like effects, these findings emphasize the critical need for stronger regulatory oversight, improved clinical screening, and targeted public health interventions.

28. STIMULANT THERAPY IMPROVES DIABETIC OUTCOMES IN ADULTS WITH ADHD - A RETROSPECTIVE COHORT STUDY

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BACKGROUND: Untreated attention-deficit/hyperactivity disorder (ADHD) may worsen glycemic control and thus increase the risk of diabetic complications in people with type 1 diabetes (T1D). Whether stimulant treatments improve diabetic outcomes in people with ADHD and T1D remains unclear. Our objective was to determine if stimulant therapy improves glycemic control and reduces diabetic complications in adults with comorbid ADHD and T1D. **METHODS:** Using the TriNetX Research Network, individuals were categorized into three groups: stimulant-treated (n=7,366), non-stimulant-treated (n=2,383), or untreated (n=6,822). **RESULTS:** Stimulant treatment was associated with lower risk of poor glycemic control (risk ratio (RR):0.92, $p < 0.001$), hospitalization (RR:0.83, $p < 0.001$), and DKA (RR:0.75, $p < 0.001$) compared to untreated ADHD. Compared to non-stimulant therapy, stimulant treatment was associated with lower risk of emergency visits (RR:0.92, $p < 0.001$), hospitalization (RR:0.80, $p < 0.001$), and DKA (RR:0.84, $p < 0.001$). No significant differences were observed for urine ketones or diabetic foot ulcers in either comparison. Non-stimulant therapy showed no significant differences compared to untreated ADHD. **CONCLUSIONS:** Effective identification and treatment of ADHD may enhance diabetes management in adults with T1D.

29. **CLINICAL OUTCOMES OF DISTAL RADIUS FRACTURES TREATED WITH VOLAR LOCKING PLATE VERSUS FRAGMENT SPECIFIC PLATING**

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BACKGROUND: Distal radius fractures (DRFs) remain one of the most common adult fractures, with increasing operative fixation rates. Volar locking plates (VLP) have been widely used because of their low complication rates and straightforward approach. Fragment-specific fixation (FSF) is often used for more complex fractures. Prior comparative studies have been limited due to smaller cohorts. **METHODS:** A retrospective multicenter review was performed on patients who underwent surgical fixation with either VLP or FSF from January 2018 to June 2024. Demographic, operative, and postoperative data was collected. Analysis used t-test for continuous variables and Fisher's exact test was used for categorical variables ($p \leq 0.05$). **RESULTS:** 211 patients were included: 150 VLP and 61 FSF. The two groups were comparable in terms of demographics and comorbidities. The dataset included individuals presenting with complete articular, type C, fractures in accordance with the AO/OTA classification system. Compared to the VLP group, FSF was associated with longer operative times (133 vs 94 min, $p<0.0001$) and greater removal of hardware rates (19.7% vs 7.3%, p=0.0091). Intraoperative complications, postoperative complications, 90-day ED visits, and readmissions were comparable between the groups. **CONCLUSIONS:** FSF is most often utilized for complex DRFs and has greater removal of hardware rate, but does not appear to increase rates of major adverse postoperative clinical outcomes when compared to VLP.

30. **UNDERSTANDING HISPANIC PARENTS' PERSPECTIVES ON PEDIATRIC HEARING INTERVENTIONS: A QUALITATIVE PILOT STUDY**

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BACKGROUND: Racial and ethnic minority groups experience reduced access to hearing aids, and Black and Hispanic children receive cochlear implants at disproportionately lower rates than White and Asian children. These disparities exacerbate vulnerabilities, as even mild hearing loss negatively affects children's intellectual development. Such inequities persist despite financial support through the Early Hearing Detection and Intervention (EHDI) Act and Medicaid, suggesting nonfinancial barriers, including limited knowledge of or hesitancy toward hearing devices. **METHODS:** We conducted a qualitative interview study with parents participating in Saturday Academies organized by Say Yes Buffalo in New York. Parents were given three scenarios to assess their views on hearing aids and cochlear implants. Responses were analyzed thematically to assess decision-making processes and beliefs. **RESULTS:** Five parents (2 female, 3 male) participated, identifying as Puerto Rican (N=3), Mexican (N=1), and Dominican (N=1). Two interviews were conducted in Spanish. All expressed willingness to pursue hearing aids, though 3 were unaware they could begin at 2–3 months. Female participants generally accepted cochlear implants immediately, whereas males sought more information, and one parent mentioned a second opinion. Six themes emerged: hearing aids as opportunities (N=5), conditional trust in doctors (N=4), hesitation with invasive procedures (N=3), information gaps and need for information (N=4), parents as primary decision-makers (N=5), and emotional reactions to hearing loss (N=4). **CONCLUSIONS:** Parental acceptance of hearing interventions is high, yet knowledge gaps and informational barriers may contribute to delayed utilization among racial and ethnic minority populations.

