

UNDER-REPORTING CONFLICTS OF INTEREST IN THE TRAUMA LITERATURE

Rishi Purayil; Mahdi Muhamad, BS; Danielle La Vigne, MD;
Sanju Purayil; David Hampton, MD; Tanya Zakrison, MD, MPH;
Selwyn O. Rogers, Jr., MD, MPH; Timothy Plackett, DO, MPH
University of Chicago Medicine

Introduction: Medical journals rely on authors to self-report any potential conflicts of interest (COI). With the advent of the Open Payments Program (OPP), there is an opportunity to publicly evaluate for potential COIs. We hypothesize that COIs are under reported in academic literature.

Methods: All publications in the Journal of Trauma and Acute Care Surgery (JTACS) during 2025 were queried for a list of authors. All US physicians were included. Physicians from outside of the US and non-physicians were excluded. Each author's general (non-research) payments were abstracted from the OPP database. Sources of payments were compared to the publication for relevancy and verified against the respective author's COI disclosure form. A subgroup analysis was performed for authors receiving over \$10,000 in total payments in the OPP during 2022 to 2024.

Results: 320 papers and 3086 authors were identified, of which 1378 (45%) authors met the inclusion criteria. 857 (62%) authors had payments in the OPP database, totaling \$12,586,752.78. 156 (11%) authors accepted more than \$10,000 in payments, accounting for \$7,142,527 in payments between 2022 and 2024. Forty-six (29%) of these higher compensated authors received payments from a company selling products related to the manuscript, totaling \$1,649,000 in relevant payments. Of these relevant payments, \$831,000 (50%) were disclosed while \$818,000 (50%) were undisclosed.

Conclusion: Only half of highly compensated industry-sponsored American surgeon scientists report conflicts of interest in JTACS publications. Editors should consider using OPP data to ensure reporting guidelines are followed and to reduce the potential for funding and publication bias.

**NATIONAL VARIABILITY IN POST-ACUTE TBI CARE:
A NATIONAL SURVEY OF U.S. TRAUMA CENTERS**

Marco J. Henriquez, MD; Amin Dehghan, MD; Marina Eguchi, MD;
Fabiana C. Sanchez, MD; Ricardo A. Fonseca, MD;
Grant V. Bochicchio, MD, MPH; Lindsay M. Kranker, MD;
Kayla Whiteaker; Douglas J. E Schuerer, MD; Grace M. Niziolek, MD
Washington University in St. Louis

Introduction: Post-discharge follow-up after traumatic brain injury (TBI) is essential to identify ongoing symptoms and recovery needs; however, outpatient care for these patients is variable and poorly described. This study evaluated current practices, barriers, and opportunities for improvement in post-discharge TBI follow-up.

Methods: We conducted a cross-sectional survey of U.S. trauma center leadership to assess inpatient service involvement, discharge education, outpatient care ownership and scheduling, telehealth use, follow-up tracking, and perceived barriers to follow-up care for TBI patients. Data were analyzed descriptively.

Results: A total of 127 respondents completed the surveys, the majority of which were trauma medical directors (89.0%). Most TBI patients are admitted by trauma surgery (92.1%), and the common consulting services included neurosurgery (93.7%), physical therapy (92.1%), case management/social work (84.3%), occupational therapy (82.7%), and speech language pathology (80.3%). Standardized TBI discharge education was routinely provided by 55.9% of centers; however, 35.4% reported no specialized TBI discharge instructions. Follow-up was scheduled before discharge in 54.3% of centers; others relied on patient self-scheduling (19.7%) or reported no standard process (11.8%). The first outpatient appointment was most frequently conducted by neurosurgery (62.2%) or trauma surgery (18.1%). Over half of the respondents were unsure as to what percentage of their patients (TBI or otherwise) were following up in any clinic. Interest in managing long-term TBI care was modest among Trauma Surgery providers (mean score 4.28/10). Telehealth was rarely used for follow-up: only 1.6% used telehealth routinely, and 60.6% never used telehealth. Barriers to TBI follow-up noted by respondents included: insurance delays (48.8%), financial constraints (40.9%), clinic capacity constraints (40.9%), and lack of standardized pathways (30.7%).

Conclusion: Trauma centers report multidisciplinary inpatient TBI care; however, substantial variability and gaps exist in outpatient follow-up infrastructure and outcome tracking. Standardized post-discharge pathways that incorporate multi-disciplinary outpatient care may improve long-term recovery from TBI, particularly for patients with greater post-acute needs.

AAST ORAL PRESENTATIONS: ARE WE HEARING THE END OF THE STORY, OR THE BEGINNING?

