STRIDE

Symposium on Tribal and Rural Innovations in Health

Approved for 6 Category 1-A AOA Credits

September 12, 2025

ABSTRACT BOOK

COLLEGE OF
OSTEOPATHIC MEDICINE
at the Cherokee Nation

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Agenda

Friday, September 12, 2025

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Proper Prescribing: Oklahoma Opioid Prescribing Guidelines — Kelly Dunn, MD

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OSBOE Sponsor: Natasha Bray, DO
Indigenous Roots of Osteopathy — Lewis Mehl-Madrona, MD, PhD

12:00PM - 12:30PM
Lunch & Visit with Exhibitors (No CME Credit)

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Dementia in Native Americans within Cherokee Nation Health Services — Jessica Lewandowski, MBA; Catherine Porter, MD

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Meeting Oklahoma's Child Psychiatry Healthcare Needs in Our Rural and Other Underserved Communities — Sara Coffey, DO; Micah Hartwell, PhD; Amanda Miller Sellers, MSW

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Food as Medicine - From Fringe to Factual — Thomas W Duffy, DO

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Breaking Barriers: Evidence-Based Approaches to Substance Use Disorder Treatment in Justice-Involved Individuals, Veterans and Marginalized Populations — Dallas D McCance, MS; Natasha Bray, DO

Abstracts

Title: Functional Impairment in MI and Stroke Survivors

Authors: S Atkinson; A Huynh; M Hartwell

Affiliations:

1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Office of Medical Student Research, Tahlequah, Oklahoma (SA; AH; MH)

Abstract

Purpose: Mortality rates from cardiovascular disease have decreased in the recent past; however, disparities remain among some ethnoracial groups, older individuals, rural citizens, and those without adequate transportation or medical access. Additionally, those who experience these events have increased acute and chronic physical difficulties afterwards. Given the increased prevalence for some groups, our objective was to determine the prevalence of physical limitations among survivors of myocardial infarction and stroke in the United States.

Methods: To assess physical limitations among those who experienced cardiovascular events, we performed a cross-sectional analysis of the 2023 Behavioral Risk Factor Surveillance System (BRFSS). We included individuals who responded to questions regarding cardiovascular events and completed all relevant modules, with associations between sociodemographics and physical limitations measured using X^2 and regression models where applicable.

Results: Among 430,164 respondents, 37,162 (6.8%) reported a history of myocardial infarction or stroke. Survivors had higher odds of reporting difficulty dressing or bathing (OR=5.25, P <0.001), serious difficulty walking or climbing stairs (OR=5.77, P <0.001), and difficulty concentrating secondary to preexisting mental, physical, or emotional condition (OR=2.05, P <0.001)

Conclusion: Our study showed that survivors of MI and stroke experience substantially greater physical and cognitive limitations than those without a history of cardiovascular events. These events and subsequent challenges disproportionately affect different sociodemographic groups. The findings illustrate the need for tailored approaches to prevention, rehabilitation, and recovery in high-risk and underserved groups.

Funding: None

Title: Comparing Cognitive Decline in Veterans and Civilians

Authors: I Bernier; A Rose; J Weygandt; B Greiner; M Hartwell

Affiliations:

1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation (IB, AR)

2. Oklahoma State University Center for Health Sciences, Department of Psychiatry and Behavioral Sciences (MH)

Abstract

Purpose: Dementia, a condition defined as a progressive decline in cognitive function, affects approximately 50 million people worldwide each year. Veterans of the United States military may face unique challenges in accessing care for dementia due to a combination of geographic, socioeconomic, and cultural factors. This study's objectives were to assess sociodemographic, behavioral, and geographic differences between US military veterans and the civilian population.

Methods: We conducted a cross-sectional analysis of the 2021-2023 Behavioral Risk Factor Surveillance System. Participants were classified by veteran status and whether they met dementia criteria. Differences in sociodemographics, behaviors, and geographical factors were assessed using design-based X^2 test or regressions models where applicable.

Results: Compared to civilians, a higher percentage of Black, non-Hispanic veterans reported dementia (19.57% vs. 13.56%), while the opposite trend was observed among Hispanic individuals (10.79% vs. 18.40%). Regional variation was evident, with the South having slightly higher proportions of veterans with dementia; however, rurality did not significantly differ between groups. Rates of veterans with dementia were highest in Washington D.C., Alabama, and Arkansas—all having higher than 25%. Veterans with dementia also had increased odds of poor physical health days (AOR=1.51; 95% CI = 1.25-1.84) and depressive disorders (AOR=1.54; 95% CI = 1.25-1.86) compared to civilians. Among all individuals, less than half reported speaking to a healthcare professional about their symptoms.

Conclusion: While veterans and civilians show similar statistics concerning demographic and confounding factors with dementia, veterans experience significantly higher rates of depression and frequent poor mental health days. Given the higher prevalence of dementia in the South, especially among veterans, healthcare providers in this region should prioritize depression screening and other similar mental health interventions for the aging population.

Grant support: No funds were used for this project.

Title: Suicide Attempts and Wait Times in Emergency Departments

Authors: K Bolte; K Burns; S Campbell-Voges; M Hartwell;

Affiliations:

1. OSUCOM-CN (KB, SCV, MH)

Abstract

Purpose: Approximately 2% of ED visits are due to suicide attempts. Patients who have attempted suicide require quick assessment and treatment and with wait times in the ED increasing in general, there is an interest in wait and boarding times in the ED for these patients.

Methods: We performed a cross-sectional analysis of the cumulative National Hospital Ambulatory Medical Survey. Individuals were included if they were seen in the ED for suicide attempt. We assessed differences in sociodemographic variables, including age, sex, race/ethnicity, and rurality, and hospital wait and boarding times and length of visit using chi-square tests and regression models where applicable.

Results: Our results showed that 0.67% of all patients were seen in the ED for suicide attempt representing over 900,000 visits per year. There was a greater number of 18-24 year olds who were seen in the hospital for suicide compared to other age groups. There was a statistically significant difference in length of visit between patients who had attempt suicide and those who had not ($t=3.68$, $P<.001$). We found no significant difference in wait time, boarding time, or length of stay in days.

Conclusions: Our study determined that patients who were seen in the ED for suicide attempts did not have increased wait and boarding times compared to the general population. We also found that these patients did have significantly increased visit lengths. Future studies may assess the disparities in visit length times by additional sociodemographic factors.

Title: Colonoscopy/Cologuard Screening Reinforced by Education

Author: C Boykov

Affiliations:

1. Choctaw Nation Family Medicine Residency (CB)

Abstract

Purpose: Native American populations experience disproportionately low colorectal cancer (CRC) screening rates, contributing to higher morbidity and mortality. This quality improvement project aimed to increase CRC screening rates from a baseline of 56.8% to a target of 75% or more by applying Behavioral Economics Interventions (BEIs) during clinic visits, aligning with osteopathic principles of preventive and holistic care.

Design Methods: Starting January 2025, BEIs—including reminders, default options, framing effects, salience, reciprocity, personalization, and simplification—were consistently integrated into routine primary care visits. ACG trifold brochures were distributed to increase patient engagement. A chart review was conducted pre- and post-intervention to measure changes in patient willingness to undergo CRC screening.

Results/ Expected Results: Post-intervention analysis revealed an increase in CRC screening rates from 56.8% to 88.09%, surpassing both the project's goal and national average. These results demonstrate the impact of low-cost, scalable behavioral strategies in improving adherence to preventive health services in a high-risk, underserved population.

Discussion/Conclusion: This study supports the use of BEIs to improve CRC screening in Native American communities, emphasizing the importance of personalized communication. The findings contribute to growing evidence on behavioral strategies in preventive care and highlight the synergy between osteopathic philosophy, preventative medicine, and modern behavioral science. Behavioral Economics Interventions are low-cost, effective ways of promoting preventative medicine and could prove innovative in outpatient primary care visits.

Title: Differences in Pain Management by Sex in Emergency Departments

Authors: K Burns; K Bolte, S Campbell-Voges, M Hartwell

Affiliations:

1. OSUCOM-CN (KB, SCV, MH)

Abstract

Purpose: Approximately 8% of emergency department (ED) visits are due to musculoskeletal injury. There is an interest in how different sexes are treated for these injuries in accordance to their pain level. Thus, it is important to analyze the different pharmacological treatments given to male and female patients based upon their pain level while in the ED with the chief complaint of musculoskeletal injury.

Methods: We performed a cross-sectional analysis of the National Hospital Ambulatory Medical Survey from 2019-2022. Individuals were included if they were seen in an ED and had a skeletal or muscular condition or external injury. Demographics assessed include age, sex, race/ethnicity, primary expected source of payment, pain level, prescribing behavior, presence of residency program, and geographic region using chi-square tests, binary and multivariable regression models where applicable.

Results: When males and females were given any pain medication, mean pain scores were 6.50 and 7.06 respectively. With each type of pain medication given, the mean pain level was higher in females than males. We found a significant difference between sex and expected payment type (P<.0001). For example, men had higher tastes of worker's compensation (71.0%) versus females (29.0%), while also having higher rates of self pay than females (60.8% vs 29.2%).

Conclusions: Our study determined that the mean pain rating was higher among women compared to men for visits where pain medication was administered for musculoskeletal injuries.Research should further assess provider prescribing practices and prescribing education to improve the equity of pain management in EDs.

Title: Breastfeeding Among American Indian and Alaska Natives

Authors: AR Buzzell; JC French; HA Baker; M Hartwell

Affiliations:

1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Office of Medical Student Research, Tahlequah, Oklahoma (ARB, JCF, MH)

2. University of Minnesota, Department of Obstetrics and Gynecology, Minneapolis, Minnesota (HAB)

3. Oklahoma State University Center for Health Sciences, Department of Psychiatry and Behavioral Sciences, Tulsa, Oklahoma (MH)

Abstract

Purpose: Breastfeeding supports infant health, reducing infection, chronic disease, and certain cancer risks, with longer duration offering greater benefits. American Indian/Alaska Native (AI/AN) mothers have some of the lowest reported breastfeeding rates, influenced by historical trauma, erosion of traditional practices, and ongoing colonization. However, the federal race classification model often underrepresents AI/AN populations—obscuring disparities. This study examined rates of breastfeeding and duration among AI/AN mothers—comparing aggregated and self-reported race measures using nationally representative data.

Methods: PRAMS Phase 8 data (2016–2022) were analyzed using two aggregated AI/AN race variables provided in PRAMS, and a constructed measure using individual self-reported race items to construct a disaggregated AI/AN variable to include all AI/AN individuals. Outcomes assessed included breastfeeding initiation among all respondents and rates of breastfeeding duration for ≥ 6 months among a subgroup of women whose infant was 6 months or older.

Results: Of 214,042 participants included in this study, 7049 (0.7%) were included in the aggregated *MAT_RACE_PU,* 12,617 (1.4%) in the *MAT_RACE_AMI*, and 12,658 in the disaggregated variable (1.4%). Results showed 87.7% of all AI/AN mothers initiated breastfeeding—with the highest rates among AI/AN-Asian (98.4%), AI/AN–Hispanic (93.2%), and Alaska Native (91.4%) mothers. The aggregated variables masked these subgroup patterns. American Indian–alone mothers had the shortest adjusted duration (6.67 weeks), while AI/AN–Hispanic had the longest (8.71 weeks). Breastfeeding duration of ≥ 6 months was highest among AI/AN Hispanic mothers at 64.8% with significant variation among other groups.

Conclusion: Disaggregation of AI/AN in PRAMS data revealed wide variation in initiation and duration by multiracial identity. More accurate racial classification in surveillance systems is essential to identify disparities and guide culturally specific breastfeeding support for AI/AN mothers.

Funding: This study was funded through the National Institute of Child Health and Human Development (U54HD113173) in conjunction with the Center for Indigenous Resilience, Culture, and Maternal health Equity (CIRCLE).

Acknowledgement: We thank the PRAMS Working Group, which includes the PRAMS Team, Division of Reproductive Health, CDC, and the PRAMS sites for their role in conducting PRAMS surveillance and allowing the use of their data.

Title: Safety Reporting in Total Knee Arthroplasty Trials

Authors: NC Camasso; JG Herring; K Keefer; R Sherry; A Elghzali; T Harris; D Archer; AI Ford; M Vassar

Affiliations:

1. Office of Medical Student Research, Oklahoma State University Center for Health Sciences, Tulsa, Oklahoma (NCC; JGH; KK; RS; AE; TH; DA; AIF; MV)

2. Department of Psychiatry and Behavioral Sciences, Oklahoma State University Center for Health Sciences, Tulsa, Oklahoma (AIF; MV)

Abstract

Purpose: Total knee arthroplasty (TKA) trials inform surgical decision-making by reporting adverse events (AEs), including serious adverse events (SAEs), other adverse events (OAEs), and deaths. Discrepancies between ClinicalTrials.gov and peer-reviewed publications persist despite FDAAA Section 801 and the 2017 Final Rule, which aimed to improve transparency. This study evaluated the completeness of AE reporting in TKA trials through a registry-to- publication comparison.

Design Methods: We systematically compared registry and publication data from 92 TKA- focused clinical trials with posted results on ClinicalTrials.gov (2009–2024). Data on SAEs, OAEs, and deaths were extracted and matched using a pre-registered protocol. Descriptive statistics assessed discrepancies and trends; regression analysis evaluated the impact of the Final Rule.

Results/Expected Results: AE reporting was more complete in registries than publications. SAE count mismatches occurred in 95% of trials, and mortality data were omitted from 87% of pre- Final Rule publications. Post-Final Rule trials still underreported SAEs and deaths, with no significant improvement. Only 15% of trials listed AEs as formal outcomes; 66% of post-Final Rule publications omitted SAE data.

Discussion/Conclusion AE reporting in TKA trials remains inconsistent, risking compromised clinical decision-making. Stronger enforcement, editorial oversight, and adherence to CONSORT Harms are needed to improve transparency and patient safety.

Title: Evidence and Clinical Disparities in Migraine Headache

Authors: E Chen; M Rowe; A Khan; T Gardner; C Bratten; A Young; E Paul; Danya; Nees; A Ito Ford; M Vassar

Affiliations:

1. Office of Medical Student Research, Oklahoma State University Center for Health Sciences, Tulsa, Oklahoma (EC, MR, AK, TG, CB, AY, EP, AIF, MV)

2. The Neurology Residency Program, University of Pennsylvania, Philadelphia, Pennsylvania (DN)

3. Department of Psychiatry and Behavioral Sciences, Oklahoma State University Center for Health Sciences, Tulsa, Oklahoma (AIF, MV)

Abstract

Purpose: Our analysis addresses an urgent issue for the migraine headache field (MH): aligning trial design and reporting with the priorities of patients, clinicians, and policymakers, especially in the context of evolving international clinical trial registries and government mandates. Our objectives are to identify potential common shortcomings in design and reporting (particularly the underrepresentation of patient-reported and long-term functional outcomes); highlight trial features that enhance value to practicing clinicians; and offer recommendations that improve the alignment between MH research and patient-centered care.

Design Methods: We systematically reviewed randomized clinical trials (RCTs) focused on acute or preventive migraine headache interventions indexed in Embase and MEDLINE from January 1, 2019, to December 31, 2024, against a 13-item usefulness criteria that captures clinical utility and transparency. Usefulness evaluations were based on the 13-item criteria developed by van ’t Hooft et al., with each criterion assigned a value of 0 (criterion absent), 1 (partially fulfilled), or 2 (fully fulfilled).

Results/Expected Results: Our analysis of 169 MH RCTs reveals a field marked by slow yet measurable progress: while over half (50.9%) surpassed the midpoint on the usefulness scale, fewer than 2% met the threshold for high utility. Patient-centeredness (98.8%) and context placement (66.9%) were commonly satisfied. However, other domains, particularly data availability (1.8%) and economic evaluation (0.6%), remain significantly underdeveloped.

Conclusion: Our review shows that MH RCTs published from 2019 to 2024 increasingly capture patient-focused measures yet still fall short on data openness and pragmatic design. By providing the first quantitative benchmark of trial clinical utility in this field, we identified where current evidence is robust and where it needs to evolve. Implementing the improvement priorities highlighted here–economic evaluations, prioritization of patient-outcomes, and proactive data sharing–will foster more trustworthy science and, ultimately, more effective and equitable MH management.

Funding: The study received no funding.

Title: A Systematic Review of Health Policy Interventions for Overweight/obesity in Adolescents and their Impact

Authors: CJ Christman; CD Killgore; M Hartwell

Affiliations:

1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Office of Medical Student Research, Tahlequah, Oklahoma (CJC; CDK)

2. Oklahoma State University Center for Health Sciences, Department of Psychiatry and Behavioral Sciences, Tulsa, Oklahoma (MH)

Abstract

Purpose: Childhood obesity is a public health concern in the United States, affecting nearly one-third of adolescents. While many school-based programs have implemented nutritional and physical activity (PA) programs to address this, there have been varying degrees of success. Given the rates of childhood obesity and its impact on long-term health, examining programmatic outcomes from these health policy initiatives targeting childhood obesity is warranted.

Methods: We conducted a systematic review of Pubmed (MEDLINE), Embase, and the Cochrane database to examine nutrition and PA programs targeting childhood obesity and prevention. We included studies that stemmed from policy initiatives that were implemented in elementary and secondary (middle/high schools) in the United States. Article screening and data extraction were conducted in a masked, duplicative fashion to identify the article's intervention type, duration, and outcome measures.

Results: The searches produced 205 articles, from which 189 were excluded due to duplicates, not including PA or nutrition intervention, not having obesity outcome measures, or being older than the date range. Of the included articles, 11 (68.75%) were PA-related, 11 (68.75%) involved nutrition, and 6 (37.5%) contained both. Eight (50%) articles also included wellness education in their primary interventions. Outcome measures of all studies used BMI criteria for obesity. Notable secondary outcomes included nutrient intake (4/16, 25%). A study by Matsuzaki et al. in 2021 showed the most benefit—with a nutrition access intervention between the years 2002 and 2016 revealing evidence of favorable associations of the state and federal school nutrition policies with overweight/obesity prevalence trends.