Abstracts

31. PREVALENCE OF HEARING LOSS IN PEDIATRIC PATIENTS WITH SICKLE CELL DISEASE: A RETROSPECTIVE COHORT STUDY

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BACKGROUND: Sickle cell disease (SCD) is a genetic disorder characterized by the production of abnormal hemoglobin, leading to sickle-shaped red blood cells. This results in chronic hemolysis and recurrent vaso-occlusive crises, causing systemic complications. Among these, otolaryngological manifestations, such as hearing loss, are often under-recognized in pediatric populations. Despite its potential impact, hearing loss in children with SCD remains inadequately studied, warranting further investigation. **METHODS:** This retrospective study analyzed pediatric patients (≤17 years) with and without SCD using the TriNetX database. Outpatient visits between January 1, 2010, and December 31, 2023, were included. Propensity score matching was applied to 2 balance cohorts by age, sex, race, and ethnicity. Relevant ICD-10 codes identified and compared otolaryngological outcomes between SCD and non-SCD groups. **RESULTS:** Of 6,854,829 children, 10,709 had SCD. After matching, 10,709 patients were included in each group (mean age: 3.3 years). Most patients in both cohorts were Black or African American (81.6%, N=8,740), with smaller proportions identifying as Hispanic or Latino (6.3%, N=671 in the SCD cohort; 6.1%, N=651 in the non-SCD cohort). Hearing loss was more prevalent in the SCD cohort (7.6%, N=815 vs. 6.1%, N=657; OR=1.26, $p<.001$). Sensorineural hearing loss was higher in the SCD group (2.0%, N=214 vs. 1.2%, N=126; OR=1.71, $p<.001$), while conductive hearing loss rates were similar ($p=.336$). Other conditions more common in the SCD cohort included obstructive sleep apnea (10.9%, N=1,166 vs. 3.5%, N=374; OR=3.38, $p<.001$) and recurrent otitis media (mean episodes: 4.40 vs. 3.08; $p<.001$). **CONCLUSION:** Children with SCD in the TriNetX database show an increased risk of developing sensorineural hearing loss compared to those without SCD. This highlights the importance of incorporating regular hearing evaluations into the care of pediatric SCD patients to address this risk and enhance overall patient management.

32. THE RELATIONSHIP BETWEEN COMORBIDITIES AND LIFESTYLE MODIFICATION RECOMMENDATIONS IN HYPERTENSION TREATMENTS

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BACKGROUND: Nearly ½ of US adults have hypertension which is associated with many comorbidities. Understanding factors that impact physicians providing recommendations on lifestyle modifications (LMs) (e.g. diet, exercise, weight loss) could be important in determining how to help patients be proactive in lowering their blood pressure (BP). Research Question: What factors correlate with physician lifestyle modification recommendations? **METHODOLOGY:** We used EPIC Slicer Dicer to obtain a random sample of 205 patients seen at Geisinger family medicine clinics with recently uncontrolled hypertension (50% stage 1 hypertension, 50% stage 2 hypertension). Patient charts were reviewed for relevant data, including the primary outcome—documentation of BP-related comorbidities and LM recommendations. Chi-square tests were used to evaluate associations with LM recommendation. **RESULTS:** Of 205 patients, 46% of patients were recommended LMs including diet change, exercise, and weight loss, 23%, 14%, and 12% respectively. LM recommendations were more common in patients with obstructive sleep apnea (OSA) (67% vs. 43%; p= 0.029) and fatty liver disease (75% vs. 44%; p= 0.037) and less so for tobacco users (26% vs. 49%; p=0.02). LM recommendations tended to be greater for those with body mass index (BMI) ≥ 35 kg/m 2 (58% vs. 44%; p=0.07). Notable comorbidities like prediabetes and atherosclerotic cardiovascular disease were not associated with LMs. In multivariable logistic regression, tobacco use (OR 0.38, 95% CI: 0.15, 0.95; p=0.04) as well as documentation of medication adherence (OR 3.03, 95% CI: 1.48, 6.23; p=0.002) were associated with higher recommendation of LM recommendation. **CONCLUSIONS**: According to our data, physicians may be biased when recommending LMs to patients depending on certain factors. Understanding these factors may be useful in designing interventions to improve the address of LMs to improve blood pressure and cardiovascular outcomes.