Peter L. Ernst, BS; Keshav Nandakumar, BS; Russell J. Myers, BS;
Jacob I. Ngobi, BS; Kristina M. Kupanoff, PhD; Sophia S. Bonnin, PhD;
James N. Bogert, MD; Jordan A. Weinberg, MD
St. Joseph's Hospital and Medical Center

Introduction: Scientific meetings showcase research prior to peer-reviewed publication and provide a platform for authors to present to national experts and potentially integrate feedback prior to publication. Recent studies have highlighted publication rates of conference presentations; however, little attention has been given to the discrepancies between key elements of the abstracts. We evaluated concordance between American Association for the Surgery of Trauma (AAST) oral presentations in 2023 and their published manuscripts, focusing on alignment of reported data, outcomes, and overall interpretation.

Methods: The 2023 AAST proceedings booklet was used to identify oral presentations. We evaluated the presentation-to-publication rate using AI-assisted identification methods and assessed concordance between conference abstracts and corresponding peer-reviewed manuscripts on the following: title, author, primary objective, study design, sample size, hypothesis, and results. All AI-identified matches were independently reviewed and manually verified by the research team to ensure accuracy. Descriptive statistics on discrepancies are reported.

Results: 66 oral presentations were listed in the proceedings booklet. 29 months following the conference, 55 (83.3%) were published; all but 1 of these were published within 15 months of the conference. Of the published manuscripts, 44 (80%) were published in the conference journal or open version of the conference journal. Discrepancies between the proceedings booklet and published manuscript abstracts were as follows: sample size 25 (46%), title 25 (46%), author list 19 (35%), hypothesis 3 (6%), primary objective 5 (9%), statistics 36 (66%). The interpretation of the main study finding differed in 2 (4%) studies. There were no discrepancies in 12 (22%) studies.

Conclusion: The majority of manuscripts are published with changes from the abstracts recorded in the conference proceedings. Although most changes were found to be marginal, differences were substantial in some cases.

BYSTANDER SUPPORT AND ADVOCACY FOR VICTIMS OF VIOLENCE IN THE EMERGENCY DEPARTMENT (BSAFE): AN EFFECTIVE TRAINING FOR IMPROVING LAW ENFORCEMENT INTERACTIONS IN THE TRAUMA BAY

Mary S. Kim, MD; Cassandra Ramdath, PhD; Lucia Mock, PhD;
Thomas G. Washburn, BSN; Nicole M. Davies, DNP;
Prashasti Bhatnagar, JD; Erin C. Hall, MD
MedStar Washington Hospital Center

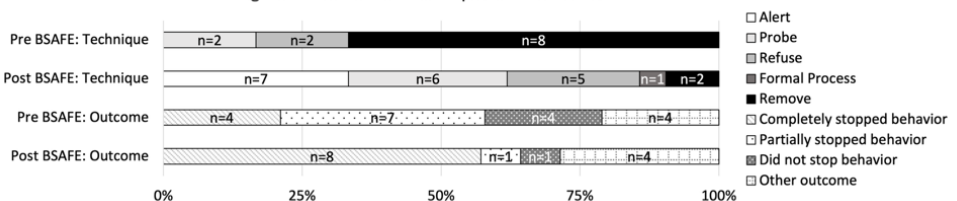
Introduction: LE presence during trauma resuscitations may inadvertently interfere with patient care delivery and create privacy concerns. In conjunction with trauma nurses and an organization with LE bystandership training experience, the BSAFE curriculum was developed to equip nurses with skills to address concerning LE behaviors. We hypothesized BSAFE would increase the use and effectiveness of bystander interventions.

Methods: Month long structured observations of LE–nurse interactions were conducted pre- and post-BSAFE training at a Level I trauma center. Interactions were any verbal exchange. Bystander interventions were defined a priori in ascending order of escalation (alert, probe, refuse, formal process, removal). Outcomes included intervention counts, types, and outcomes (partial or complete cessation of LE behavior). Proportions were compared using Fisher’s exact tests.

Results: 58 LE–nurse interactions were observed over 216 hours pre-BSAFE and 30 over 564 hours post-BSAFE. Low-escalation techniques increased (alert: 0% vs 33.3%, $p=0.03$) while higher-escalation decreased (removal: 66.7% vs 9.5%, $p<0.01$). Intervention success increased (57.9% vs 64.3%, $p=1.0$) (Figure 1).