Conclusion: Our systematic review showed that the majority of interventions published in the literature were either PA or nutrition based and related to State/Local policy guidelines. Between intervention types, more publications of nutrition interventions showed positive effects than PA studies. As the concerns for addressing pediatric obesity are critical, school-based programs targeting both PA and nutrition are necessary, but may not be sufficient alone. We encourage not only physician organizations to help lead policy changes at the national and state levels, but also with every pediatric patient and parent they treat.

Funding: None.

Title: Disparities in Physical Activity among individuals with Osteoarthritis

Authors: N Delarosa; K Gravatt; J Condreay; R Cruz; M Hartwell

Affiliations:

1. OSUCOM-CN (ND, KG, JC, RC, MH)

Abstract

Purpose: Osteoarthritis (OA) is the most common type of arthritis in the United States, affecting over 32.5 million people. Despite physical activity (PA) showing symptomatic improvement in osteoarthritis, not all patients who are prescribed ultimately participate. Thus, there is importance in examining associations between physical activity participation and various factors limiting participation. Additionally, types of PA participation in relation to joint pain can offer insight into the improvement of PA participation.

Methods: We conducted a cross-sectional study of the 2023 Behavioral Risk Factor Surveillance System. Respondents were included if they answered "yes" to the prompt "Has a doctor or other health professional ever suggested physical activity or exercise to help your arthritis or joint symptoms?". The following sociodemographics were assessed: income, education level, location, marital status, race and ethnicity, and age group, along with various behavioral and health-related risk factors.

Results: We discovered that 39.8% (358/784) of those who reported excellent health met both PA guidelines compared to only 10.5% (134/1,190) of those who reported poor health. The average pain score for those who met both PA guidelines was 4.49/10, compared to an average of 5.77/10 for those who did not exercise. Respondents who reported no activity participation were more likely to have higher levels of pain, with 53.5% reporting 6-10 pain (1,960/3,886) compared to 41.8% reporting 1-5 pain (1,748/3,886) and 4.8% reporting 0 pain (178/3,886).

Conclusion: Our study determined that PA participation was less likely in individuals with higher pain levels than those with lower pain levels. Further analysis found that education and income are positively associated with PA participation. Our findings indicate the need for advanced methods that aim to increase PA participation in these populations.

Title: Association of Substance Use and Cesarean Delivery in Mothers Using PRAMS Phase 8

Authors: K Donatucci; S Pathak; C Guevara; M Hartwell

Affiliations:

1. Oklahoma State University Center for Health Sciences, Office of Medical Student Research, Tulsa, Oklahoma (KD, SP)

2. University of Oklahoma School of Community Medicine, Department of Obstetrics and Gynecology, Tulsa, Oklahoma (CG)

3. Oklahoma State University Center for Health Sciences, Department of Psychiatry and Behavioral Sciences, Tulsa, Oklahoma (MH)

Abstract

Purpose: Substance Use Disorder (SUD) encompasses the misuse of both legal and illegal substances, including alcohol, tobacco, opioids, and cannabinoids. From 2000 to 2014, a 400% increase was observed in the prevalence of SUD in the US, including women of childbearing age. SUD associated pregnancies may have double the increased risk of stillbirth. The risk of dangerous sequelae from SUD is well documented on fetal and maternal risks, except for the relationship to cesarean delivery.

Methods: We use the Pregnancy Risk Assessment Monitoring System (PRAMS) Phase 8 data, which surveyed mothers within 4 months of being postpartum from 2016 to 2021, to examine the occurrence of cesarean section (CD) and vaginal deliveries. Respondents self-identified substance use during pregnancy, which we used to assess associations of delivery type (CD vs vaginal delivery) among first-time mothers, and by rurality. Associations were assessed using X^2 tests and a heat map was constructed to visualize rates of substance use among CDs across US census divisions.

Results: Our results showed that rates of CD were higher among women who used methadone, pain medication, and cigarettes; however only cigarette use and alcohol use—alone or together, and pain medications were significant differences (P<.05). Rates of drug use also significantly differed by rurality—with nearly 10% higher rates of substance use among rural women (P<.0001).

Conclusion: Overall, increased rates of CD are seen in patients who use alcohol, tobacco, and pain medication. However, no significant association was found with marijuana, methadone, or illicit substances. As well, rural mothers were shown to be more likely to use substances. This warrants improved screening and discussion of birth plans in mothers who use these substances, especially in rural settings.

Funding: None.

Title: The use of GLP-1 agonists among pediatric patients with Type 1 Diabetes: A scoping review of safety, efficacy, and potential for long-term usage.

Authors: E Dowell; O Forcha; M Hartwell

Affiliations:

1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Office of Medical Student Research, Tahlequah, Oklahoma (ED, OF, MH)

Abstract

Background: Type 1 diabetes (T1D) is a chronic autoimmune condition often diagnosed in childhood, requiring lifelong insulin therapy to maintain glycemic control and prevent complications. While technological advances such as continuous glucose monitors and insulin pumps have improved management, the availability of Glucagon-like peptide-1 receptor agonists (GLP-1RAs), used in type 2 diabetes and pediatric obesity, may offer potential benefits for those with T1D through mechanisms such as delayed gastric emptying, reduced glucagon secretion, and appetite suppression. While off-label use is increasing among children with T1D, the current evidence on the efficacy and safety is limited.

Methods: We conducted a scoping review to examine the current evidence base regarding the use of GLP-1RAs in pediatric patients with T1D. Database searches were conducted on 3/4/25, with results screened and data extracted by two authors (ED, OF) in a masked, duplicative fashion.

Results: Our search of PubMed, Embase, and Cochrane databases yielded 132 items, which, after screening, we excluded due to not involving children, not being type 1 diabetes studies, not including GLP1RAs, or not involving human subjects. Of the remaining 16 articles, the most common themes regarding efficacy and safety suggest these agents may reduce HbA1c, insulin requirements, and body weight without significantly increasing the risk of hypoglycemia. However, concerns about gastrointestinal side effects and the potential for diabetic ketoacidosis (DKA) remain.

Conclusion: GLP-1RAs are not currently approved for use in patients with Type 1 Diabetes at any age. However, as GLP-1 RA use in T1D becomes more common, additional research is required in the pediatric population to clarify safety and efficacy before adopting this treatment clinically.

Title: Hysterectomy and OA Prevalence in U.S. Women

Authors: A Duke; C Mullins; J Lowrimore; S Wilkinson; J Parks; M Hartwell

Affiliations:

1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Office of Medical Student Research, Tahlequah, Oklahoma (AD, CM, JL, SW)

2. Oklahoma State University Center for Health Sciences, Department of Obstetrics and Gynecology, Tulsa, Oklahoma (JP)

3. Oklahoma State University Center for Health Sciences, Department of Psychiatry and Behavioral Sciences, Tulsa, Oklahoma (MH)

Abstract

Purpose: Hysterectomy is one of the most frequently performed gynecologic surgeries in the United States and is associated with hormonal changes that may increase the risk of musculoskeletal conditions, including osteoarthritis (OA). Understanding these associations can inform targeted prevention efforts and guide healthcare providers in counseling women on long-term joint health after hysterectomy. This study assessed the prevalence of OA among women by hysterectomy status and examine differences by age, ethnoracial group, and urbanicity.

Methods: We conducted a cross-sectional analysis using 2022 Behavioral Risk Factor Surveillance System data. Women were included if they had complete responses for hysterectomy history and arthritis diagnosis. Logistic regression models estimated the odds of OA among women with hysterectomy compared to those without. χ^2 tests examined differences in hysterectomy and OA prevalence by sociodemographic factors.

Results: Of 215,151 women, 24.3% reported a hysterectomy. OA prevalence was significantly higher among women with hysterectomy (57.2%) compared to those without (30.5%; OR: 3.77, 95% CI: 3.60–3.94).

This disparity was greatest in women under 40 years old (32.9% vs 8.0%; OR: 6.26, 95% CI: 4.80–8.14). Among women with hysterectomy, OA prevalence was highest in American Indian/Alaskan Native (61.9%), White (58.2%), and Black (57.3%) women, and lowest in Hispanic (48.3%) and Asian (34.5%) women ($\chi^2 = 16.91$, $P < .0001$). Metropolitan status was not significantly associated with OA prevalence following hysterectomy.

Discussion: Women with a history of hysterectomy had substantially higher odds of OA, particularly in younger age groups. These findings suggest the need for targeted screening and early intervention for OA in post- hysterectomy populations. Public health strategies, such as community-based physical activity programs and patient education, may help reduce OA-related morbidity. This study adds to the evidence that surgical history should be considered in assessing long-term joint health risks in women.

Funding: None.

Title: The Association between Childhood Trauma, Social Determinants of Health, and Arthritis Pain in Adulthood

Authors: KM Fonk; MG Heimbach; M Hartwell

Affiliations:

1. OSUCOM-CHS (KF, MH)

2. OSUCOM-CN (MH)

Abstract

Purpose: Arthritis is one of the leading causes of chronic pain, and is increasing in prevalence within the U.S. Adverse childhood experiences (ACEs) and social determinants of health (SDOH) have also been associated with health consequences in adulthood. Our objective was to investigate the relationship between ACEs, SDOHs, and arthritis pain, to determine factors affecting the health of affected individuals.

Methods: We performed a cross-sectional analysis utilizing the 2023 BRFSS data. We included participants who met the criteria of: (1) a self-reported physician diagnosis of arthritis, (2) a reported joint pain rating within the past 30 days using a 0–10 scale, (3) completed responses to the ACEs module [0- 11] and (4) completed the Social Determinants of Health Module [0-13]. We used path analysis to construct a multi-modal regression model to identify the direct effects of ACEs on arthritis pain and the indirect effects through SDOH.

Results: Our findings showed that ACEs had significant direct effects and indirect effects on arthritis pain scores—showing that for each ACE experienced, pain scores increased by .15 points ($P < .001$). Conversely, for each SDOH experienced, there was a 0.31 point increase in pain score ($P < .001$). Sedentary lifestyle, insurance, age, and income were significantly associated with ACEs, while sedentary lifestyle, insurance, income, and education were significantly associated with pain score. Compared to White respondents, Black respondents reported a 0.54 point higher pain score when controlling for other factors.

Conclusions: Our study determined that both ACEs and SDOH factors have significant direct effects on arthritis pain scores in adulthood. ACEs also have an impact on SDOHs which indirectly increases the effects on arthritis pain. Further research should be done to investigate this relationship between ACEs, SDOH, and arthritis pain to identify and treat arthritis earlier in disease progression, and prevent unfavorable health outcomes.

Title: SDOH role in CVD amongst rural populations across US regions

Authors: O Forcha; E Dowell; M Hartwell

Affiliations:

1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Office of Medical Student Research, Tahlequah, Oklahoma (OF, ED, MH)

Abstract

Purpose: According to data from the 2017 Centers for Disease Control and Prevention (CDC) there is a higher prevalence of CVD among rural residents. Increased risk of CVD for individuals living in rural areas are multidimensional and have been linked to poorer social determinants of health (SDOH). Future projections for CVD in the United States indicate a continued rise in prevalence. According to The American Heart Association Clinical CVD disease is projected to affect about 45 million people by the year 2050. Given the prevalence of CVD, examining population based data by rurality and regionality of social determinants of health may allow for precise and more targeted strategies which may lead to better health outcomes.

Methods: We conducted a cross-sectional analysis of the 2022 BRFSS data to determine rates of SDOH across the United States. We analyzed the 10 items from the SDOH module, including mental health and social support, employment, food security, housing stability, transportation, and additional measures of barriers to medical access. We assessed these SDOH across regions and rurality, and created a heatmap showing where individuals report experiencing 3 or more negative SDOH by census division.

Results: Compared with Northeast urban residents, residents in the South had significantly higher rates of several poor SDOH indicators, including not being able to afford to see a doctor when needed, lacking medical checkups, and elevated rates of food insecurity ($P < .05$). West urban residents had significantly greater odds of not completing routine checkups ($P < 0.001$) and frequent loneliness ($P = 0.009$) compared to the reference group.

Conclusion: Our results highlighted the link between poor SDOH and elevated Cardiovascular disease rates particularly amongst rural Southern populations compared to the reference group. Addressing these factors can significantly reduce disparities and improve overall health in these populations.

Title: Pediatric COVID-19 Exposure and the Olfactory System

Authors: C French; A Buzzell; Z Monahan; YS Kalani; M Hartwell

Affiliations:

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2. St. Johns Neuroscience Institute, St. Johns Medical Center, Tulsa, Oklahoma (YSK)

3. Oklahoma State University Center for Health Sciences, Department of Psychiatry and Behavioral Sciences, Tulsa, Oklahoma (MH)

Abstract

Purpose: The COVID-19 pandemic has profoundly impacted the social aspect of child development. However, few studies have examined its impact on the structural development of children's brains—particularly the olfactory system, a site of continued neurogenesis into adulthood—given the reported anosmia often among those who acquired the virus. This study aims to assess potential structural differences in the olfactory system among children with reported past COVID-19 infections compared with children who did not report having COVID- 19 using data from the Adolescent Brain and Cognitive Development (ABCD) Study.

Methods: We conducted a time-series analysis of MRI data from the Adolescent Brain and Cognitive Development (ABCD) study to determine if the volume of brain structures associated with the olfactory system was impacted by COVID-19 infection. The ABCD study is a large-scale, longitudinal, open-data neuroimaging study comprising approximately 12,000 children born between 2006 and 2008 at 21 sites across the United States. We used regression analysis to compare the differences in brain volume growth in the structures of the primary and secondary olfactory cortices between scanning periods among children in the COVID-19 substudy. Secondarily, we compared brain structure development among those with COVID-19 by whether or not they experienced COVID-related anosmia.

Results: Our sample included 2,423 samples, of which 8.1% (n=195) reported a history of COVID-19 infection and 0.01% (n=34) reported anosmia. Children with a history of COVID-19 infection had smaller amygdala, hippocampus, parahippocampus, entorhinal cortex, insula, and total cortical volumes. Children with anosmia had significantly smaller hippocampal volumes.

Conclusions: We found a significant association between children with COVID-related anosmia and smaller hippocampal volume, which may have long-lasting implications for odor discrimination, emotional and memory processing, and potential risks for specific medical conditions. Increased awareness of these complications could help healthcare providers initiate preventative care strategies to mitigate potential adverse outcomes.

Title: Urban-Rural Differences in Healthcare Utilization Among Children with Epilepsy: Identifying Factors Associated with Adequate Care Using the National Survey of Children's Health

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Abstract

Background: Epilepsy affects an estimated 470,000 U.S. children and is associated with increased comorbidities and premature mortality. Access to specialized care is critical but remains limited by financial constraints, shortages of neurologists, and geographic disparities. Pediatric rural epilepsy care is understudied, and little is known about differences in access and quality of care between rural and urban children with epilepsy (CWE). This study evaluated differences in care between children with and without epilepsy, and between rural and urban CWE.

Methods: We conducted a cross-sectional analysis of 2021–2023 National Survey of Children's Health (NSCH) data, representative of U.S. children aged 0–17 years. Children were classified by parental report of an epilepsy diagnosis. Outcomes included healthcare access (insurance, personal doctor, specialist visits, referral difficulty) and patient- and family-centered care (PFCC) measures. Survey weights and design-based χ^2 tests compared children with and without epilepsy, and rural–urban differences among CWE.

Results: Of 145,720 children, 888 (0.6%) had epilepsy; 11.6% resided in rural areas. CWE were more likely to have a personal doctor, but parents more often reported frustration accessing services. PFCC ratings were lower for CWE, including providers always listening carefully, showing sensitivity to family values, and providing needed information. No significant rural– urban differences were found among CWE.

Conclusion: Caregivers of CWE reported lower PFCC in listening, cultural sensitivity, and provision of information, alongside greater frustration accessing services. Improving provider– caregiver communication and streamlining service access may enhance satisfaction and continuity of care. Limitations include a lack of epilepsy severity data and a small epilepsy subsample. Future research should incorporate standardized satisfaction measures and detailed clinical data to guide interventions.

Title: Ogilvie Syndrome as Sequelae of Post-Cesarean Uterine Atony

Authors: A Garcia; A Pham

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1. North Eastern Health System Internal Medicine Residency (AG, AP)

Abstract

Background: Ogilvie syndrome (acute colonic pseudo-obstruction) is known to predominantly affect elderly patients with multiple comorbidities. This case presents an unusual occurrence in a young postpartum patient following complicated cesarean delivery.

Case Presentation: Ogilvie syndrome (acute colonic pseudo-obstruction) is known to predominantly affect elderly patients with multiple comorbidities. This case presents an unusual occurrence in a young postpartum patient following complicated cesarean delivery. A 30-year-old G3P3003 female underwent emergent tertiary cesarean section at 38+6 weeks for spontaneous rupture of membranes with active vaginal HSV infection. Intraoperative complications severe uterine atony and hemorrhage (estimated blood loss of 1400 mL) requiring multiple interventions to achieve hemostasis. On postoperative day 2, the patient developed significant abdominal distension, tachycardia, and vomiting. Physical examination revealed initially hyperactive then hypoactive bowel sounds. Urgent CT imaging demonstrated severe small and large bowel ileus with possible complete closed-loop obstruction at the transition of the splenic flexure. Despite nasogastric tube placement, decompression was not achieved, and she exhibited signs of compartment syndrome, requiring emergent exploratory laparotomy. Surgical findings revealed spontaneous evisceration of massively dilated transverse and right colon without mechanical obstruction, with ischemic cecal infarction requiring subtotal colectomy. The uterus remained markedly enlarged and boggy intraoperatively.

Rural Hospital Challenges: Due to the unusual presentation of this case, special considerations in the setting of rural healthcare include delayed recognition and diagnosis due to limited access to advanced imaging and/or specialist care, resource limitations affecting stabilizing measures and barriers to timely transfer to higher-level care.