33. INVESTIGATING THE ANTI-MICROBIAL PROPERTIES OF GORDOLOBO AGAINST P. AERUGINOSA

Fiorella Murillo Machado; Olivia Hatton, PhD at Colorado College

BACKGROUND: Gordolobo, also commonly known as mullein, is a plant grown in northern Mexico commonly used by Indigenous communities in a tea to expel phlegm as a treatment for bronchial asthma and coughs, amongst other things. Although it is traditionally used as an anti-inflammatory, we were interested in examining whether it also contained anti-microbial properties, specifically against P. aeruginosa. P. aeruginosa causes respiratory system infections with mortality rates ranging from 18-61%, depending on comorbidity factors. **METHODS**: Gordolobo's potential anti-microbial properties were assessed via minimum inhibitory concentration (MIC) and disc diffusion assays. Different preparations of Gordolobo including traditional teas, tinctures, and extracts of different parts of the plant, were compared. **RESULTS**: The results of the MIC assays all suggest no anti-microbial properties were present in any of the Gordolobo preparations; growth inhibition was only seen in preparations containing ethanol, including the tincture control, suggesting that ethanol was the ingredient inhibiting growth and not Gordolobo. The disc diffusion assays all showed no zones of inhibition for any of the samples excluding the tobramycin control. **CONCLUSION**: All the data collected suggests that Gordolobo does not have anti-microbial properties against P. aeruginosa. The different forms of preparation did not make a difference in anti-microbial properties.

34. HIGH PREVALENCE OF ANXIETY AMONG WOMEN WITH FIBROMUSCULAR DYSPLASIA SEEN AT A TERTIARY REFERRAL CENTER

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BACKGROUND: Fibromuscular dysplasia (FMD) is a non-atherosclerotic disease that causes serious vascular events (e.g., coronary and cervical artery dissection, stroke) as well as migraine headache, pulsatile tinnitus, and uncontrolled hypertension. We sought to explore the mental health of patients with multifocal FMD seen at a referral center and whether vascular features of FMD were associated. **METHODS**: 175 consecutive patients with multifocal FMD seen in clinic between 12/16/2024-08/07/2025 consented to participate. Clinical and FMD parameters were captured by a single clinician. Patients completed the 14-question Hospital Anxiety and Depression Scale (HADS) and an electronic demographic questionnaire. HADS-anxiety(a) > 11 and HADS-depression(d) > 11 subscales were considered probable cases. HADS-total(t) score >11 was considered psychological morbidity. **RESULTS**: Data are presented for 144 female patients with complete data (mean age 62.4 yrs, 91.7% White). Mean time from FMD diagnosis to study visit was 6.5 yrs. 77.1% of patients had multivessel FMD involvement, most commonly involving the carotid (81.3%), renal (58%), vertebral (38%), and iliac (31.9%) arteries. Aneurysm (23.6%) and/or dissection (38.2%) were common and 26.4% had previously undergone a therapeutic vascular procedure. Median HADS-t score was 9 (5, 14); 38.9% of patients had HADS-t > 11. Only 4.2% of patients had HADS-d > 11 while 18.8% had HADS-a >11. There was no significant association between anxiety and time since diagnosis, multivessel involvement, aneurysm, dissection, or vascular procedure. 18.8% of patients reported being under the care of a mental health professional. There was a significant negative correlation between older age and lower HADS-t ($r = -0.21$; $p=0.01$) and HADS-a scores ($r=-0.3$, $p=0.00025$). **CONCLUSION**: Psychological morbidity is common among women with multifocal FMD seen at a referral center with 18.8% identified as probable cases of anxiety. FMD-related vascular factors were not associated with anxiety. These data suggest that patients may benefit from multidisciplinary care to address the physical and psychosocial impacts of FMD, beyond medical care alone.