Conclusion: BSAFE training increased use of low-escalation bystander strategies and improved mitigation of concerning LE behaviors. Structured bystander training may support trauma teams in managing LE interactions, optimizing patient care, and decreasing stress among staff.

Figure 1. Intervention Techniques and Outcomes



TWO DECADES OF URBAN RURAL DIVERGENCE IN GERIATRIC TRAUMA MORTALITY: A MECHANISM SPECIFIC CDC WONDER NATIONAL ANALYSIS

Samreen Shaikh, MD; Shugofta Aziz, MBBS; Samuel Linton, MD;
Faran Bokhari, MD, MBA; Vishnu Mani, MD
OSF Healthcare

Introduction: Geriatric trauma mortality continues to rise in the United States; however, the degree to which mechanism-specific deaths have diverged across the urban–rural spectrum remains poorly defined. We hypothesized that rural regions demonstrate disproportionately greater growth in age-adjusted mortality, particularly for fall-related injuries.

Methods: Using CDC WONDER data (1999–2020), we identified adults ≥ 65 years with injury-related deaths due to falls, firearms (suicide and homicide), and motor vehicle traffic crashes. Mortality was stratified by the 2013 NCHS urbanization categories. Age-adjusted rates per 100,000 were calculated using the 2000 U.S. standard population.

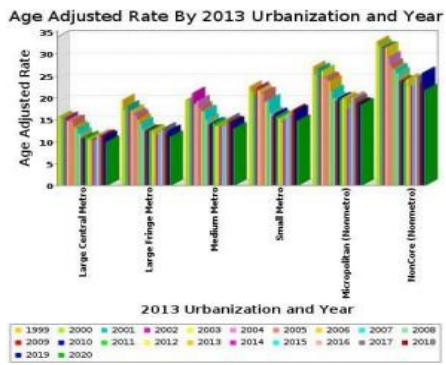
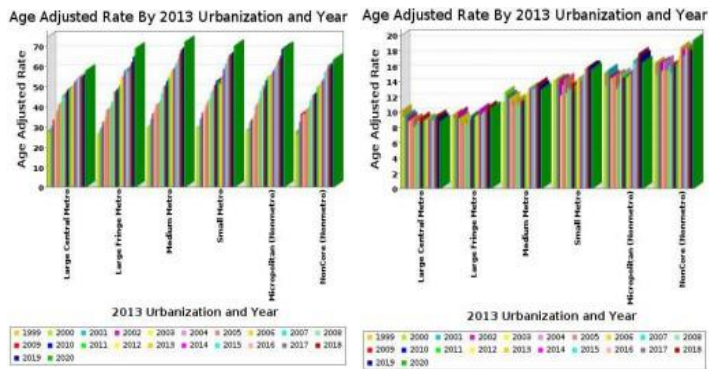
Results: A total of 722,772 geriatric trauma deaths occurred between 1999 and 2020. Although metropolitan regions accounted for the majority of deaths (79.8%), age-adjusted mortality rates demonstrated a

consistent urban–rural gradient across all mechanisms. Overall mortality increased 143% during the study period (20,704 in 1999 to 50,342 in 2020).

Falls represented the predominant and fastest-growing mechanism, with disproportionately

higher age-adjusted rates in nonmetropolitan regions. By 2020, fall-related mortality demonstrated a clear stepwise increase from large central metropolitan areas to noncore rural counties. Firearm mortality demonstrated a persistently elevated burden in rural regions across all study years, with widening disparities after 2010. Motor vehicle traffic mortality showed a more modest increase and less pronounced urban–rural separation. The most significant divergence over time was observed in fall related mortality, suggesting mechanism-specific amplification of rural vulnerability in the geriatric population.

Conclusions: The rise in geriatric injury mortality over two decades reflects not only increasing fall deaths but also a sustained rural burden of firearm mortality. These findings suggest a mechanism-specific rural amplification effect and underscore the need for targeted fall prevention and firearm suicide mitigation strategies in aging rural populations.



HIDDEN DELAYS: RACIAL INEQUITIES IN HIGH-VULNERABILITY COMMUNITIES' PREHOSPITAL TRAUMA TIMES

Kathryn Stadel, MD, MPH; Sneha Swaminathan, MD;
Tandis Soltani, MD; Guibo Xing, PhD; Ian Breown, MD, PhD;
David Shatz, MD; Rachael Callcut, MD, MSPH
Oregon Health & Science University

Introduction: Inequities in prehospital care may contribute to downstream disparities in trauma outcomes. The CDC Social Vulnerability Index (SVI) captures community-level factors associated with structural disadvantage, yet its relationship to prehospital time intervals remains poorly understood. We evaluated how SVI and race intersect and relate to EMS response, scene, transport, and total prehospital times among injured patients.