Conclusion: This case demonstrates Ogilvie syndrome in an atypical demographic, highlighting the importance of clinical vigilance in young postoperative patients. The rapid progression from initial symptoms to life-threatening complications emphasizes the potential for high mortality (up to 36%) when bowel perforation occurs. Early recognition and appropriate management are crucial, as conservative treatment should precede more invasive interventions unless perforation or peritonitis develops.

Title: Unmet health needs among AI/AN children

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2. Oklahoma State University Center for Health Sciences, Department of Psychiatry and Behavioral Sciences, Tulsa, Oklahoma (AHD)

Abstract

Purpose: Previous research shows American Indian and Alaska Native (AI/AN) children have reduced access to healthcare, creating long-term complications with increased risk of chronic disease. Given the reported high rates of chronic disease among AI/AN populations, the purpose of our study was to determine unmet health needs among AI/AN children using data from the National Survey of Children's Health.

Methods: We used data from the National Survey of Children's Health (2019-2023) to assess the unmet healthcare needs and barriers among AI/AN children in the U.S. We measured differences of any unmet needs and domains of medical, dental, vision, hearing, 'other,' and 'multiple,' unmet needs between groups using design-based X^2 tests.

Results: Of the 108,753 children assessed 3,038 were AI/AN. AI/AN children had a greater percentage of unmet needs compared to all other children (4.9% vs. 3.4%, P < .022). Rates of unmet medical needs were lower for medical care among AI/AN (0.4%) compared to other children (0.54%). However, rates were higher among AI/AN children for mental health (1.0%), dental (1.1%), 'other' (0.5%), and individuals reporting multiple domains of unmet needs (1.8%)—each of the latter 3 being nearly double that of other children.

Conclusion: Our results highlight significant disparities in unmet needs among AI/AN children compared to the general pediatric population. Given the higher incidence of chronic health conditions, including mental health diagnoses, in AI/AN youth – additional research is needed to determine barriers to care experienced by AI/AN children.

Grant Support: None.

Title: Erased Voices: Investigating Intimate Partner Violence Among Indigenous Mothers

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Abstract

Purpose: Previous research has shown that Indigenous mothers experience intimate partner violence (IPV) at high rates. Our primary objective was to compare differences in self-reported IPV experiences between Indigenous subgroups using aggregated and disaggregated ethnoracial identity data within the Pregnancy Risk Assessment and Monitoring System (PRAMS).

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

Results: The percentage of women experiencing IPV varied across ethnoracial variables. When assessing individuals using the American Indian/Alaska Native (AI/AN) variable, 9.05% of Indigenous women reported experiencing IPV compared to 3.26% of non-Indigenous women ($p < .0001$).
Alaska Native women in Alaska similarly reported higher rates of IPV (8.81%) compared to Alaska-residential. White (2.80%) and 'another race/multiracial' women (4.88%; $p < .0001$). Statistically significant differences were observed among ethnoracial categories for the monoracial aggregated identity variable provided by PRAMS ($p < .0001$) with women who were AI/AN alone having the highest IPV rate (8.81%). Prevalence of IPV varied broadly across disaggregated Indigenous groups with 'AI/AN, White, Asian, and Native Hawaiian Other Pacific Islander' women having the highest rates (19.66%) and 'AI/AN, and Asian' women having the lowest (2.10%). The remaining rates ranged from 4.0%-12.97%.

Discussion: Our findings reiterated high rates of IPV among Indigenous women across variables within PRAMS. Our findings highlight the need for additional research to assess population-level data using an inclusive lens to determine if specific Indigenous subgroups are at greater risk for IPV.

Funding: This study received funding from the National Institute of Child Health and Human Development (U54HD113173; Shreffler).

Title: Factors Impacting Physical Activity Prescription in Osteoarthritis

Authors: K Gravatt; N Delarosa; R Cruz; J Condreay; M Hartwell

Affiliations:

1. OSUCOM-CN (KG, ND, RC, JC, MH)

Abstract

Purpose: Physical activity (PA) is one of the most important protective factors for osteoarthritis (OA). PA can also reduce OA symptom severity. Many patients seek advice from their health care provider on how to start and maintain a PA program. While PA should be universally recommended, many patients with OA may not be properly counseled. Therefore, we sought to determine the rate of PA counseling from healthcare providers among those with OA and to assess potential demographic factors that are associated with poor counseling.

Methods: Using the 2021 Behavioral Risk Factor Surveillance System, we assessed rates of patient PA counseling in association with intrinsic factors, including age, sex, ethnicity, and BMI. Associations were measured using design-based X^2 tests and regression models where applicable.

Results: We found statistically significant associations between PA counseling and BMI class, sex, and race (P<.01). PA counseling rates were highest among the obese BMI category (71.5%) and lowest among the underweight BMI category (60.3%). Among males, 36.4% (9,347) didn't receive PA compared to 29.6% (8,870) of females. Regression models showed significantly increased likelihood of PA counseling for Black individuals compared to Whites, females, and those with obesity (P<.01).

Conclusion: Our study found multiple demographic factors associated with higher levels of PA recommendation compared to other groups. Females, non-Hispanic Blacks, BMI>30, and those younger than 25 had higher rates; conversely, while males, Asians (non-Hispanic), BMI <18.5, and those 25 and older received the least PA counseling. Given that OA is the most common form of arthritis and the disparities in patient counseling, additional research and targeted interventions are needed, as all patients should be advised on the benefits of PA for pain reduction, improved range of motion, and mental health.

Title: Embolic Stroke - A Patient's First Sign of Infective Endocarditis: A Case Study

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1. Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Office of Medical Student Research, Tahlequah, Oklahoma (VMG, CDK, CJC)

Abstract

Purpose: It is important to consider all underlying etiologies for a diagnosis, especially in a case as severe as a stroke. The death rate for stroke in the United States was 39 per 100,000 in 2023,[1] with ischemic stroke accounting for 87% of all strokes.[2] A less common presentation of infective endocarditis (IE) is a neurologic manifestation, resulting from embolic stroke, like from an aortic vegetation, brain hemorrhage, or abscess.[3,4] Unfortunately, neurologic complications can be the first physical sign that someone has IE.[5] Although bacteremia is a known cause of IE, blood cultures are not always part of a routine stroke workup. However, in this case of recurrent idiopathic stroke, ordering blood cultures for 'completeness sake' helped identify a cause, limiting further morbidity and possibly delaying mortality in a patient with otherwise minimal risk factors. According to the Duke Criteria, the patient could not be diagnosed with IE until transesophageal echocardiogram and blood cultures were run. On presentation, he had one minor criteria, predisposition. This case study is an example of how ancillary testing can play an important role in a medical workup.

Our patient tested positive for *Streptococcus viridans* bacteremia after several stroke presentations. He reportedly had a dental procedure five months prior to his onset of stroke-like symptoms. Dental procedures are a known nidus for bacteremia and therefore IE, but the American Dental Association (ADA) recommends prophylactic antibiotic therapy to prevent IE for only a certain group of patients before an invasive dental procedure; those with a history of IE, valve damage, or prosthetic valves. There is no recommendation for prophylaxis in healthy patients so as to not contribute to antibiotic resistance.[6,7] Therefore, it is of the utmost importance to gather a thorough history in a patient presenting with an ischemic stroke of unknown origin.

Title: A review of the longevity and biochemical effects of different chemical compounds in total joint replacements

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Abstract

Purpose: Arthroplasty is a surgery to reshape, reconstruct, or replace a diseased or damaged joint. This review investigates the different options for a total joint replacement, identifies the most common causes of need for revision, and concludes with an evaluation of the best materials for the joint application.

Methods: For our primary objective, articles were searched to identify the most common causes for revision. For our secondary objective, articles were searched to determine efficacy of different components for joint replacements.

Results: The most undesired side effect of joint arthroplasty is the need for revision, which can be caused by metal ion release, biofilm formation, or aseptic loosening. The best option for biocompatible joint replacement is a titanium-based alloy as the base material with bioactive coatings made of silicate glass which facilitates bone adhesion and growth. Ceramic coatings can limit biofilm formation, so on the exposed surface the metal should be coated with a nitride-based ceramic coating with a low coefficient of friction consisting of niobium to improve resistance to wear and minimize ion release and biofilm formation. This compound lowers the risk of aseptic loosening and the need for revision.

Discussion: Joint replacement hardware must be biocompatible, release few metal ions, and be resistant to biofilms. Bare metals are not ideal for joint replacements because of their lack of biocompatibility, susceptibility to biofilms, and release of metal ions. However, metals are still necessary components of joint replacements due to their rigid structure. Therefore, a titanium-based alloy with a silicate glass coating for the base material and a nitride-based ceramic coating for the exposed surface is the best material option for a joint replacement.

Title: Reporting Statuses and Analysis of Pediatric Strabismus Clinical Trials in the National Library of Medicine

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Abstract

Purpose: Pediatric strabismus (PS) is one of the most common conditions for referral to an ophthalmologist, with a worldwide prevalence of nearly 6%. Untreated strabismus leads to amblyopia and irreversible decreased vision. Research through clinical trials (CTs) is necessary to advance treatment options. Our primary objective was to summarize current characteristics of PS CTs using the United States National Library of Medicine's (NLM) Clinical Trial Database, providing an overview of current treatments. Our secondary objective was to assess rates of PS trial discontinuation. Methods:

Methods: We searched the NLM's Clinical Trials Database (ClinicalTrials.gov) on October 8, 2024, to capture interventional CTs that included children. We collated trials by completion status and reported rates of type of strabismus assessed, intervention type, trial phase, enrollment, location, and funding source.

Results: Of 204 trials returned from the search, 77 met inclusion criteria. Of the trials, the most frequent type of strabismus was exotropia (32, 41.6%) followed by general strabismus (24, 31.2%), and esotropia (12, 15.6%). The most common interventions were surgical (33, 42.9%) and devices (22, 28.6%). Egypt had the most registered PS trials (21, 27.3%) followed by the United States (20, 26.0%). Of included trials, 3 (3.9%) had been discontinued.

Discussion: Surgical interventions for PS were the most common intervention used and many completed trials lack reported results in the database. Egypt and the United States had the highest rates of registered PS CTs. Our study highlights the range of current CTs to help inform physicians and caregivers of individuals with PS.

Title: Discontinuation and nonpublication of clinical trials for pharmacologic prophylaxis and treatment of venous thromboembolism

Authors: M Haight; T Skinner; M Kee; M Hartwell

Affiliations:

1. OSUCOM-CN (MH TS, MK, MH)

Abstract

Purpose: As of 2023, the AHA estimates over 1 million cases of venous thromboembolism (VTE) occur annually. Vitamin K antagonists and unfractionated heparin have been the standard of care for VTE prophylaxis and treatment since the early 20th century. After being declared a national health problem in 2008, researchers have been encouraged to advance VTE prophylactic and treatment regimens. While randomized clinical trials (RCTs) are a necessity for advancing pharmacotherapies, associated research waste hinders the production of evidence. The primary objective of our study was to assess the rates of discontinuation and nonpublication of RCTs focused on pharmacologic prophylaxis and treatment of VTE and to determine factors associated with this type of waste.

Methods: We conducted a cross-sectional study to assess the rates of discontinuation and nonpublication of phase 3 or 4 randomized controlled trials aimed at VTE prophylaxis and treatment registered in ClinicalTrials.gov. The total number of trials returned from our search were reported along with the excluded study count based on our outlined inclusion and exclusion criteria, and the number of retained trials. Multivariable logistic regression was used to evaluate the effects of RCT characteristic variables such as study region, study design, drug assessed, funding source, and trial phase on discontinuation and publication status. Statistical analyses were performed using Stata 16.1 (StataCorp, College Station, TX)

Results: Our search query returned 491 trials, of which 198 were excluded as they were either still active (68), not VTE (25), started before 2000 (17), had unknown status (61), or had primary outcomes outside of our aims (27). Among the 293 included studies, a majority of studies included pharmaceutical intervention (258, 88.1%), and the average enrollment across all trials was 997 (SD=2130.2) participants. We identified 61 (20.8%) discontinued studies—comprised of 46 terminated studies, 14 withdrawn, and 1 suspended.

Conclusions: Our results indicate over 20% of stage 3 or 4 RCTs pertaining to VTE prophylaxis and treatment were discontinued, withdrawn or suspended for various reasons, largely due to poor study design. Our findings underscore the importance of remaining cognizant of research waste to minimize unnecessary expenditure of invaluable resources. Poor planning and foresight by investigators create barriers in advancing the standard of care. Thus, ensuring adequate planning of well-developed research designs with the aim of trending completion rates of RCTs upward is integral in the advancement of healthcare and optimizing patient outcomes.

Title: Medical Home Access among Children with Asthma

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Abstract

Purpose: Access to medical homes—defined as having a primary doctor or nurse who provides comprehensive and family-centered care—is critical for children with chronic illnesses. As asthma affects nearly 5 million children in the US and symptom management can be complicated, continuous access to medical care is often necessary. Uncontrolled asthma puts children at increased risk for developing longer-lasting health problems and reduces the quality of life secondary to recurrent exacerbations. Our objectives were to examine the prevalence of medical home access among children with asthma and the association between medical home status and asthma severity, among other sociodemographic factors.

Methods: We conducted a cross-sectional study using data from the 2022 cycles of the National Survey of Children's Health to assess how many children with asthma are classified as being in a medical home. We then assessed associations between medical home status and asthma severity, age, and family structure, using design-based X^2 tests.

Results: Among a sample of 3,636 children reported to have asthma, 41.5% were in a medical home. We found significant associations between medical home status and each of the variables' tests ($P < .001$) except age. First, among those with severe asthma, only 19.0% were in a medical home, while 45.1% with mild symptoms were. As parent education increased, so did the percentage of children who met the criteria for being in a medical home. Regarding family structure, the highest rates of medical home access were among two biological parents.

Conclusion: Our results showed that 41% of children with asthma were in medical homes—and only 1 of 5 with severe symptoms. Additionally, there are sociodemographic factors that significantly impact the likelihood of children with asthma having access to a medical home. Given the scale of children with asthma not having comprehensive medical care, national and state policies are needed to enhance access to services.

Funding: None

Title: Clinical Utility of Congestive Heart Failure Trials

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3. Department of Psychiatry and Behavioral Sciences, Oklahoma State University Center for Health Sciences, Tulsa, Oklahoma (AIF, MV)

Abstract

Purpose: Congestive heart failure (CHF) affects over 64 million adults worldwide, contributing to high morbidity, mortality, and health care costs. Randomized controlled trials (RCTs) are critical for advancing CHF care, yet their real-world usefulness is uncertain. This study evaluated the clinical usefulness, transparency, and patient-centeredness of CHF RCTs published between 2014 and 2024 using a validated 13-item assessment framework.

Methods:We conducted a systematic review and meta-research analysis of peer-reviewed, English-language CHF RCTs published globally from January 1, 2014, to December 31, 2024. MEDLINE and Embase were searched on April 1, 2025. Two independent reviewers screened and extracted data according to a predefined framework assessing methodological rigor, pragmatism, transparency, and patient-centeredness. Descriptive statistics and linear regression assessed temporal trends and predictors of usefulness.

Results: Of 659 screened records, 44 RCTs met inclusion (median sample size: 82; IQR: 52–191). Only 15.9% met information gain criteria, and 4.5% avoided pragmatic principle violations. Protocol publication occurred in 13.6% of trials, cost analyses in 2.3%, and raw data sharing in 13.6%. Patient-centeredness was fully addressed in 54.5% of studies. Most trials disclosed funding (77.3%) and conflicts of interest (68.2%). Transparency and total usefulness improved over time (Pearson $r = 0.42$; $P < .05$).

Conclusion: Despite their gold-standard status, most CHF RCTs lacked pragmatic design, cost analysis, andtransparency, limiting clinical applicability. Broader eligibility, economic evaluations, and open data could enhance clinical utility and regulatory compliance.

Funding: No funding was received for this study.

Title: A Cross-Sectional Analysis of Characteristics of Osteopathic Medicine Content on Tiktok

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Affiliations:

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Abstract

Purpose: TikTok, with over one billion monthly active users, offers a unique opportunity to shape public perception of osteopathic medicine. This study aimed to characterize the nature, themes, and engagement patterns of TikTok content related to osteopathic medicine to inform strategies for public outreach and education.

Methods: A cross-sectional analysis was conducted by searching TikTok for the hashtag #osteopathicmedicine. The top 100 public posts from November 2023 to November 2024 were evaluated. Variables recorded included account type (Physician, Medical Student, Business/College of Osteopathic Medicine, Other), content category (Educational, Event, Experience, Personal), theme, and engagement metrics (views, likes, comments, saves, shares). Posts were assessed for mention, description, or demonstration of osteopathic manipulative medicine (OMM) and reference to osteopathic philosophy or tenets. Posts themed “DO vs. MD” were further analyzed for the top 10 common subthemes.

Results: Most posts were created by physicians, followed by medical students and institutional accounts. Educational content predominated and was associated with longer average video length. Posts detailing professional experiences and those mentioning or demonstrating OMM showed higher engagement across all measures. Videos mentioning OMM averaged 65,748 views compared to 7,519 views for those without OMM content. Medical education and student life were the most common themes.

Conclusion:

Osteopathic-related TikTok content is largely educational and physician-driven, with OMM- focused posts generating substantially higher engagement. These findings suggest that leveraging trend-driven social media strategies, particularly those featuring OMM, may enhance public understanding and visibility of osteopathic medicine. Future work should assess audience demographics and evaluate content accuracy to optimize digital outreach.

Title: An Electronic Medical Record Study of the Rate of CT and MRI scanning in Female Victims of Nonfatal Strangulation Assault

Authors: R Hazlitt; MA Erdmann

Affiliations:

1. Oklahoma State University, College of Osteopathic Medicine (RH)

2. Oklahoma State University, Center for Health Systems Innovation (MAE)

Abstract

Background: In the US, 1 in 6 adult women will experience non-fatal strangulation (NFS) such as choking or suffocation in their lifetimes. NFS is a severe form of intimate partner violence (IPV), characterized by external pressure on the neck that can lead to hypoxic injuries which can be classified as a type of injury to the brain including traumatic brain injury (TBI). Brain injuries are best identified through CT and MRI scanning, MRI being far superior. To date the appropriate, standardized care for NFS victims allows for clinician's judgement as to the medical necessity of CT or MRI scans to identify brain injury. It is unknown the extent to which clinicians seek those scans after an assault diagnosis in women.