Abstracts

Poster Session
REVIEW

01. **SOCIAL DEPRIVATION AND PEDIATRIC ORTHOPAEDIC CARE: A SCOPING REVIEW OF DISEASE BURDEN, ACCESS, AND OUTCOMES**

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BACKGROUND: Socioeconomic disadvantage is linked to delayed treatment and worse musculoskeletal outcomes in adults, but the impact of neighborhood social deprivation on pediatric orthopaedic care is less defined. We mapped how validated deprivation indices relate to pediatric orthopaedic disease burden, access to care, and outcomes. **METHODS:** We conducted a scoping review following Joanna Briggs Institute methodology, searching PubMed,Embase, Medline, and Scopus for studies assessing social deprivation indices and pediatric orthopaedic care. Two reviewers independently screened and extracted data. Outcomes were grouped into: (1) prevalence and disease risk, (2) access to care and treatment delays, and (3) clinical or patient-reported outcomes, and synthesized descriptively. **RESULTS:** Forty-one studies (~5.5 million children) met inclusion criteria. Sixteen indices were reported, most commonly the Area Deprivation Index and Child Opportunity Index. Among studies of prevalence and risk (n=20), 17 found greater functional limitations and clinical severity in more deprived children. Of studies on access and timeliness (n=13), 10 reported later presentation, missed follow-up, or reduced access to nonoperative care in higher-deprivation groups. Of studies on outcomes (n=8), 6 found worse clinical or psychosocial outcomes with greater deprivation. **CONCLUSIONS:** This scoping review provides a comprehensive map of how neighborhood-level social deprivation relates to pediatric orthopaedic disease burden, access, and outcomes, revealing a consistent pattern of disadvantage. Integrating deprivation data into clinical workflows and pairing risk identification with targeted supports such as transportation, care coordination, and follow-up navigation may help reduce inequities in access and recovery and guide future intervention and policy work.

02. **END-OF-LIFE COMMUNICATION FOR NON-ENGLISH LANGUAGE PREFERENCE: PATIENT, CAREGIVER, AND INTERPRETER PERSPECTIVES**

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BACKGROUND: Patients with Non-English Language Preference (NELP) experience care quality challenges during end-of-life (EOL) conversations. Prior literature analyzes medical interpreters (MI) and NELP patient/caregiver perspectives separately. This review includes both to further understand EOL communication challenges. **METHODS:** Systematic Review of PubMed, PsycInfo, Google Scholar, Cochrane Library, and EBSCO yielded 1349 articles. Inclusion criteria required adult patients, MI or NELP patient perspectives on EOL or palliative care, and interpretation to English; articles on pediatric patients or interpretation to other languages were excluded. Nine articles met inclusion criteria (MI = 5, patient/caregiver = 4). Thematic analysis identified three themes: emotional response, family role, and communication style. **RESULTS:** Analysis of MI vs. patient/caregiver perspectives on these themes produced mixed results. Both groups reported negative emotional responses; MI described feelings of discomfort and stress especially without provider pre-meeting. NELP patients/caregivers expressed fear, anger and disconnection from shared decision-making. Regarding family involvement, MI stated the most English-proficient family members dominated the conversation leading to inaccurate translation and intentional information concealment. Conversely, NELP patients emphasized family importance in decision-making and increased comfortability. Both groups agreed discordant communication styles had negative impacts; certain vocabulary didn't translate well, and speech pacing/delivery could be misaligned with patient cultural values. **CONCLUSION**: This review highlights opportunities for improvement in EOL communication with NELP patients, including improved interpreter preparation for EOL discussions, clearer role definitions, and greater emphasis on cultural sensitivity. Strengthening interpreter services could create more equitable, patient-centered, and dignified EOL care for NELP patients.