Objective: This study aims to assess the rate of documented CT and MRI imaging procedures (representing a clinician decision to assess for brain injury beyond physical assessment) among female patients with a documented diagnosis of strangulation from assault.

Methods: The data was extracted from Cerner Health Facts, one of the largest HIPAA-compliant relational databases. To extract female patients most likely to have suffered from domestic assault, we used the ICD9 code 994.7 and ICD9 code E963 to clearly identify those patients suffering from assault strangulation. We limited age
to 13 years and older. Patients with unknown age were excluded.

Results: The data query (from the Cerner Realdataset) identified 160 female patients aged 13 to 65 (M = 32, Std dev = 13.61) **.** Twelve women (7.5%) received a CT of head (combined CPT codes 87.03 and 70450) and none were coded as receiving an MRI of the head**.** Frequency of treatment location was as follows: 95 (59%) in the emergency room, 45 (28%) in inpatient care, 7 (4%) in observation unit, and 6 (4%) in an outpatient clinic.

Conclusion: The sample size of the study was extremely low given the 85+ million unique patients in the dataset; our conclusion was that physicians do not code for NSF assault, making studying treatment of assault victims difficult. Therefore, next steps in understanding treatment of NFS victims will include treatment of NFS broadly.

Using the frequency of CT and MRI scans as a proxy for clinical interest in understanding and identifying injury to the brain after strangulation,it appears that brain injury detection through imaging is not yet a routine focus**,** suggesting that the standard of care for NFS patients' needs further establishment. Since there is no standardized care requiring scanning (even though brain injury can occur without external strangulation signs), we cannot conclude inappropriate treatment was delivered. Changes to appropriate care standards may be necessary.

Given the extremely low rate of CT or MRI imaging at the initial time of treatment, we wonder what educational discharge material patients are provided to raise their awareness of their risk of brain injury. To explore patient education, these researchers are currently conducting an OSU CHS IRB approved study of Oklahoma hospital systems' embedded patient education provided post asphyxiation and strangulation.

Title: The Association of Childhood Trauma with Osteoarthritis Pain in Adulthood

Authors: MG Heimbach; KM Fonk; S Chronister; S Heimbach; W Roberts; M Hartwell

Affiliations:

1. OSUCOM-CHS
2. OSUCOM-CN

Abstract

Purpose: Osteoarthritis (OA) is a joint disease that continues to increase in diagnoses worldwide and early diagnosis is essential to reduce long-term pain and prevent physical limitations. Adverse childhood experiences (ACEs) have been associated with chronic pain from other chronic diseases; therefore, our objective was to evaluate the relationship between ACEs and OA-related pain, as well as investigate if any one ACE domain has a higher impact on OA pain.

Methods: We performed a cross-sectional analysis of the 2023 Behavioral Risk Factor Surveillance System (BRFSS). Respondents were included if they were 18 years or older, and answered these questions: (1) they have been diagnosed with arthritis by a doctor, (2) reported their joint pain in the last 30 days on a scale of 0-10, and (3) completed responses from the BRFSS ACEs module.

Results: We found a statistically significant positive relationship between pain and ACE frequency ($P <$ .0001), and between the number of ACEs and socioeconomic (SES) factors ($P<.0001$). Among individuals aged 18-24, 69.5% with OA had experienced 4+ ACEs, whereas 12.38% of individuals aged 65+ reported experiencing 4 or more. Native American and Alaska Natives had the highest prevalence of 4+ ACEs (44.1%). The highest reported mean pain score among Black individuals (M=6.0, SD=0.1). No statistically significant results were found between ACE domain and pain score.

Conclusions: Our study determined that ACE prevalence is associated with increased arthritis pain score. We also found that ACEs increase with certain socioeconomic factors such as female sex, American Indian and Alaskan Native ethnoracial group, and lower income. Further research should be done to assess the role between ACEs on arthritis incidence to identify those at risk and improve health outcomes.

Title: Assessing the Prevalence of Mental Health Implications among Post-Stroke/MI Survivors and the Intersectionality between Implications and Sociodemographic Factors

Author : A Huynh; S. Atkinson, M. Hartwell

Affiliations:

1. OSUCOM-CN (AH, SA, MH)

Abstract

Purpose: Strokes and myocardial infarctions remain a leading cause of death in United States, with potential disparities existing by sex, race, rurality, age, and education, as well as social determinants. Furthermore, survivors often experience physical symptoms following stroke or myocardial infarction as these are more evident, but mental health issues may also manifest. Therefore, our objective was to assess the prevalence of depression and poor mental health days among survivors and determine associations with pertinent sociodemographic factors and social determinants of health.

Methods: A cross-sectional analysis study was performed using data from the 2023 BRFSS to evaluate the prevalence of depression and poor mental health days. Respondents were included if they responded to having a stroke and myocardial infarction. Demographic variables included sex, race, rurality, age, education, medical access, and other social determinants of health were assessed using X^2 tests and regression, where applicable.

Results: Our results show that compared to White individuals, Black (non-Hispanic) and American Indians/Alaska Natives were at higher odds of experiencing a stroke ($P < .05$). Additionally, males were at higher odds of experiencing a stroke, and those residing in rural areas were at higher odds of experiencing a cardiovascular event. Regarding medical access, those with health insurance, reported having a primary care provider and adequate transportation were at lower odds. Lastly, pertaining to mental indicators, those experiencing life dissatisfaction, absence of social/emotional support, loneliness, and pre-existing physical, mental, or emotional conditions were at higher odds of having had a stroke/MI.

Conclusion: Our study determined that certain ethnoracial groups, those with barriers to medical access, and other social determinants of health were at higher odds of having had a stroke/MI. Further research needs to examine how to best address these disparities and implement targeted interventions for these groups.

Title: Adverse Event Reporting Discrepancies in T1DM Trials

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Abstract

Purpose: Advances in Type 1 Diabetes Mellitus (T1DM) interventions have introduced challenges in balancing glycemic benefits with safety risks. While federal mandates require adverse event reporting on ClinicalTrials.gov, clinicians primarily depend on peer-reviewed publications, where harms reporting completeness remains uncertain. Our study aims to assess the completeness and concordance of adverse event (AE) reporting between ClinicalTrials.gov and peer-reviewed publications for randomized controlled trials of T1DM interventions, identifying discrepancies impacting transparency and clinical decisions.

Design Methods: We conducted a registry-to-publication comparison study using systematic review methods. Eligible interventional T1DM trials were assessed for completeness and concordance in AE reporting between the registry and publication. Quantitative and qualitative analyses were performed to evaluate reporting patterns, discrepancies, and thematic trends.

Results: Across 202 randomized trials in Type 1 Diabetes, 64% showed discrepancies in serious adverse event (SAE) counts between ClinicalTrials.gov and publications, with 52% reporting more SAEs in the registry. In 22% of trials, SAEs were completely absent from the publication but present in the registry. Despite Final Rule implementation, nearly half of the post- implementation studies still exhibited mismatches in patient or event counts. Death reporting was consistently more complete in ClinicalTrials.gov than in publications, with the gap widening after the Final Rule, highlighting persistent underreporting of mortality in the published literature.

Discussion: Our results revealed significant discrepancies in adverse event and mortality reporting between registry entries and corresponding publications. Despite improvements following the FDAAA Final Rule, there is a persistent mismatch between registry and publication reporting—posing risks to informed decision-making. These findings confirm the hypothesis that AE reporting in T1DM publications is less complete than in ClinicalTrials.gov, with frequent underreporting of serious events and mortality. By quantifying these discrepancies, the study highlights persistent transparency gaps and reinforces the need for standardized, accountable harms reporting to strengthen the evidence base.

Title: Bridging Evidence to Practice in Atopic Dermatitis RCTs

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Abstract

Purpose: Atopic Dermatitis (AD) is the most common chronic inflammatory skin condition worldwide, with substantial psychosocial and functional impact. Although recent years have seen therapeutic expansion, randomized controlled trials (RCTs) in AD may lack features that enhance their clinical applicability. We aimed to evaluate the clinical usefulness of AD RCTs published from 2017-2024 using the van 't Hooft usefulness framework.

Methods: We systematically searched MEDLINE and Embase (April 1, 2025) for RCTs assessing AD interventions. Eligible trials were screened in duplicate and evaluated against a 13-item usefulness framework. Data extraction was conducted independently by trained reviewers. Descriptive statistics and linear regression analyses examined trial characteristics and predictors of clinical usefulness.

Results: Among 208 RCTs, 95.7% reported patient-centered outcomes. Transparency practices varied: funding (84.1%) and conflicts of interest (94.2%) were commonly disclosed, while pre- registration (46.6%), protocol sharing (7.7%), and data sharing (1.4%) were rare. Transparency positively correlated with clinical usefulness ($r = 0.32$, $p < 0.001$). Many trials lacked pragmatic design elements and enrolled narrowly defined populations, reducing generalizability.

Discussion: Although AD RCTs have increased in number, their clinical applicability is often constrained by limited pragmatism, narrow participant selection, and insufficient transparency practices.
Enhancing trial design to include diverse populations and robust transparency measures may strengthen evidence translation into practice.

Funding: No funding was received for this study.

Title: Patient Characteristics and 72-Hour ED Return Visits

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Abstract

Purpose: Emergency department (ED) return visits within 72 hours ("bouncebacks") are used as quality indicators, yet the impact of patient demographics on these returns is understudied nationally. This study examined demographic and social characteristics associated with short-term return visits and identified populations at highest risk.

Design Methods: We conducted a cross-sectional analysis of 2019–2022 National Hospital Ambulatory Medical Care Survey (NHAMCS) data, including 49,140 ED visits with complete demographic and outcome data (representing ~547 million weighted visits). The primary outcome was a return visit to the same ED within 72 hours. Survey-weighted descriptive statistics and logistic regression identified independent predictors, accounting for complex sampling.

Results: The national 72-hour return rate was 4.04% (95% CI: 2.96–5.12%). Working-age adults had the highest rates: ages 15–24 (5.48%), 25–44 (5.18%), and 45–64 (4.67%), significantly higher than children under 15 (2.84%) and adults over 75 (3.21%). Adjusted odds ratios for working-age groups were 1.67–1.82 compared with children. Medicaid (aOR 1.57, 95% CI: 1.21–2.03) and Medicare (aOR 1.41, 95% CI: 1.05–1.90) patients had higher odds than privately insured patients. Rural patients had higher return rates (8.00%) than urban patients (3.87%), though CIs were wide. Racial disparities attenuated after adjustment for insurance and other variables. Predicted probabilities ranged from 1.56% for privately insured urban children to 9.22% for working-age males with Medicaid in rural areas.

Discussion/Conclusion: Working-age adults and publicly insured patients are at highest risk for bouncebacks. These findings suggest current quality metrics may disproportionately penalize hospitals serving vulnerable populations. Risk-adjusted measures and targeted discharge interventions could improve care quality and equity. The attenuation of racial differences after adjustment underscores the role of structural factors over individual characteristics.

Grant Support: None.

Title: Virtual Reality Fitness as a Tool to Assess Affective Responses to Exercise in Self- Identified Native American Participants

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Abstract

Purpose: Our study assessed differences between Native American versus non-Native American participants regarding exercise practices, changes in positive and negative affect, perceived exertion, and potential barriers to exercise.

Design Methods: This study involved the participation of 58 teenagers and adults, including 13 Native Americans. Consent was obtained and participants performed an exercise of choice for 10 minutes using a Virtual Reality (VR) headset. Exercise options included Walkabout Mini Golf, Gorilla Tag, Creed: Rise to Glory, and Fit Beat Combat. Control participants completed 10 minutes of stillness with meditative music and visuals. Participants completed a self-reported PANAS questionnaire to document affect over the previous week before and after exercising, as well as a general demographic survey and a Rate of Perceived Exertion (RPE). All procedures in this study received approval from the OSU-CHS IRB to ensure compliance with ethical guidelines

Results/Discussion: Exercise levels meeting national recommendations were relatively similar between Native American (46.15%) and non-Native American participants (40.00%). However, participants with a Native American background tend to subjectively note that they exercise regularly (84.62%) at a much higher rate than non-Native American participants (57.78%).

Grant Support: OSU-CHS Office of Research

Title: A Tick-ing Time Bomb: When Lyme Triggers Autoimmune Demyelination
Steroid-Refractory Acute Disseminated Encephalomyelitis Responsive to IVIG

Authors: SJ Jones; TB Bangale; SC Cano

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2. Faculty Advisors: Muneeza Afif MD, Prashant Kaushik MD, Kelly Marak DO

Abstract

Purpose: We present a case of ADEM following acute systemic Lyme disease, without Lyme encephalitis, responsive to IVIG potentially refractory to corticosteroids.

Case Presentation/Design: A 29-year-old female with medical history of PCOS, tension headaches, anxiety, and occasional marijuana use presented with altered mental status. On initial evaluation, she demonstrated disorientation, moderate agitation, combativeness, and delusions that she was pregnant, despite negative hCG testing, Initial laboratory studies, including: metabolic panels, viral panels, and infectious workup, were largely unremarkable. MRI of her brain revealed nonspecific symmetrical hyperintensity in bilateral thalamus and head of caudate with confluent areas of hyperintensity within the subcortical white matter. Continuous EEG demonstrated mild diffuse slowing without epileptiform activity, consistent with diffuse encephalopathy. Cerebrospinal fluid analysis revealed 100% monocytosis with elevated CSF IgG synthesis rate. Serologic testing was positive for markers of Lyme disease.

Results: The patient was started on treatment for presumed encephalomyelitis with broad-spectrum antibiotics. Repeat MRI brain showed progressive cerebral white matter lesions; later, an EEG favored possible ADEM, with suggestions to start targeted treatment with steroids.

Ultimately, the patient was treated with a five day course of IVIG, resulting in marked clinical improvement both inpatient and in the outpatient setting. She also completed treatment for advanced Lyme disease with a course of an appropriate antibiotic regimen. Four weeks after discharge, a follow-up MRI showed significant improvement with only a few trace hyperintense lesions on FLAIR sequencing. Additional follow up with infectious disease resulted in complete resolution of her Lyme disease.

Conclusion: We offer a case of ADEM, after acute systemic Lyme disease, resulting in a unique inflammatory encephalopathy, rather than Lyme encephalitis, with rapid improvement after IVIG. This presentation highlights the importance of considering post-infectious inflammatory mechanisms in patients with CNS manifestations following Lyme disease, as these cases may respond to immunomodulatory therapy and warrant expanded diagnostic evaluation.

Title: Aripiprazole Trials in Youth Conduct Disorder

Authors: Y Kang; V Swami; M Hartwell

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Abstract

Purpose: Conduct disorder (CD) is a prevalent pediatric psychiatric condition characterized by persistent antisocial and aggressive behaviors. Although second-generation antipsychotics (SGAs) are frequently prescribed off-label for CD-related aggression, no pharmacologic treatment is FDA-approved for this indication. Aripiprazole, an SGA with a relatively favorable metabolic profile, has seen increasing off-label use in youth populations. A scoping review was performed to identify and characterize registered clinical trials investigating aripiprazole for CD in pediatric populations.

Methods: A structured search of *ClinicalTrials.gov* was conducted on June 9, 2025, using search terms for CD, behavioral disorders, and aripiprazole (including brand and formulation names). Trials were included if CD was the primary condition and aripiprazole was the intervention. All trial phases were considered. A post-hoc search of PubMed (Medline) identified 1 additional trial.

Results: The search identified 186 trials meeting the initial parameters. After applying the inclusion and exclusion criteria, only one registered trial remained—a six-week, open-label study involving 12 post-pubertal male adolescents with conduct disorder. An additional 15-day open-label study involving 23 patients with similar parameters, which was not registered in the database, was also identified. Both trials reported reductions in aggression and behavioral scale scores, along with good tolerability; however, they lacked a placebo control and had small sample sizes. Both studies were sponsored by the pharmaceutical company that manufactures aripiprazole.

Conclusions: Despite increasing off-label prescribing of aripiprazole for CD, clinical trial evidence remains minimal. Large, independent, placebo-controlled studies are needed to establish its efficacy and safety in pediatric CD.

Grant: No funding was used for this research.

Title: Association of Race and Age with Late- and Non-engagement in Prenatal Care

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Abstract

Purpose: Prenatal care (PNC) plays a critical role in optimizing maternal and fetal health by managing maternal complications, identifying fetal abnormalities early, and providing necessary education for expecting mothers. Despite its well-established benefits, over one million women in the United States annually fail to receive adequate or timely PNC, placing them at increased risk for adverse outcomes such as preterm birth, low birth weight, and pregnancy-related complications. This study aimed to identify the underlying factors contributing to delayed initiation or absence of PNC.

Methods: A cross-sectional analysis was conducted utilizing data from the Pregnancy Risk Assessment Monitoring System (PRAMS) Phase 8 (2016–2022), a multi-state, population-based survey targeting women who had recently delivered live births. Variables analyzed included self- reported reasons for delayed or missed care, geographic and rural versus urban residence, and various sociodemographic characteristics. Design-based chi-square analyses were used to assess associations between these factors and PNC utilization.

Results: Within all PRAMS Phase 8, 56237 of 215926 (25.1%) women reported having late or no PNC engagement. A subset of 20 states collected rationale for not engaging PNC earlier of whom 9,373 engaged after the 9 weeks. The most commonly selected reasons for late engagement were difficulty obtaining appointments (39.5%), unawareness of pregnancy (38.3%), and financial limitations (24.9%); however, 52.2% of women reported multiple reasons. Rationale for late PNC significantly differed across ethnoracial groups and by maternaleducation; however, only one rationale significantly differed by urbanicity—rural mothers reported not wanting prenatal care.

Discussion: These findings underscore the complex, multifactorial barriers to timely PNC initiation and highlight the urgent need for targeted interventions. Public health efforts should focus on enhancing sexual education, expanding access to affordable pregnancy testing, implementing flexible payment options, and addressing healthcare workforce shortages to improve equitable access to PNC and ultimately enhance maternal-fetal outcomes across diverse populations.

Title: Legionella due to marijuana inhalation through a water pipe, a case and prevention strategies

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Abstract

Brief introduction: Legionella pneumoniae, often referred to as Legionnaires' disease, is a pulmonary infection caused by the gram-negative rod Legionella species, most often Legionella pneumophila. Infection is caused by exposure to aerosolized water droplets containing the bacteria, and can be found in both natural and artificial water systems. Symptoms commonly include fevers, dyspnea, cough, nausea, and vomiting, and labs often include hyponatremia, leukocytosis, elevated liver enzymes, and elevated inflammatory markers. Sources often include cooling towers, hot tubs, and fountains, and have been found in water pipes. Management oftenincludes either fluoroquinolones or macrolides. Here, we present a recent case of Legionella from a water pipe and provide recommendations for water pipe cleaning and care to help educate our patients.

Purpose: A presentation to review Legionella signs, symptoms and management as well as informing providers that marajuana can be a cause. Additionally, educate providers on proper care of water pipes in order to educate patients who use them to prevent adverse events from their use in the future

Design methods: Presenting a case that was seen in the hospital, and a brief literature search on relevant topics and prevention strategies

Discussion / Conclusion: A number of factors contribute to the growth of *Legionella Pneumophilia,* including but not limited to biofilms adherence, stagnation, scale, organic nutrients, inorganic nutrients, optimal temperatures, infectious aerosol spread, among others.
Proper care for water pipes include using distilled water, disinfecting the pipe with heat, or washing by submerging in chlorine solution in a well ventilated area.
Alternative forms of ingestion of marijuana can include joints as well as a dry glass pipe. Both of these forms lack a water chamber eliminating the possibility of biofilm formation, stagnation and adherence. Cannabis infused edibles as well as cannabis infused oils eliminate the aerosol portion of *Legionella* spread, these alternatives also lack a water chamber.

Grant Support: None.

Title: Usefulness in Trials of Laparoscopic Techniques in General Surgery

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Abstract

Purpose: Laparoscopic surgery is widely used across specialties, offering benefits like reduced pain and faster recovery. While RCTs in this field have increased, many lack features that enhance clinical usefulness and real-world relevance. We evaluated the clinical usefulness and transparency of general surgery RCTs on laparoscopic procedures (2020–2024) using a structured framework by van ’t Hooft et al.

Design Methods: We systematically evaluated RCTs investigating laparoscopic interventions within general surgery. Eligible studies were identified using a comprehensive database search from both MEDLINE and Embase on May 19, 2025. Records were screened in duplicate, and assessed using a 13-item usefulness framework. Data extraction was performed independently and in duplicate by trained reviewers. Descriptive statistics and linear regression analyses were used to summarize trial characteristics, and identify predictors of clinical utility, transparency, and total usefulness. Risk of bias assessment was not performed due to the unavailability of the planned tool (RobotReviewer).

Results: Among 160 included RCTs, clinical utility was inconsistently reported: patient-centeredness (63.8%) and feasibility (60.0%) were more commonly reported, while problem base (6.9%) and pragmatism (0.6%) were infrequent. Transparency was also low, with only 2.5% of studies sharing raw data. Greater transparency was significantly associated with higher clinical utility, with a low to moderate positive correlation ($r = 0.32$, $p < .001$). Regression models identified general surgery journals, self-funding, and higher journal impact factor as predictors of greater overall usefulness.

Conclusions: Despite growth in laparoscopic surgery trials, many remain limited in transparency, pragmatism, and relevance to real-world clinical problems. Addressing these gaps may improve the applicability of trial findings to routine surgical practice.

Grant Support: This study received no support.

Title: Improvement of Early Detection of Cutaneous Malignancies and Reduction of Healthcare Costs at Farmers' Markets and a Church in Oklahoma City: A Pilot and Cross Sectional Study

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Abstract

Purpose: Skin cancer is the most common malignancy in the United States, with worse outcomes reported in underserved communities. This study evaluated the feasibility, diagnostic yield, educational impact, and cost-effectiveness of free skin cancer screenings paired with local farmers' markets and one community church event in Oklahoma City.

Methods: Six screening events were conducted, with participation from 411 adults (mean age 49; 57.4% female). Demographics included 59.9% White, 18.0% Latinx, 14.1% Black, 8.5% Asian, and 2.7% Native American participants; 96% were from urban areas. Screenings of exposed skin were conducted by dermatology residents supervised by board-certified dermatologists. Pre- and post-screening surveys assessed awareness of sun safety, lesion recognition, barriers to care, and sunscreen use. Six-month follow-up calls were conducted for those referred. Statistical analyses included paired t-tests, ANOVA, and chi-square tests ($p<0.05$).

Results: Notable lesions were identified in 9.7% of participants (NNS=10.3), including 7 biopsy-confirmed basal cell carcinomas, 4 suspicious pigmented lesions, and 23 actinic keratoses. Awareness of sun safety and lesion recognition increased significantly after counseling (mean increases: +1.37 and +2.66 points, respectively; $p<0.0001$). Baseline awareness was significantly lower among Black and Latinx participants compared to White participants ($p<0.001$). Sunscreen use varied by race, with 37.9% of Black participants reporting never using sunscreen vs. 9.35% of White participants ($p<0.001$). Among participants without prior dermatologic care, 72.2% cited no perceived need. The estimated average cost savings per participant was $156.70, totaling $64,403.70 across all events.

Conclusions: Community-based skin cancer screenings at farmers' markets are a feasible, low-cost strategy that improves awareness and may promote early detection, particularly in underserved populations. These findings support expanding access to screenings in similar non-clinical community settings to reduce dermatologic care disparities.

Title: A Cross-Sectional Analysis of Safety Reporting in Sleep Disorder Clinical Trials

Authors: M Lackey; Caden Forbes; K Keefer; R Hazlitt; T Harris; D Archer; Logan Corwin; A Ito Ford; M Vassar

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2. Department of Psychiatry and Behavioral Sciences, Oklahoma State University Center for Health Sciences, Tulsa, Oklahoma

Abstract

Purpose: Adverse event (AE) reporting is a critical component of clinical trial transparency and patient safety, particularly in the evaluation of interventions for sleep disorders. Inconsistent AE reporting between trial registries and peer-reviewed publications can compromise evidence- based decision-making. The objective of this study was to assess the concordance of AE reporting between ClinicalTrials.gov and corresponding publications for interventional sleep disorder trials conducted between 2017 and 2024.

Methods: We conducted a cross-sectional analysis of interventional sleep disorder trials registered on ClinicalTrials.gov. Eligible studies included trials with posted results and at least one matched peer-reviewed publication reporting trial outcomes. Using structured adverse event tables provided in the registry, we extracted serious and non-serious AE data, including counts of affected patients and total events. These were compared to AE data reported in the matched publications. Discrepancies were defined as differences in counts, absence of reporting, or inconsistent framing across sources. The location and level of detail of AE reporting within publications were also evaluated. Trial characteristics such as randomization, masking, phase, and funding source were summarized to contextualize reporting patterns.

Results: Among 168 eligible trials, 85.1% demonstrated discrepancies in serious AE reporting between ClinicalTrials.gov and the publication. Additionally, 73.2% of trials showed inconsistencies in the number of patients affected by AEs, and 35.1% of publications failed to report any AE data at all. While trials initiated after the 2017 FDA Final Rule showed modest improvement in registry-based reporting, discordance with publications remained common.

Conclusions: The findings highlight a persistent problem of underreporting and selective framing of safety data in sleep disorder trials. These discrepancies undermine clinical interpretation, hinder meta- analyses, and may pose risks to patient safety. Greater enforcement of reporting standards and registry-publication alignment is necessary.

Funding: This study did not receive external grant funding.

Title: Assessing AI Guidelines in Critical Care Journals

Authors: SA Lassiter; MG Lackey; JC Marchbanks; TS Harris; AA Hagood; JA Duncan; AV Tran; P Crotty; A Young; AI Ford; BM Vassar

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Abstract

Purpose: Artificial intelligence (AI) is increasingly used in Critical Care research for data analysis, systematic reviews, and clinical decision support. However, its integration raises concerns about transparency, authorship, and reproducibility. This study evaluates how leading Critical Care journals address AI through their author instructions and policies.

Design Methods: We conducted a cross-sectional review of the top 100 peer-reviewed Critical Care and ICU Medicine journals, ranked by the 2023 SCImago SJR indicator. Data were extracted from each journal's "Instructions for Authors" to identify specific policies regarding AI. We analyzed AI-related guidelines, including authorship criteria, disclosure requirements for AI use in manuscript writing, and the use of AI in generating images or content. Correlational analyses were performed to explore the relationship between these policies and journal characteristics, such as impact factor.

Results: Of the 100 journals reviewed, 54% had some mention of AI in their author instructions. The most common policy (48%) was prohibiting AI from being listed as an author, with 41% requiring disclosure of AI's involvement in manuscript preparation. Only 12% of journals accepted AI-generated content, while 16% allowed AI-generated images. Journals with higher impact factors were more likely to have comprehensive AI policies. However, there was a significant lack of standardization and detailed guidance across the journals reviewed.

Discussion: Despite the growing integration of AI in critical care research, our findings reveal a notable lack of consistent and detailed policies among leading journals. While most journals prohibit AI authorship, there is little consensus on reporting guidelines for AI-assisted research and content generation. The adoption of clear and comprehensive AI-specific reporting guidelines is essential to ensure ethical practices, transparency, and reproducibility in Critical Care and ICU Medicine research as AI technologies continue to advance.

Title: Transparency Gaps in T1DM Trial Outcome Reporting

Authors: SA Lassiter; HN Huynh; TS Harris; AS Elghzali; RA Hazlitt; K Keefer; DR Archer; AI Ford; BM Vassar

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Abstract

Purpose: The purpose of this study was to examine the frequency, type, and timing of prespecified outcome modifications in clinical trials for type 1 diabetes mellitus (T1DM) and to determine if these changes were acknowledged and rationalized in corresponding publications. This research is essential because undisclosed modifications can introduce bias and undermine the credibility of the evidence base used to guide treatment recommendations in T1DM care.

Design Methods: A registry-based cross-sectional analysis was conducted on T1DM interventional trials registered on ClinicalTrials.gov with start dates between January 18, 2017, and December 31, 2024. We compared each trial's earliest and most recent registry entries to identify outcome modifications, including additions, removals, and reclassifications.
Corresponding peer-reviewed publications were reviewed to assess whether trialists provided a rationale for any modifications. A Severity-Weighted Change Score was used to quantify the impact of modifications.

Results: Of the 76 trials analyzed, every study (100%) had at least one outcome change. The majority of these changes occurred either post-publication (52.6%) or after the primary completion date (43.4%). The impact of these changes was predominantly rated as high (39.5%) or moderate (43.4%). Despite the prevalence of these modifications, none were reported on ClinicalTrials.gov, and only 13.2% (10/76) were acknowledged in the corresponding publications.

Discussion: Our findings reveal a widespread issue of undisclosed outcome modifications in T1DM clinical trials, which may compromise the reliability of the evidence base that clinicians and patients rely on. The high frequency of changes, their substantial impact, and the lack of transparency in reporting raise concerns about interpretive bias and the credibility of trial findings. This persistent lack of disclosure undermines the regulatory standards intended to promote transparency and accountability.

Title: Dual-target chimeric protein vaccine against *C. difficile*

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Abstract

Clostridioides difficile is a Gram-positive, rod-shaped, spore-forming anaerobic bacterium found in the environment. *C. difficile* can colonize the colon and act as an opportunistic pathogen, becoming infectious after antibiotic treatment. Symptoms of *C. difficile* infection (CDI) include diarrhea, which can progress to pseudomembranous colitis and, if left untreated, death. Treatment options include the more broad-spectrum antibiotics metronidazole, vancomycin, and the narrow-spectrum fidaxomicin. However, using antibiotics to treat the infection also kills many other bacteria in the gut, which can allow for the recolonization of *C. difficile* and create a cycle of reinfection. It is frequently transmitted in hospitals and nursing homes, but can also spread in community settings where access to adequate hygiene products and sanitation systems is limited.

Our laboratory is working to develop a vaccine against CDI. The vaccine antigens are purified recombinant chimeric proteins expressed by non-toxigenic *E. coli*. The first half of the chimeric protein consists of the receptor-binding domain of *C. difficile* TcdB toxin, which stimulates toxin-neutralizing antibodies. The second half consists of a protein exposed on the bacterial surface, which stimulates antibodies that can bind to and coat *C. difficile*. We are currently cloning, overexpressing, and purifying these chimeric proteins. We successfully purified TcdB, TcdB-Cwp66, TcdB-CrtP, via nickel column chromatography and verified chimeric protein presence by Western blot; however, TcdB-SlpA protein purification was unsuccessful. Purified proteins will then be tested for their immunogenicity and protective efficacy in a mouse model.

Grant Support: OCAST Award #HR21-115

Title: Cold water immersion therapy and effects on insulin

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Abstract

Purpose: Cold water immersion (CWI) is a growing trend due to its effects on brown adipose tissue activation, and neurotransmitter modulation. However, its impact on insulin sensitivity and glucose metabolism in humans remains underexplored. This scoping review aims to evaluate the existing literature on the effects of CWI on insulin in humans and to identify the knowledge gaps that currently exist.

Design Methods: This scoping review was conducted by two authors (JG and BM) according to the Joanna Briggs Institute (JBI) guidelines. A scoping search of PubMed, Embase, and Cochrane databases was conducted on July 11th 2025 using search strings developed by a SR librarian. Title and abstract screening, as well as full-text review and data extraction, were performed in a masked, duplicative fashion. Inclusion criteria required human studies published in English from 2000 onward that utilized CWI and measured insulin, glucose, or related metabolic outcomes.941 articles were identified with 67 articles picked for full review. 7 studies met our inclusion criteria. These studies varied in participant demographics (male, female, mixed cohorts) and age groups ranged from 18 to 55+. Intervention duration ranged from a single acute CWI session to 11 months of repeated CWI.

Results: The majority of studies reported an improvement in insulin sensitivity and glucose utilization by peripheral tissues and brown adipose tissue (BAT). However two studies reported negative metabolic effects. Only three studies used full-body CWI, while the remainder used cold water suits. Current research suggests that CWI can enhance insulin sensitivity and glucose metabolism in humans.

Discussion/Conclusion: This finding supports the potential for CWI to be used as an adjunct therapy for insulin resistance or type 2 diabetes. However, variability in methodology and limited high-quality, long duration studies highlight the need for further research especially involving full-body immersion protocols so that efficacy and clinical applicability is further understood.

Title: Completeness in Safety Reporting in Movement Disorder Trials

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Abstract

Purpose: Movement disorders (MDs) require new developments to safely mediate disease status. MD clinical trials involve diverse adverse events (AEs) that must be acknowledged to inform patient care. Despite regulations following the FDAAA Final Rule of 2017, ambiguity remains in AE reporting. This review assesses concordance between trial registries and publications to bridge gaps in transparent reporting practices.

Methods: We performed a cross-sectional analysis of ClinicalTrials.gov-registered MD intervention trials with published results. Data were extracted in masked duplicate fashion for serious AEs, other AEs, treatment-related discontinuation, and mortality. Concordance and reporting bias were evaluated using Bland-Altman and funnel plots. A composite AE reporting score, reflecting Final Rule-required field, was analyzed with linear and segmented regression models to evaluate reporting.

Results: Of 176 analyzed MD trials, AE reporting did not drastically change post-Final Rule. There was no consistent improvement in reporting rates among federally regulated trials. Death reporting on the registry increased from 57% to 100%. Bland-Altman and funnel plot analyses revealed substantial reporting variability, especially in smaller, pre-Rule trials. Regression analysis showed no significant change in AE reporting scores post-Rule, suggesting limited policy impact on reporting.

Discussion: Discrepancies remain in AE reporting for MD clinical trials, despite Final Rule implementation. To improve transparency, investigators can apply stringent structures to reporting practices, with stronger enforcement from FDAAA and publishers. Intentional, vigilant reporting standards can strengthen AE data to improve MD patient care.

Funding: None

Title: Safety Reporting in Stroke Clinical Trials: A Comparative Analysis of ClinicalTrials.gov Data and Published Research

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Abstract

Purpose: Strokes remain a leading cause of morbidity and mortality worldwide. While numerous trials have evaluated pharmaceutical, interventional, and rehabilitative treatments, concerns persist regarding inconsistent safety reporting between clinical trial registries and peer-reviewed publications. Such discrepancies can undermine data transparency, limit reproducibility, and compromise clinical decision-making. This study systematically compared adverse event (AE) reporting between stroke randomized controlled trials (RCTs) registered on ClinicalTrials.gov and their corresponding publications.

Methods: We conducted a retrospective analysis of Phase 2–4 stroke RCTs registered on ClinicalTrials.gov between 2009 and 2023 with matching PubMed-indexed publications. For each trial, we extracted data on serious adverse events (SAEs), other adverse events (OAEs), and deaths. Discrepancies were defined as any mismatch in counts, types, or zero-event reporting between sources. Comparative analyses were performed using Chi-square and Mann-Whitney U tests in accordance with STROBE guidelines.

Results: We identified 116 eligible trials with matching publications. SAEs were reported in 72/116 (62.1%) ClinicalTrials.gov entries versus 50/116 (43.1%) publications ($P = 0.006$). OAEs were reported in 67/116 (57.8%) registry entries compared with 35/116 (30.2%) publications ($P < 0.001$). Conversely, deaths were reported more frequently in publications (87/116, 75.0%) than in registry entries (70/116, 60.3%) ($P = 0.025$). Nearly half of trials (54/116, 46.6%) showed discrepancies in the number of patients experiencing SAEs, with ClinicalTrials.gov reporting higher counts in 79.6% of these cases. The median number of SAE types per trial was significantly greater in registry data (33.5) than in publications (3.0; $P = 0.013$), whereas the median number of patients with SAEs did not differ ($P = 0.851$).