Poster Session
SHORT COMMUNICATION

01. **IMPACT OF ANTI-IMMIGRATION MEASURES ON PHYSICAL HEALTH AND MENTAL HEALTH**

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BACKGROUND: Florida's Senate Bill 1718 (SB1718) went into effect on July 1, 2023, and introduced a set of anti-immigration measures. Among them is a requirement that hospitals collect information about the immigration status of patients. Previous studies have documented the contribution of these laws to an avoidance of health care and social service utilization. However, less is known about the direct health consequences of anti-immigration measures, a critical knowledge gap given the recent proliferation of similar policies worldwide. **METHODS:** A difference-in-differences approach was used to compare changes in outcomes among Hispanic adults residing in Florida versus control states after SB1718. We fit multivariable linear regression models and included a binary indicator for policy status for period, and an interaction term between the two indicators. Models included state and month-year fixed effects and adjusted for covariates. The study population included 3,274 Hispanic adults residing in Florida and 5,344 Hispanic adults residing in control states. **RESULTS:** There was a significant increase in poor physical health days among Hispanic adults (4.0 to 4.4 days, adjusted difference, +0.78 days [95% CI: 0.41-1.1]) and significant differential increase in poor mental health days among Hispanic adults in Florida following SB1718 (adjusted difference-in-differences, +1.4 days [95% CI: 0.54-2.4]; p=0.002). **CONCLUSION:** Hispanic adults experienced a significant increase in poor physical and mental health days after implementation of anti-immigration policies in Florida. Our findings underscore the need for policymakers and health systems to recognize and address the health consequences of exclusionary immigration policies.

02. **PERIPHERAL NERVE STIMULATION FOR CHRONIC KNEE PAIN: A REVIEW OF LITERATURE FROM 2023-2025**

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BACKGROUND: Chronic knee pain due to osteoarthritis and following total knee arthroplasty remains challenging to manage. Peripheral nerve stimulation (PNS) has emerged as a reversible, nerve-targeted intervention, available as temporary 60-day or permanently-implanted devices. Contemporary data evaluating the effectiveness and safety of knee-focused PNS systems remain limited; these outcomes were compared. **METHODS:** A review of studies between 2023-2025 was conducted using PubMed, Embase, and Web of Science databases. These were screened using predefined eligibility criteria. A ≥50% responder was defined as participants achieving ≥ 50% reduction in pain from baseline. Data on responder rates, percent pain reduction, nerve targets, device type, and adverse effects were extracted. Outcomes were compared using a two-proportion z-test. **RESULTS:** Seven studies were included (N = 145). The average pain reduction was approximately 67% (range 43–100%). The end-of-treatment ≥50% responder rate was 79% (95% CI 71–84; $p < 1\times10^{-10}$).Temporary 60-day PNS systems demonstrated a responder rate of 77% (95% CI 69–84; N = 111) vs 82% in permanent systems (95% CI 66–91; N = 34). There was no statistically significant difference in responder rates between device types (p = 0.48). Adverse effects were minimal and primarily dermatologic. **CONCLUSION:** Peripheral nerve stimulation for chronic knee pain demonstrated short-term effectiveness. Pain reduction outcomes were similar between temporary and permanent PNS systems, and adverse effects were mild. These findings support PNS as an effective and well-tolerated treatment option for chronic knee pain.

Abstracts

03. **EVALUATING THE IMPACT OF ART-BASED ACTIVITIES ON PEDIATRIC PATIENTS AND FAMILIES IN AN ACADEMIC FAMILY MEDICINE HEALTH CENTER**