Conclusion: Substantial inconsistencies in AE reporting persist between stroke trial registry data and corresponding publications. Given the critical role of safety profiles in guiding stroke treatment, improving adherence to standardized reporting frameworks, such as the CONSORT Harms Extension, and implementing cross-verification between registries and journals are essential to ensure accurate, transparent, and clinically reliable data for patient care.

Title: Assessing the Completeness of Safety Reporting in Clinical Trials of Regional Anesthesia Interventions: A Registry-Publication Comparison Study

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Abstract

Background: Incomplete or inconsistent reporting of adverse events (AEs) undermines the interpretability of randomized trials. In interventional regional anesthesia (RA), where procedural risks must be clearly communicated, such discrepancies may obscure safety profiles. This study evaluates concordance between AE data reported in ClinicalTrials.gov and corresponding peer-reviewed publications.

Methods: We conducted a comparative study of interventional RA trials registered on ClinicalTrials.gov with published results. AE data were extracted in duplicate across four domains: serious adverse events (SAEs), other adverse events (OAEs), treatment-related discontinuations, and all-cause mortality. Descriptive statistics characterized trial features. Bland-Altman and funnel plots assessed reporting concordance and bias. Chi-square tests compared reporting completeness by regulatory status. A composite 0–7 AE reporting score, derived from FDAAA Final Rule–mandated fields, was analyzed using linear and segmented regressions to identify predictors of reporting and temporal trends.

Results: Among included trials, substantial discrepancies were observed in AE counts between ClinicalTrials.gov and publications. Funnel plot asymmetry suggested possible underreporting in smaller studies. Trials subject to FDA reporting requirements were significantly more likely to report complete AE data ($p < 0.05$). Composite AE reporting scores were higher in industry-sponsored and drug-focused trials. Segmented regression identified a modest post–Final Rule increase in reporting completeness, though recent-year instability limits interpretation.

Discussion: In RA trials, AE reporting is frequently incomplete or discordant across sources, with regulatory oversight linked to greater transparency. These findings highlight the need for standardized safety reporting and alignment between registries and publications to ensure accurate risk communication in anesthesiology research.

Funding: This study is not funded.

Title: Marijuana Use and Adherence to Cancer Screening

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3. Oklahoma State University Center for Health Sciences (MH)

Abstract

Purpose: With marijuana use on the rise in the United States, its impact on preventive health behaviors, like cancer screening adherence, remains unclear. While prior research has identified unmet healthcare needs, including preventive care, as a prevalent issue among people who use substances, marijuana has been excluded from much of this research. This study investigates whether marijuana use is associated with lower adherence to U.S. Preventive Services Task Force (USPSTF) guidelines for cervical, breast, and colorectal cancer screening among eligible women.

Methods: We conducted a cross-sectional analysis using data from the 2022 Behavioral Risk Factor Surveillance System. Women were included if they met USPSTF eligibility criteria for cervical, breast, or colorectal cancer screening and had complete data on both screening adherence and marijuana use. Logistic regression models were used to assess associations between marijuana use and screening adherence, adjusting for sociodemographic factors such as age, income, education, and insurance status.

Results: Marijuana use was not significantly associated with adherence to cervical (OR: 1.11, 95%CI: 0.86-1.43; AOR: 1.27, 95%CI: 0.95-1.69) or colorectal (OR: 0.79, 95%CI: 0.65-0.96; AOR: 1, 95%CI: 0.83-1.22) cancer screening guidelines. However, women who reported marijuana use were significantly less likely to adhere to breast cancer screening guidelines (OR: 0.5, 95%CI: 0.41-0.6; AOR: 0.65, 95%CI: 0.53-0.78). Sociodemographic factors, particularly insurance coverage and income, were significantly associated with screening adherence across all three cancer types.

Discussion: Our findings suggest that marijuana use may be an independent risk factor for non-adherence to breast cancer screening guidelines, whereas no such association was observed for cervical or colorectal screening. These results underscore the need to further examine marijuana's role in preventive health behavior and to develop targeted public health interventions to improve compliance among women who use marijuana.

Funding: None.

Title: Substance use in psychiatric ED patients

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Abstract

Background: The use of emergency departments (ED) for substance use and other mental health concerns has increased substantially in recent decades. This increase is due, in part, to a growing disparity between the prevalence of mental health and the lack of stable mental healthcare resources. This places EDs in a unique position to provide early identification and interventions for people with psychiatric disorders.

More research is needed to characterize how people with substance use and psychiatric disorders use ED services.

Objective: To characterize the rates of alcohol use disorder (AUD) and substance use disorder (SUD) among patients utilizing ED services with psychiatric presentations. To analyze the rates of ED recidivism by AUD/SUD history and the patient's psychiatric diagnosis.

Methods: We conducted a cross-sectional analysis of American ED visits as reported by the 2019-2022 National Hospital Ambulatory Medical Care Survey (NHAMCS). Psychiatric diagnoses for ED visits were defined as having an ICD-10 "F code" assigned to the visit.

Results: Of 66,573 ED visits, 9.5% (n=7,466) had a psychiatric diagnosis reported for the visit. Patients with a psychiatric diagnosis were significantly more likely to have a history of AUD, SUD, or both (47.7%) compared to non-psychiatric visits (5.6%; $p < .0001$). Patients with psychiatric history in rural areas were significantly more likely to have no substance use history ($p = .008$) and less likely to have SUD ($p < .0001$), compared to urban patients. Patients with a history of AUD were significantly more likely to exhibit ED recidivism ($p = .022$).

Conclusions: Patients with a psychiatric diagnosis and AUD were significantly more likely to exhibit recidivism. These data support the use of standardized assessment tools for people with mental illness, and for providing support and referral to alcohol and substance use treatment to prevent ED utilization and recidivism.

Keywords: Substance Use Disorder; Alcohol Use Disorder; Recidivism; Emergency Department; Psychiatric Disorders; Mental Health

Title: Substance Use Among Deaf/Hard-of-Hearing Adults in the United States

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Abstract

Purpose: Substance use disorders (SUD) represent a significant source of problems in the United States. Deaf/hard of hearing (HH) individuals possess both protective and predisposing factors in regard to SUD, and understanding the interplay between these elements is essential for understanding this population. Here, we evaluate self-reported substance use (SU) patterns among Deaf/HH individuals with a secondary focus on sociodemographics.

Methods: This cross-sectional analysis used 2022 BRFSS data to assess rates of SU among Deaf/HH individuals regarding usage of alcohol, tobacco, vaping, and marijuana. Individuals were included in the study if they indicated severe hearing impairment or Deafness and answered questions regarding SU. Demographic variables amongst Deaf/HH individuals who affirmed SU were also assessed.

Results: Analysis of data revealed significantly lower prevalence of alcohol consumption ($P < .0001$) and binge drinking (11.7%, $P < .0001$) in the Deaf/HH population, while heavy drinking did not significantly differ. The Deaf/HH population had a higher percentage of no or lower cigarette use ($P < .0001$), but similar rates of daily smoking. ENDS and marijuana use ($P = .041$ and $P = .004$) were significantly lower in the Deaf/HH population.

Caucasian Deaf/HH individuals had significantly higher overall odds of SU compared to other ethnicities. Female and non-metropolitan Deaf/HH individuals had lower odds of alcohol use compared to males (AOR: 0.63; 95% CI 0.56-0.71) and urban individuals (AOR: 0.76; 95% CI 0.66-0.88). Finally, those aged 18-24 years had higher odds of marijuana use and ENDS use compared to older age groups ($P < .05$).

Conclusion: This study examined the prevalence of alcohol, cigarettes, ENDS, and marijuana use in the Deaf/HH population. Our findings demonstrate that the Deaf/HH population reported lower prevalence of SU across most categories compared to the general population. Rates of SU varied amongst different sociodemographic groups and differed from previous research findings.

Acknowledgements: We would like to thank N Bray for providing clinical insight and suggestions for clarity.

Title: Mental Health and Vaping among High School-Aged Adolescents

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Abstract

Introduction: More than a third of all high-school-aged students report experiencing persistent feelings of sadness or hopelessness, and 2 in 10 report serious consideration of attempting suicide. Overall, a 10% and 3% increase, respectively, since 2013. With the popularization of ENDs use, there is a lack of published research exploring the potential negative mental health effects among high school-aged children. Therefore, our primary objective is to determine the association between ENDS usage and its impact on mental health amongst young adults, specifically related to depression. Our secondary objective is to identify disparities in ENDS usage by utilizing ACE scores.

Methods: We pooled data from the combined 2013-2023 high school YRBSS to report the prevalence of ENDS usage and ACE scores, particularly focusing on questions related to mental health. We estimated the weighted prevalence and 95% confidence intervals by YRBSS cycles, occurring biannually. Multivariable logistic regression was utilized to assess the association between symptoms of depression and suicidal behaviors.

Results: Our study showed that current electronic nicotine delivery usage in high school-aged children had significantly higher odds of depressive symptoms, suicidal ideation, suicidal planning, and suicide attempts ($P < .05$). Frequent poor mental health days and adverse childhood experiences were also significantly associated with ENDS use.

Conclusion: The association between current ENDs use in high school-aged children demonstrates higher odds of depressive symptoms, suicidal ideation, suicidal planning, and attempts. Thus, the growing popularity of ENDS usage amongst young adults and potential negative impacts on long-term mental health outcomes demonstrate a need for mitigating negative health risk factors in young adults. Further research is needed to investigate risk reduction strategies and the implementation of public health interventions.

Funding: None

Title: Racial Gaps in Atopic Dermatitis in the 2024 NHIS

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Abstract

Purpose: Atopic Dermatitis (AD) is one of the most common skin conditions that significantly burdens patients globally by intense itching, dryness, inflammation, and thickening of skin. Considering the chronic nature of AD, it is essential to provide timely diagnosis and treatment to improve patients' quality of life and reduce financial burdens. Our objective seeks to identify the association and disparities between race and the diagnosis of AD.

Methods: We conducted a cross-sectional analysis of the 2024 National Health Interview Survey (NHIS), a national survey that monitors the health of US households across various health topics. We performed a bivariate and multivariable logistic regression model, investigating the association between race and reports of AD.

Results: Our 2024 NHIS sample included 3,551 responses with 2,453 individuals noting a diagnosis of eczema/AD and 1,098 individuals without the diagnosis. The highest prevalence of an eczema/AD diagnosis was seen in Other single and multiple races (82.3%), AIAN alone or in combination (81.5%), and Black/African American only (78.0%). After adjusting for sociodemographic variables including income and rurality, there is a significant association in Hispanic (40.1%) and Asian only (29.3%) respondents without a diagnosis of eczema/AD despite presenting symptoms.

Conclusion: Our study indicates a significant association between Hispanic and Asian individuals with the diagnosis of eczema or AD. With the consequences of delayed diagnosis and treatment of AD - the severity of individuals' quality of life, mental health, and financial burden - it is important to understand cultural perspectives and barriers to care within minority communities to provide successful intervention. Effective action plans should mitigate linguistic and cultural gaps and open discussions on unmet medical needs to improve treatment of AD.

Title: ACEs, Substance Use, and Mental Health among High School Students

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Abstract:

Purpose: Increasing rates of substance use, including alcohol, marijuana, and electronic cigarettes, have been increasing among adolescents over the past 20 years—coinciding with increases in adverse childhood experiences (ACEs). Our objective was to assess the impact of ACEs and protective and compensatory experiences (PACEs) on the earlier initiation and experiences of adolescents with substance abuse among current high school students and contextualize their impact on reported mental health outcomes, such as reported depression or suicidality.

Methods: We conducted a cross-sectional study of youth substance use initiation, ACEs, and PACEs from the 2023 Youth Risk Behavior Surveillance System. We assessed student participants in two analyses (the first including alcohol and tobacco, and the second including marijuana and other drugs) to assess the direct impact of childhood events on mental health outcomes and indirect effects through drug use. Quasi-causal disease modeling, via path analysis, was used to assess the relationship between these variables.

Results: The first grouping examining alcohol and tobacco use included 10,028 high school students, with 52.8% of respondents who reported ever using either alcohol or nicotine. The second group assessing marijuana, pain medications, and other drugs showed 75.5% of respondents reporting past or current use. ACEs showed significant, positive associations for all substance types ($P<.0001$) and for each mental health outcome, while PACEs were mildly protective ($P<.01$) for each substance and mental health outcome with the exception of illegal drug use on frequent poor mental health days.

Conclusion: Our findings show that a significant proportion of US children are experiencing ACEs and consequently report increased substance use and poor mental health, including suicidal ideation. Considering these factors, there is a need to improve ACE screening in high school adolescents and to create opportunities for PACEs through multigenerational therapy to build resilience and break cycles of generational substance dependence and maltreatment.

Grant Support: No funding was received to support this research.

Title: Discordant Outcome Reporting in Movement Disorder Trials

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Abstract

Purpose: Selective outcome reporting is a long-established methodological concern within clinical trials, warranting federal oversight to uphold stronger research practices. With new guidelines following the Food and Drug Administration Amendments Act 801 (FDAAA) of 2007 and its 2017 Final Rule, there is little insight into the outcome reporting practices of movement disorder (MD) trials.

Methods: We performed a cross-sectional analysis of MD trials that were registered on ClinicalTrials.gov post-Final Rule and had matching publications to compare outcome reporting. Data was extracted independently and in duplicate, including originally registered outcomes, outcome revisions, and deviation disclosures within the publication. Descriptive statistics were used to examine relationships between outcome modifications and trial characteristics.

Results: Among 46 MD trials analyzed, 100% had at least one outcome modification post- primary completion date or post-publication. Moreover, 89.1% had changes that could potentially impart severe impact on interpretation. Most modifications involved refined outcome definitions to more specific language. The severity of outcome revisions did not demonstrate statistically significant relationships with any trial characteristics.

Conclusion: Despite new FDAAA guidelines, outcome discrepancies persist between registry and publication for MD trials. Similar patterns prior to the Final Rule and across specialties underscore the need for systemic solutions that foster transparent reporting practices. By adopting core outcome sets, structured reporting guidelines, and mandatory deviation disclosures, MD trials can produce substantial results to guide patient care.

Funding: This study received no funding.

Title: Tracking Selective Outcome Reporting in Obstetric Trials: A Registry Audit of ClinicalTrials.gov Records and Linked Publications

Authors: VV Nguyen; LE Kocour; LP Corwin; DR Archer; R Hazlitt; RJ Sherry; AS Elghzali; AI Ford; MB Vassar

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Abstract

Purpose: Obstetric interventions such as cesarean delivery and postpartum hemorrhage (PPH) management carry maternal and neonatal risks. Despite efforts like the FDA Final Rule to improve trial transparency, adverse event (AE) reporting remains inconsistent. This study evaluated AE reporting concordance between ClinicalTrials.gov and corresponding publications for obstetric trials.

Methods: A registry-publication comparison was conducted using a systematic ClinicalTrials.gov search for obstetric trials with posted results from 2009 to 2024. Eligible trials enrolled pregnant individuals, reported maternal or neonatal safety outcomes, and had a matched publication; those unrelated to obstetrics or lacking AE data were excluded. Dual blinded reviewers performed data extraction. Trials were categorized by regulatory status, and AE reporting consistency and trends were assessed using descriptive statistics, chi-square tests, Bland-Altman plots, funnel plots, and segmented regression. The study was registered with PROSPERO and the Open Science Framework.

Results: Within the 101 included trials, AE reporting was inconsistent. Among post-Final Rule trials, 58% failed to report serious adverse events (SAEs) in registries and 79% omitted them from publications. Other adverse events (OAEs) were unreported in 61% of registries and 87% of publications. Among trials with data in both sources, 63% showed discrepancies in SAE counts. Funnel plots revealed high variability in SAE rates, particularly in smaller trials. Segmented regression showed no significant change post–Final Rule, though linear regression indicated a modest increase in reporting scores (unadjusted $p < 0{\cdot}0001$; adjusted $p = 0{\cdot}004$).

Conclusion: Despite regulatory mandates, AE reporting in obstetric trials remains incomplete and inconsistent between registries and publications. These discrepancies hinder risk-benefit assessments, compromise clinical guideline development, and may obscure true safety profiles. Enhanced enforcement of reporting standards and routine integration of registry data into obstetric evidence syntheses will be essential to improving maternal and neonatal safety.

Funding: None.

Title: Pediatric Abuse and Neglect Associated Visits in Emergency Departments Primary

Authors: E Oberlander; N Nguyem, M Hartwell, A Hendrix-Dicken, C Beeson

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Abstract

Purpose: Child maltreatment impacts an estimated 7.4 per 1000 children in the United States.[1] Given the severity of some abusive injuries, children may present to emergency departments (EDs). As such, EDs are primary screening locations for early identification of maltreatment. As such, our objective was to assess rates of intentional maltreatment among pediatric patients presenting to the ED.

Methods: We performed a cross-sectional analysis of pediatric ED visits using data from the CDC's National Hospital and Ambulatory Care Survey (2019-2022). Child maltreatment was identified by ICD diagnosis codes of confirmed and suspected maltreatment, examinations performed after sexual assault, problems related to upbringing, malnutrition, and chief complaint codes for 'child abuse', 'sexual abuse', or 'rape'. We then used design-based X^2 tests to determine associations between sociodemographic factors, comorbidities, wait time, and length of stay for these patients.

Results: Our sample included 13,896 pediatric visits. After applying sampling weights, 1.43% of pediatric ED visits (422,755 visits annually) were related to maltreatment. Of these visits, 62.7% were for examinations after sexual assault, 31.2% included maltreatment, and 6.1% were for problems related to upbringing or malnourishment. No significant associations were observed by race, age, insurance, sex, or rurality. When evaluating associations between comorbidities and child maltreatment-related visits, associations of asthma, substance use, and developmental disorders were statistically significant ($P < .05$). Additionally, visits for these encounters were 28.04 minutes longer compared to other visits ($P = .040$).

Discussion: Our study showed no significant differences in demographic factors related to child maltreatment ED visits; however, there were differences by specific comorbidities. As EDs remain vital in identifying child maltreatment—it is critical to understand these risk factors to improve identification of maltreatment, thus protecting children from continued abuse.

Title: Adverse childhood experiences and family planning—the impact of ACEs on contraceptive use and pregnancy intention, BRFSS 2022

Authors: A Olmstead; M Nobre Priosti; J Sumner, M Hartwell

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Abstract

Purpose: Adverse childhood experiences (ACEs), such as abuse, neglect and household dysfunction, are known to have lasting effects on mental, physical and behavioral health. Additionally, protective factors have been shown to be a mediator in these relationships. However, little is known about how ACEs impact contraceptive use and pregnancy intention in adulthood. This study aimed to assess the relationship between ACEs and family planning, including contraceptive use and pregnancy intention.

Methods: We used the Behavioral Risk Factor Surveillance System to measure the impact of ACEs and PACEs on contraceptive use and pregnancy intention. To measure associations, we used design-based chi-square tests and regression models, adjusting for demographic and socioeconomic factors.

Results: The final sample size included 4,197 adult women from five states who completed both the ACE and Family planning modules. Most participants reported at least one ACE, and over a quarter reported four or more. Higher ACE scores were associated with lower use of any contraceptive method and higher reports of unintended pregnancy. Compared to women with 0 ACEs, those with 1-3 age were significantly more likely to use contraceptives (AOR: 1.66; 95% Cl= 1.1-2.49). There was no significant difference in ACE score and pregnancy intention; however, PACEs were associated with contraceptive methods ($P < 0.02$) with nearly ⅓ of those having no support structure as children reported having sterilization procedures.

Conclusion: Women with a history of multiple childhood traumas were more likely to use contraception—which may be due to wanting to discontinue the cycle of abuse. This highlights how early life trauma can affect health decisions. Further research should focus on the sociodemographic implications of contraceptive uses and access in relation to adverse childhood experiences.

Funding: None.

Title: Adverse Event Reporting Gaps in Arrhythmia Therapies

Authors: MT Penland; EC Chen; DR Archer; TS Harris; RJ Sherry; LP Corwin; K Keefer; AI Ford; MB Vassar

Affiliations

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Abstract

Purpose: To evaluate the completeness and consistency of AE reporting in clinical trials of arrhythmia therapies by comparing ClinicalTrials.gov and publications.

Design Methods: We systematically compared data from ClinicalTrials.gov with corresponding publications for 173 cardiac arrhythmia interventional trials, reporting results between 2009 and 2024. Using a pre-registered protocol, we extracted data on serious adverse events (SAEs), other adverse events (OAEs), and mortality from both sources. Descriptive and inferential analyses quantified discrepancies and temporal trends, while a segmented regression was applied to evaluate the effect of the FDAAA Final Rule on reporting practices.

Results/Expected Results: ClinicalTrials.gov consistently reported SAEs, OAEs, and mortality more completely than publications in both before and after the FDAAA Final Rule. SAE reporting was higher in the registry than in publications pre- and post-Final Rule ($p < 0.001$). Publications were frequently underreported than the registry ($p < 0.001$-0.005). Mismatches in affected patient counts were present in 86.1% of trials, mostly favoring the registry (75.2%), with discrepancies increasing after the Final Rule (78.6% vs 94.0%).

Discussion/Conclusion: AE reporting in arrhythmia trials remains inconsistently disclosed between ClinicalTrials.gov and published articles, highlighting persistent transparency gaps. Harmonized reporting practices and stricter editorial oversight are needed to strengthen risk assessment and patient-centered care.

Grant Support: This study received no funding.

Title: MMR Coverage and Safety Trends in Children Aged 4–6: Public Health Implications for Measles Resurgence

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Abstract

Purpose: Despite previous eradication of measles in the United States, diminishing MMR vaccine rates have allowed for the resurgence of the disease. Although the MMR vaccine is safe and efficacious in preventing life-threatening disease, a growing number of families have delayed and declined immunizations. Our primary objective was to assess trends in MMR vaccination rates and subsequent adverse event reports to the FDA's Vaccine Adverse Events Reporting System (VAERS) for 4-6 year olds from 2014-2024.

Methods: We conducted a retrospective study analyzing data from the FDA VAERS and the CDC's VaxView from 2014 to 2024 for children 4-6 years old. Adverse event reports were classified as 'serious' if they included the following outcomes: hospitalization, death, life-threatening, or disabled. Descriptive statistics were conducted as well as Pearson correlations to assess changes in total MMR adverse events per 100,000 kindergarteners and serious adverse event reports per 1,000,000 kindergarteners over time.

Results: Administration rates of the MMR vaccine decreased from 94% to 92.5%, while the percentage of vaccine exemptions increased from 2.2% to 3.6%. Additionally, the number of general adverse event reports associated with the MMR vaccine declined from 12.52 to 11.70 per 100,000 ($R = .64$, $p = .0351$) while the serious adverse event reports declined from 4.05 to 2.38 per 1,000,000 ($R = .90$, $p = .0002$).

Conclusion: Our study showed MMR vaccination rates have been steadily declining over the past ten years. Additionally, the number of total and serious adverse events reports related to the MMR vaccine have also declined. With the resurgence of the measles virus in the US, healthcare providers should discuss the benefits of MMR vaccination in the context of risks associated with the disease versus the small number of serious adverse event reports associated with the vaccine.

Title: Trends in Timing of Public Interest in Withdrawal in the United States: An Infodemiology Study of Google Trends during 2024

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Abstract

Purpose: Substance use disorder is an increasing concern in the United States as more people experience withdrawal symptoms. With digital media being more accessible, the purpose of this study is to evaluate specific times of the day and weeks in the year when withdrawal and substance searches peak to compare with states' death mortality rates.

Methods: This study used a statistical analysis of Google Trends hourly and weekly relative search terms (RSI) for the terms *withdrawal*, *spins*, *crashing*, and *detox,* along with *fentanyl*, *cannabis*, and *alcohol* from January 1, 2024, to December 31, 2024. Data was extracted for each state and compared to the overdose mortality rate from the CDC.

Results: Statistically significant hourly RSI was highest at 2 AM for *withdrawal* and 6:00 PM for *spins*, *crashing*, and *detox*. *Fentanyl* was highest at 12:00 PM, *cannabis* at 5:00 AM, and *alcohol* at 1:00 PM. The weekly RSI for *withdrawal*, *detox*, and *alcohol* was highest the week of 12/29/2024. The Appalachian Region states had the highest rates of RSI and death rates, while Hawaii and the Great Plains states had the lowest. Search interest in *withdrawal* by state had a significant correlation with the overdose death rate (R=.44, *P* =.0011).

Conclusions: Advertisements for therapy services could be tailored to consumers by increasing advertisements in different states depending on the time of day and year when the terms peak. By displaying targeted advertisements during these times, people struggling with substance use disorder or withdrawal symptoms will hopefully seek help or answers to their condition.

Funding: None.

Title: Skeletal Injuries Among Sports-Related Injuries in the ED Based on Level of Triage

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Abstract

Purpose: Sports-related injuries are a common cause of ED visits, often requiring specialized intervention by orthopedic surgeons. Many of these injuries include skeletal involvement.
Skeletal injuries are frequently accompanied by life-threatening injuries requiring accurate triage and quick intervention. The purpose of this study was to understand the characteristics of skeletal sports-related injuries based on triage level using ICD-10 codes, with a secondary purpose of evaluating pain score and wait times regarding injury anatomical location and triage level.

Method: Using the 2021 National Hospital Ambulatory Medical Care Survey (NHAMCS), ICD- 10 codes starting with "S" and activity at the time of injury were included. Injury location, triage level, hospital geography, patient demographics, imaging, and obesity status were also described.

Results: 1,228 sports-related skeletal injury ED visits were included. Older adults (18.78%), obese patients (28.38%), and patients who received imaging were associated with higher triage levels. Injuries to the neck (30.48%), thorax (15.6%), and shoulder (7.99%) were also associated with higher triage levels (emergent = 7.146%; urgent = 34.95%). Lower pain levels were associated with nonurgent triage levels (CI = -3.94 (-6.15 - -1.72); P = 0.001), and anatomical location was not significantly associated with pain score. Wait times were not significantly associated with anatomical location or triage level.

Conclusion: This analysis aids in the identification of high-risk populations for sports-related skeletal injuries, providing insight into who may require specialized care and triage to mitigate morbidity and mortality. Through these specialized diagnostic and treatment methods, resources can be better allocated to best serve these populations.

Funding: None.

Title: Examining the Current Scope of Interventional Clinical Trials for Knee Injuries: Review of a Clinical Trials Registry

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Abstract

Purpose: Every clinical trial has to be registered at ClinicalTrials.gov, which has enabled evaluations of current and discontinued clinical trials in all areas of expertise. Knee injuries are common in all levels of sport and it is becoming increasingly more important to prevent these at a younger age so they do not affect the person later in life. The purpose of this study was to create a summary of the knee injury interventional clinical trial portfolio.

Methods: All interventional trials registered at ClinicalTrials.gov from October 1, 2021, until October 1, 2024, were included. Intervention type, enrollment population, trial phase, location, injury type, and primary outcome were described.

Results: During this time there were 159 interventional knee injury trials active or completed. The most common intervention type was “Other” (24.5%) which included rehabilitation exercises and new diagnostic tests followed by procedures (23.3%). The majority of trials were adult-only enrollment compared to only 3 that were pediatric enrollment only. An overwhelming majority did not provide a current phase, however of those that did, the most common was Phase IV. Most trials were conducted in North America followed by Europe and Asia. Over half of the clinical trials focused on ACL injuries (58.5%), with osteoarthritis (13.2%) and meniscus injuries (6.9%) as the next most common injury type.

Conclusion: Analysis of the ClinicalTrials.gov data permits summarization of the current scope of interventional knee injury trials. This data can be useful to decide how to proceed regarding treatment and prevention of knee injuries. They can also provide insight to the advancement of interventional clinical trial setup and execution regarding knee injuries, as well as save both patients and insurance companies money in the long term.

Funding: None.

Title: Pediatric suicide, ideation, and self-harm visits in Emergency Departments

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Abstract

Purpose: The CDC reports suicide rates among children and adolescents have significantly increased over the past 20 years—with self-harm being a major predisposing factor. These events are often severe, needing immediate attention, and often present in emergency departments (EDs). Therefore, our primary objective was to assess the demographic profile of children presenting to EDs for self-harm, suicidal ideation, and suicide attempts, and identify potential associated comorbidities and diagnoses.

Methods: We performed a cross-sectional analysis of pediatric ED visits (ages 0-21) using data from the CDC's National Hospital and Ambulatory Care Survey (2019-2022). We identified cases of self-harm, suicidal ideation, and suicide attempts using ICD-10 codes, and text extraction via diagnosis fields and chief complaints. We evaluated associations between these visits with sociodemographic variables, history of substance use, current intoxication, psychiatric diagnoses, and other comorbidities, using X^2 tests.

Results: Of the 17,685 pediatric ED visits, 33 (0.1%) visits included complaints or diagnoses of self-harm, 215 (1.2%) for suicidal ideation, and 152 (0.8%) suicide attempts. Associations between these diagnoses, including no self-harm or ideation, showed significant differences by race, age, mental health disorders, intoxication on arrival in the ED, and insurance type (P<.05). Differences by US census regions and rurality were not observed to be statistically different. Nearly ⅓ of pediatric ED visits for suicide attempts and ideation were among those under age 15, with approximately 40% occuring in the South.

Conclusion: Improving access to social and mental health services is essential to reducing suicide and self-harm. Pediatric Mental Health Care Access Programs are aiming to improve access through virtual health initiatives—including the OSU-based Statewide Psychiatry Access, Resources and Knowledge (SPARK), which is extending into EDs and the Chickasaw Nation Pediatric Collaborative.

Disclosures/Funding: Authors SC and MH are involved in the SPARK program, which is funded through HRSA. The contents of this research are those of the author. They may not reflect the policies or ideas put forth through HRSA, HHS, or the U.S. Government.

Title: Kidney Disease, Barriers to Care, and Health Among Veterans

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Abstract

Purpose: United States military service members and veterans often experience environmental and social factors that may predispose them to acquiring chronic kidney disease (CKD). After diagnosis, they may be impacted by many sociodemographic, mental, and physical health factors that can worsen CKD outcomes. Thus, our primary objective was to assess rates of CKD between veterans compared to civilians, and examine barriers to care, mental health status, and physical health measures between groups.

Methods: Using data from the 2022 Behavioral Risk Factor Surveillance System, we assessed rates of CKD by US veteran status. Then we compared sociodemographics, behavioral factors, barriers to care and current mental and physical health measures between groups using X^2 tests and linear regression models.

Results: Our sample included 315,489 civilians and 48,671 veterans. Rates of CKD differed between civilians (4.6%) and veterans (6.2%; *P*<.0001) with rates being higher among both sexes who had military service (*P*<.0001). Distributions of all sociodemographic variables were significant between groups (*P*<.0001) except rurality. Alcohol consumption and cigarette smoking were significantly higher among veterans with CKD; however, rates of vaping and exercise showed no significant difference. Veterans with kidney disease are more likely to have frequent poor mental and physical health days when compared to civilians (AOR=1.52; CI: 1.11- 2.06 and AOR=1.44; CI = 1.13-1.84, respectively). Histories of heart attack and stroke were also more prevalent among veterans with CKD; however, our adjusted models showed no significant difference between groups for barriers to care or cognitive decline.

Conclusions: Veterans with kidney disease were more likely to be impacted by poor mental or physical health, as well as cardiovascular disease, compared to the civilian population. Improved health education for veterans before and after out-processing from the military may improve the effects of kidney disease on the veteran population.

Grant support: No funds were used for this project.

Title: Assessing the Completeness of Adverse Event Reporting in Clinical Trials of Psoriasis Treatments: A Registry-Publication Comparison Study

Authors: M Rowe; M Dinh; R Sherry; K Keefer; R Hazlitt; A Elghzali; D Archer; A Ito Ford; M Vassar

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Abstract

Background: The proliferation of systemic and biologic therapies for psoriasis necessitates comprehensive adverse event (AE) data. However, significant discrepancies in AE reporting between public trial registries and peer-reviewed publications may compromise clinical safety assessments.

Objective: To evaluate the completeness and concordance of AE reporting for psoriasis clinical trials by comparing data on ClinicalTrials.gov with their corresponding publications.

Methods: This cross-sectional study analyzed psoriasis trials with results posted on ClinicalTrials.gov from 2009 to 2024. Data on serious adverse events (SAEs), other adverse events (OAEs), withdrawals, and deaths were systematically extracted and compared between registry entries and their matched publications.

Results: AE data were more thoroughly reported on ClinicalTrials.gov than in publications. For example, other adverse events (OAEs) were documented in 51% of registries but only 22% of publications. Discrepancies in SAE counts were found in over 90% of trial pairs, with publications consistently showing a trend of underreporting that did not improve over time.

Limitations: The study assessed the completeness of *reported* data, not the true incidence of AEs, and relied on the accuracy of the data available in the registries and publications.

Conclusion: Significant and persistent inconsistencies in AE reporting between trial registries and publications undermine evidence-based safety evaluations and informed clinical decision-making for psoriasis therapies.

Title: Transparency of Adverse Events in Depressive Disorder Trials

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Abstract

Purpose: Depression is one of the leading causes of disability worldwide, and emerging therapies require rigorous safety evaluations. Clinicians rely on both clinical trial registries and peer-reviewed publications to evaluate adverse events (AEs). However, discrepancies in AE reporting between these two sources can compromise informed decision-making.

Design Methods: We conducted a systematic comparative analysis of AE reporting between ClinicalTrials.gov and corresponding peer-reviewed publications for depression-related interventional trials. Data were extracted in duplicate, focusing on serious adverse events (SAEs), other adverse events (OAEs), mortality, and withdrawal rates. BlandAltman and funnel plots assessed concordance and potential reporting bias, while chisquare tests compared AE reporting completeness. A composite 0–7 AE reporting score, based on FDAAA Final Rule criteria, was evaluated using linear and segmented regression to identify reporting patterns and predictors.

Results: Among 142 eligible studies, 59% reported inconsistent patient SAE counts between ClinicalTrials.gov and publications, with 89% reporting discrepancies in total SAEs. Post-Final Rule, death reporting in ClinicalTrials.gov increased from 49% to 100%, while corresponding publications reported deaths in only 50% of cases ($p < .001$). OAEs were significantly underreported in publications compared to registries, and many studies presented incomplete AE data in non-tabulated formats.

Conclusion: Discrepancies in AE reporting persist despite regulatory efforts which ultimately may lead to poorer treatment outcomes for patients. Systematic improvements in AE reporting across both registries and publications are needed to enhance transparency, guide clinical decision-making, and ensure patient safety in depression treatment research.

Grant Support: None

Title: Silent Shifts: Outcome Changes in Depression Trials

Authors: J Saurino, Z Sammur, K Keefer, R Hazlitt, D Archer, L Corwin, A Elghzali, AI Ford, M Vassar

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Abstract

Purpose: Selective outcome reporting is a persistent concern in clinical research, especially in psychiatry where outcomes can be nuanced and subjective. Even though regulations like the FDAAA Final Rule minted into standardized transparency, there are still gaps in reporting that can negatively impact clinical decision making.

Design Methods: We conducted a cross-sectional study of 44 FDA-regulated interventional clinical trials for depressive disorders, with start dates between 2017 and 2024, registered on ClincialTrials.gov. Utilizing the registry's version history, we cross-referenced the initial outcome specifications with the most recent changes, evaluating the scale of change and if the reasons for these changes were disclosed. Outcome modifications were classified according to type, timing, and interpretive impact.

Results/Expected Results: All trials had at least one outcome modification, with 97.7% meeting the criteria for a high-impact change. The majority of changes were made post-primary completion, and none of the modifications were disclosed in corresponding publications. Primary outcomes were often reformatted from broad to specific, while secondary outcomes experienced a higher total of changes per trial.