Katherine Tinco[1], Caroline Gutierrez[1], Jacqueline Bernabe[1], Evelyn Guaman[1], Katherine Florian[1], Ericka F. Frias[1], Krystelle Joinville[1], Nayeem Hussain[1], Juan Robles MD[1]
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BACKGROUND: The integration of art interventions in healthcare settings cultivates connection among patients, caregivers, and healthcare providers, improving communication, rapport, and emotional well-being. Active art engagement supports self-expression, fosters a sense of control, and reduces anxiety and stress. While art health programs are well established in hospitals, particularly in pediatric specialty care, their integration into family health centers remains limited. There is a growing need to expand art-based interventions into primary care settings. This project describes the implementation and preliminary outcomes of an art-based intervention for pediatric patients and caregivers in the waiting area of an academic family medicine health center serving socioeconomically disadvantaged families. **METHODS**: Pediatric patients and their families were offered art-based activities (e.g., crafts, drawings and projects) in the waiting area facilitated by pre-health students of the Bronx Community Health Leaders (BxCHL), a pre-health pathway program for socioeconomically disadvantaged and/or underrepresented minority students seeking careers in healthcare. Surveys will evaluate satisfaction with the activities, how they enhance the waiting room experience, and their impact on caregiver and patient mood. **RESULTS**: Art-based activity sessions have been offered weekly and year-round, with positive anecdotal feedback from caregivers and healthcare staff about their impact on the waiting room experience. Survey data will further evaluate satisfaction and the impact on the waiting experience for children and their caregivers. **CONCLUSION**: Art-based interventions can enhance engagement and satisfaction for pediatric patients and caregivers in underserved primary care settings, transforming waiting rooms into supportive and meaningful spaces with lasting creative outcomes.

04. **UNDERSTANDING SUN PROTECTION IN THE LATINE COMMUNITY: A SCOPING REVIEW OF PERCEPTIONS, FACILITATORS, AND BARRIERS**

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BACKGROUND: There are significant disparities in skin cancer outcomes for the Latine population. Sun-protective behaviors, such as wearing sunscreen and protective clothing, reduce the risk of skin cancer and other sequelae of sun exposure. Latine people have lower use of sun protection compared to other populations. **METHODS**: We conducted a scoping review to identify and synthesize research on the perceptions of sun-protective behaviors among Latine people as well as barriers and facilitators. The PRISMA Extension for Scoping Reviews was used as the reporting guideline. PubMed, Scopus, and CINAHL were searched with keywords and subject headings. Two authors independently screened each article by title and abstract, followed by a full-text review and data extraction. Results were summarized qualitatively. **RESULTS**: The included studies discussed conflicting perceptions of sun protection, which were influenced by beauty standards, machismo, and social context. This review identified multiple barriers to sun protection, including limited knowledge of skin cancer and sun protection, cultural norms, financial constraints, and the built environment. The cultural emphasis on the importance of family and increased knowledge of skin cancer were facilitators of sun-protective behaviors. **CONCLUSION**: Perceptions, barriers, and facilitators of sun-protective behaviors are shaped by a complex interplay of socioeconomic factors, knowledge, and cultural norms. Future research should explore how to best address these barriers and incorporate facilitators into interventions. Future interventions should be culturally tailored. Further work will also need to address the structural barriers that contribute to disparities in these behaviors, with a focus on occupational sun protection.

05. **BUILDING A HEALTHIER SCRANTON: SHORT-FORM COMMUNITY VIDEOS TO PROMOTE PHYSICAL AND MENTAL WELL-BEING**

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BACKGROUND: Community engagement efforts in downtown Scranton, Pennsylvania revealed low participation in local wellness activities and limited awareness of accessible physical and mental health resources. Rising rates of chronic disease and post-pandemic social isolation highlighted the need for accessible, community-centered health education approaches. **METHODS**: Six medical students partnered with Scranton Tomorrow and local community organizations to identify community health themes through interviews and field observations. The team scripted, filmed, and produced a five-part series of short health education videos, each under sixty seconds, using smartphones. Topics included vaccination, physical activity through community trails, coworking and social connection, mental health services, and outdoor recreation. Videos were shared through Scranton Tomorrow's social media platforms. Community feedback was assessed through informal partner discussions and social media engagement metrics. **RESULTS**: Community partners reported increased awareness and interest in local physical and mental wellness opportunities. Preliminary engagement metrics demonstrated positive community response, including high viewership and increased sharing behavior across platforms. **CONCLUSION**: Short-form, locally contextualized social media videos represent an effective and accessible strategy for promoting preventive health behaviors and community engagement. Future iterations may incorporate partnerships with public health agencies and longitudinal evaluation of behavioral outcomes.