Discussion/Conclusion: Reframed and reorganized outcomes can raise concerns about transparency, potential bias, and effectiveness of current regulatory oversights, especially considering the frequency of changes to primary and secondary outcomes. These systematic issues in trial outcome reporting may hinder accurate clinical decision making and highlights the need for improved regulations for outcome disclosure standards.

Title: Vision correction, ADHD, and associated symptoms.

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Abstract

Purpose: Attention hyperactive deficit disorder (ADHD) and refractive error are two conditions that many children are living with worldwide. Both of these conditions, if left untreated, can lead to long-term poor outcomes. Thus, the primary objective of this study is to examine whether spectacle correction among school aged children with impaired vision and ADHD impacts educational outcomes using data from the National Survey of Children's Health (NSCH).

Methods: This study performed a cross-sectional analysis of the 2021-2023 NSCH data to assess spectacle correction among school aged children with impaired vision and ADHD and their educational outcomes by sociodemographic factors using X2 and regression models.

Results: In a nationally representative sample (N = 15,598), 7.6% of children had a parent-reported ADHD diagnosis. Children within the youngest age group (ages 2–5) had the highest lens use (64.3%) compared to older children ($\chi^2 = 19.66$, $p < .001$), and insured children were more likely to receive lenses ($\chi^2 = 5.18$, $p = .023$). In preschoolers (ages 2-5) with ADHD, corrective lens use was associated with greater task persistence ($\beta = 0.91$, $p = .012$) and lower frequency of smiling/laughing ($\beta = –0.41$, $p = .033$). In school-aged children with ADHD (ages 6-10), corrective lenses were linked to improved emotional regulation ($\beta = 0.23$, $p = .050$). Adolescents (ages 11-17) with ADHD and corrective lenses, displayed increased emotional self-regulation when faced with a challenge ($\beta = 0.19$, $p = .047$).

Conclusion: Our results highlighted that in children with ADHD and refractive error, vision correction was shown to have an impact on educational outcomes in comparison to those without correction. Most notably, the preschool-aged children showed a significant increase in task persistence- while the other age groups had smaller gaps between corrected and uncorrected vision impacting educational outcomes.
Funding: None.

Title: Parental Perception and Weight Discrimination: Dual Barriers in Addressing Childhood Obesity

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Abstract

Purpose: Childhood obesity is a growing public health concern with long-term health risks and emotional and social challenges, including weight discrimination, which may impact a child's mental health and self-esteem. Early prevention is essential. Parents should play a key role in recognizing and addressing unhealthy weight gain in their children; however, many may not recognize potential symptoms. This study aimed to examine parental perceptions of their child's weight status and explore the prevalence of weight discrimination among early adolescent children in the ABCD study®.

Methods: We examined rates of weight discrimination and parental perceptions of their child's weight using data from the ABCD Study® (DOI: 10.15154/z563-zd24, release 5.1) in association with the child's BMI classification. BMI class was based on WHO criteria for underweight, normal weight, overweight, and obesity, based on age-adjusted percentiles.

Results: This study found that 241 of the 3264 children included in the study reported weight discrimination—with significant differences between BMI class ($P < .0001$). Children with obesity had the highest rates of discrimination at 12.8% followed by underweight at 8.0%. Parental perceptions of their child's weight status also significantly differed between groups, though only 10.2% (133/1231) of parents with children in the obesity category responded 'very true or often true' regarding their child being overweight.

Conclusions: The study highlights the dual challenges of childhood obesity: weight-related discrimination and the parental perceptions of their child's weight. The findings of increased discrimination of children with obesity may further impact their psychological well-being. Additionally, the gap in parental perception of their child's weight presents a barrier to early intervention. Addressing both parental awareness and discrimination is essential in developing public health strategies to combat childhood obesity and support the well-being of children.

Title: Cardiovascular Risk Factors Among Young Adult who use ENDS: A NHANES Cross-Sectional Data Analysis

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Abstract

Background: ENDS usage among young adults is commonly overlooked in several pathologies and may lead to an increased risk of chronic cardiovascular disease. Nicotine and other aerosolized compounds in e-cigarettes may trigger inflammatory responses and vascular injury, mirroring some of the pathophysiological effects observed in conventional smoking. However, the long-term cardiovascular consequences of vaping remain understudied; therefore, our objective was to assess the impact of ENDS use on lipid panel values using data from the National Health and Nutrition Examination Survey (NHANES).

Methods: We performed a cross-sectional analysis of common cardiovascular disease markers among individuals based on current ENDs, cigarette, and dual use compared to a non-smoking group. Differences in sociodemographic variables were assessed using design-based X2 and mean differences where appropriate. Differences in lipid panel values were assessed using binary and multivariable regression models.

Results: A sample consisting of 4,144 adults was assessed between the ENDs groupings with 3,123 reporting no nicotine use, 217 reporting ENDS only, 623 reporting cigarettes only, and 181 reporting dual usage. Significant differences were found among sociodemographics between groups including sex, race, income, education, marital status, and fiber intake (P<.0001).
Regarding lipid panel values, compared to the non-smoking groups, lipid panel values of the ENDS and dual use groups were not significantly different; however, individuals in the smoking group had significantly lower HDL (-3.83, SE=0.74, *P* <.0001) and higher triglycerides (15.24, SE=7.25, *P* = .044)

Conclusion: While lipid panel values among individuals in the ENDS and dual use groups were not significantly different from the control group, and those smoking cigarettes were, this indicates ENDS use may be a safer alternative among this younger group. However, previous research indicates ENDS use may cause acute lung injury as well as longer-term damage; therefore, increasing prevention efforts for all nicotine intake is necessary.

Funding: None.

Title: Disparities in Melanoma: an Analysis of the 2022 Behavioral Risk Factor Surveillance System Data

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Abstract

Purpose: Melanoma accounts for the majority of skin cancer-related deaths despite comprising only a small percentage of skin cancer diagnoses. Early detection is critical, but disparities in access to dermatologic care can delay diagnosis and worsen outcomes. This study used the PROGRESS-Plus framework to evaluate sociodemographic disparities in melanoma and non-melanoma skin cancer diagnoses using the 2022 Behavioral Risk Factor Surveillance System (BRFSS).

Methods: We performed a cross-sectional analysis of the 2022 BRFSS dataset, including participants aged 40 and older who reported on melanoma or non-melanoma skin cancer diagnoses. The PROGRESS-Plus framework was applied to assess disparities by place of residence, race/ethnicity, occupation, gender, education, socioeconomic status, and other social determinants. Chi-square (X^2) tests and adjusted analyses were used to evaluate associations between skin cancer type and demographic variables.

Results: Of 276,433 respondents (representing ~140 million U.S. adults), 0.67% reported melanoma (n = 2,621), and 1.43% reported non-melanoma skin cancer (n = 6,136). Melanoma prevalence was higher among rural residents, males, veterans, retired individuals, and those with higher income and lower BMI. Non-Hispanic White individuals had the highest rates of both melanoma (0.96%) and non-melanoma cancers (2.23%). Higher income was consistently associated with increased melanoma prevalence, while non-melanoma cancers were more evenly distributed across income groups.

Conclusions: Significant disparities in skin cancer diagnosis exist across multiple sociodemographic factors. Individuals in rural areas, those with higher income, and non-Hispanic Whites had greater reported melanoma prevalence, likely reflecting differences in healthcare access and utilization. Interventions such as teledermatology, community education, and integration of screening in primary care may help reduce barriers and promote earlier detection in underserved populations.

Title: Regional and Socioeconomic Determinants of Atopic Dermatitis in the United States: A Cross-Sectional Analysis of the 2022 National Health Interview Survey

Authors: A Smith; C Wenske; C Elenwo; M Hartwell

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Abstract

Purpose: Atopic dermatitis (AD) is a chronic inflammatory skin condition influenced by genetic, environmental, and socioeconomic factors. Regional variation in air pollution, humidity, water quality, and UV exposure may contribute to disparities in AD prevalence and diagnosis. This study aimed to examine associations between geographic region, occupational industry, and sociodemographic characteristics with self-reported AD diagnosis in U.S. adults.

Methods: We conducted a cross-sectional analysis using data from the 2021 National Health Interview Survey (NHIS). Adults aged 18 and older who reported a skin allergy and responded to the AD diagnosis prompt were included. Variables analyzed included geographic region (Northeast, Midwest, South, West), urban-rural classification, income-to-poverty ratio (IPR), education level, occupation, age, sex, and race/ethnicity. Multivariable logistic regression assessed adjusted associations with AD diagnosis.

Results: Among 29,431 respondents, 10.75% reported a skin allergy, and 68.5% of those reported receiving an AD diagnosis. Diagnosis rates increased with educational attainment (59.2% in the least educated vs. 74.0% in the most educated; $P < .0001$) and IPR ($P = .0015$). Women had higher prevalence (12.6%) and diagnosis rates (70.9%) than men (8.8% and 64.8%, respectively; $P < .01$). Racial disparities were observed: non-Hispanic Black (11.3%) and multiracial (16.7%) adults had higher prevalence, while Hispanic (56.4%) and Asian (58.5%) adults had lower diagnosis rates ($P < .0001$). Compared to the Northeast, adults in the Midwest (AOR = 0.59), South (AOR = 0.64), and West (AOR = 0.60) had lower odds of diagnosis. Occupations in healthcare, education, and retail were associated with higher prevalence.

Conclusions: Significant disparities in AD diagnosis exist across region, race, income, education, and occupation. Adults outside the Northeast and those from underserved groups likely face barriers to diagnosis. Findings underscore the need for regionally targeted interventions and improved access to dermatologic care.

Title: Adverse Event Reporting in Abdominal Surgery Trials

Authors: J Stroup; N Calvert; R Sherry; D Archer; T Harris; L Corwin; A Elghzali; AI Ford; M Vassar

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Abstract

Purpose: Transparent adverse event (AE) reporting in surgical trials is vital for accurate safety assessment and informed clinical decision-making. Discrepancies between trial registries and publications may undermine the reliability of reported outcomes. This study evaluated the concordance of AE reporting between ClinicalTrials.gov and corresponding publications in gastrointestinal and abdominal surgery studies.

Methods: We systematically reviewed 116 gastrointestinal and abdominal surgery registered on ClinicalTrials.gov with published results. AE data were extracted from both the registry and associated publication. Discrepancies were identified and analyzed using descriptive statistics and comparative tests, with subgroup analyses by funding source and trial timing relative to the Food and Drug Administration Amendments Act (FDAAA) Final Rule.

Results: Sixty-seven percent of trials showed inconsistencies in serious AE reporting, and 59% omitted patient-level serious AE data from the publication. All post-FDAAA Final Rule trials reported mortality on ClinicalTrials.gov; however, only 30% included mortality data in the corresponding publication ($p < .001$). Industry-funded trials were more likely to underreport or frame AEs in a favorable manner.

Conclusions: Despite regulatory progress, substantial gaps in AE and mortality reporting persist in surgical literature. These discrepancies indicate that current reporting standards and enforcement mechanisms are insufficient to ensure complete and transparent dissemination of safety outcomes. Strengthening guidelines, increasing accountability, and addressing publication bias are essential to ensure clinical practice is guided by accurate and comprehensive trial safety data.

Funding: None

Title: Comparison of Changes in Outcome Reporting in Substance Use Disorder Trials

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Abstract

Purpose: In 2021, over 46 million Americans met criteria for a substance use disorder (SUD), marking a steep rise and an urgent public health crisis. With psychiatric comorbidities increasingly recognized, reliable research is essential. Accurate outcome reporting is crucial for advancing evidence-based care.
Design Methods: We performed a registry-based cross-sectional analysis of interventional SUD trials to assess outcome change disclosure. Using ClinicalTrials.gov, we compared original and most recent entries to identify modifications (additions, removals, reclassifications) and reviewed corresponding publications for disclosure or justification. Although observational, the study adhered to PRISMA 2020 guidelines for systematic search, screening, and data extraction.
Extending beyond prior work on selective reporting, our approach evaluated both the occurrence and transparency of modifications, providing a broader view of reporting practices in SUD trials.

Results: All 47 trials (100%) modified at least one prespecified outcome. Most changes occurred after study completion, and over a quarter were made post-publication. None were disclosed in registries or publications. Common modifications included wording edits, timing adjustments, and redefinitions; less frequent were the addition or removal of outcomes.

Conclusion: Outcome modifications in SUD trials are widespread yet rarely transparent. Greater accountability from investigators and journals is needed to ensure reliable reporting and maintain trust in addiction research.

Grant Support: none

Title: ACES and educational outcomes among children with ADHD, Anxiety, and Depression

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Abstract

Purpose: In recent decades, research has demonstrated that adverse childhood experiences (ACEs) increase the risk of poor health outcomes in adulthood. More recent studies have begun to reveal the short-term effects on children, like anxiety, depression, and poor school outcomes. However, limited studies have explored how interventions like mental health support and family-centered medical care may reduce the impact of ACEs. In this study, we explore the impact of these interventions on school outcomes.

Methods: Using the 2023 National Survey of Children's Health dataset, we extracted data on school outcomes, experiences with primary care provider, use of mental health services including medications and counseling, diagnoses of mental health disorders (ADHD, anxiety, and depression), exposure to ACEs, and socio/demographic factors. We then used structural equation modelling (SEM) to map the quasi-causal pathways.

Results: Our analysis included 59,409 children aged 5-17 years old with a mental health diagnosis — 9,676 (12.6%) anxiety, 4,430 (5.6%) depression, and 8,381 (12.0%) ADHD. Our SEM showed ACEs were directly associated with poorer school outcomes ($\beta\beta\beta\beta$=-0.032, p=.011). School outcomes were better with more family-centered health care ($\beta\beta\beta\beta$=0.066, p<.001) but were worse when the child received increasing mental health support ($\beta\beta\beta\beta$=-0.453, p<.001). Parental factors showed a direct inverse relationship with ACEsand Social Determinants of Health (SDOH)($\beta\beta\beta\beta$=-0.125, p<.001; $\beta\beta\beta\beta$=-0.597, p<.001), respectively.

Conclusions: Our findings suggest school outcomes measured by grades earned and level of school participation can be improved through family-centered care for students with ACEs and diagnosed with ADHD, depression, or anxiety. Further research should be done to explore the relationship between mental health support and school outcomes, with consideration for the severity of their disorder and the timing of treatment.

Title: Accidental cannabis ingestions in Oklahoma children under 6

Authors: M Whitmill; J Kostal; K Edelen; AD Hendrix-Dicken; L Campion; M Condren

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Abstract

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

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

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

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

Title: COVID-19 Exposure and Pediatric Brainstem Structure

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Abstract

Background: The impact of the COVID-19 pandemic on child development is an evolving area of study. However, the effects of prior COVID-19 infection on brain structures critical for autonomic and behavioral functions remain understudied. This study aimed to assess structural differences in the brainstem, cerebellum, and associated regions among children with a reported history of COVID-19 infection compared to those without, using data from the Adolescent Brain and Cognitive Development (ABCD) Study.

Methods: We conducted a time-series analysis of magnetic resonance imaging (MRI) data from the ABCD study, a large-scale, longitudinal open-data neuroimaging cohort study that consists of approximately 12,000 children born between 2006 and 2008 at 21 sites across the United States. Regression analyses were used to compare volumetric growth in the brainstem, cerebellum, and related structures between pre-pandemic (2018-2019) and post-pandemic (2021-2022) scans.
Cognitive performance at the 4-year follow-up was evaluated using the NIH Toolbox Cognition Battery.

Results: Of the 2,423 children in the sample, 195 reported a history of COVID-19 infection. This group exhibited significantly reduced volumes in the brainstem, cerebellum, hippocampus, amygdala, and accumbens area compared to those without prior infection. They also scored lower on the Picture Vocabulary, Flanker Inhibitory Control and Attention, and Oral Reading Recognition Tasks.

Conclusion: Previous COVID-19 infection was associated with reduced volumes in the brainstem and cerebellum, as well as lower cognitive performance in children. These findings suggest potential long-lasting implications for brain regions involved in autonomic regulation, motor coordination, and cognitive function. Further research is needed to assess the persistence of these changes and explore potential interventions.

Title: From door to disposition: demographic correlates of emergency department waittime, triage priority, and length of stay among people with schizophrenia

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Abstract

Background: Despite extensive pharmacological and psychotherapeutic efforts, the quality of life for patients with schizophrenia remains low.[1] Societal stigma and avoidance, adverse medication effects, unhealthy lifestyles, and physical and psychiatric comorbidities are some of the contributing factors. In addition to poor well-being, schizophrenia patients have a life expectancy approximately 20 years less than the general population.[2] Our objective was to identify variables that may impact morbidity and mortality in these individuals. The study analyzed patient visits in U.S. Emergency Departments (EDs) to create a profile of sociodemographics, comorbidities, and hospital outcomes for patients presenting with schizophrenia-spectrum disorders (SSDs).

Methods: We conducted a cross-sectional analysis of the 2019–2022 National Hospital Ambulatory Medical Care Survey (NHAMCS). Patients included had a diagnosis in the ICD-10 subgroup F20-29, denoting all SSDs. We then sorted by hospital outcome and comorbidity.

Results: Significant differences were found in sociodemographic profiles from ED visits among those with and without SSDs—with higher rates of males, non-White racial groups, urban-living, substance and alcohol use, depression, and HIV among the former group (P<.01). ED visits for these individuals were nearly twice as likely to be reported as repeats within the past 72 hours (8.4% compared to 4.3%, P=.0002). Among those admitted, 60.1% with SSD went to the mental health/detoxification unit compared to 3.3% of other visits, and their wait time, length of visit, and number of days in the hospital were significantly longer than the other visits (P<.05).

Conclusion: Our findings show sociodemographic and hospital-related disparities between patients with schizophrenia and the general population. The higher rates of comorbidities and prolonged hospital stays underscore the need to address systemic factors within and beyond EDs so that we may improve care coordination, reduce repeat visits, and optimize resource utilization.

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NOTES