Methods: We analyzed adult trauma patients transported from the field by EMS to a Level I trauma center (2009–2023). Injury locations were geocoded to census tracts and linked to SVI quartiles. Predicted travel time was derived from distance and historical traffic patterns and was incorporated to account for geographic variation in time-to-hospital. Univariable and multivariable linear regression assessed associations between SVI, race, ethnicity, and prehospital intervals, adjusting for age, sex, mechanism, and field GCS. A Race×SVI interaction term evaluated differential associations across communities.

Results: Among 6,156 patients, higher SVI quartiles were associated with shorter overall prehospital times ($p<0.001$). Compared with White patients, Black patients had shorter scene times (–1.78 minutes; 95% CI –3.38 to –0.17) and total times (–5.07 minutes; 95% CI –7.66 to –2.48). However, interaction analysis revealed that in the highest-SVI communities, Black patients experienced *longer* scene times relative to White patients (Q4 +6.09 minutes; $p<0.005$)

Conclusion: Although higher community-level vulnerability was associated with shorter prehospital times overall, Black patients in the most socially vulnerable neighborhoods experienced disproportionately longer scene times. These findings highlight persistent racial inequities that are not explained by geography or injury alone and point to the need for deeper examination of operational practices, structural factors, and EMS decision-making in high SVI communities to improve health equity.

EDUCATING FOR PREVENTION: A SCHOOL INTERVENTION TO ADDRESS YOUTH FIREARM VIOLENCE

Christina Colosimo, DO, MS; Shamele Battan-Wraith, MD;
McKenna Dellinger, BA; Tanya Anand, MD, MPH;
Molly Douglas, MD; Srisaianirudh Reddy Julakanti, BS;
Tandis Soltani, MD; Bellal Joseph, MD; Louis J. Magnotti, MD, MS
The University of Arizona

Introduction: There is a significant gap in school-based firearm violence prevention education for adolescents. We hypothesized that a comprehensive, school-based intervention would improve firearm safety knowledge and behavior among high school students.

Methods: This prospective pre–post matched study (February–May 2025) at two schools evaluated a structured, module-based intervention including firearm violence data, safety education, advanced bleeding-control training, and an applied case scenario. Outcomes were measured using mixed-method survey assessments.

Results: 49 students completed pre- and post-intervention surveys. Participants were between 13–22 years old. Of these 46% reported previously having fired a gun, 67% knew someone who was had been a victim of gun violence, and 14% reported personal victimization. 41% stated that active shooter drills somewhat prepare them but also increased anxiety. Students demonstrated improved knowledge after the intervention, particularly regarding firearm prevalence in U.S. homes, with correct responses increasing from 33% to 61% post-survey ($p<.001$). The proportion who agreed or strongly agreed that they could personally reduce gun violence increased from 37% to 44%. Recognition of the long-term consequences of gun violence remained high, with 73% pre-intervention and 80% post-intervention agreeing or strongly agreeing that gunshot injuries can result in lifelong harm. Prior to the intervention, 89% of students agreed that firearm violence prevention should be taught in schools.

Conclusion: A school-based firearm safety intervention improved student knowledge and modestly increased confidence to address gun violence. These findings support integrating structured firearm violence prevention education into high school curricula as a feasible strategy to strengthen youth safety literacy.

REGIONALIZATION OF TRAUMA CARE: PEDIATRIC ACCESS AND FINANCIAL IMPLICATIONS IN NORTH CAROLINA

Laura Purcell, MD, MPH; Mustafa Abid, MD, MPH;
Anthony Charles, MD, MPH; Michael Phillips, MD, MSCR;
Laura Purcell, MD, MPH
UTSW Medical Center

Introduction: Trauma systems are designed to regionalize specialty care and improve access to care. Whether these trauma systems address disparities in access and financial implications for injured children is unknown.

Methods: A retrospective cohort study of North Carolina pediatric trauma admissions from 2007 to 2023 was performed. Admitted pediatric patients (≤ 18 years) with traumatic injury and an ISS of 9-16 were included. Outcomes among rural and urban children were examined using bivariate and multivariable regression analyses.

Results: 13,097 patients were included, rural children (n=4034, 30.8 %) were increasingly admitted to a trauma center (TC) for management of moderate traumatic injury, from 60.4% in 2007 to 92.1% in 2023. Rural children traveled farther for care at a TC than at a non-trauma center (NTC) (median Euclidean distance: 39.4 vs 12.0 miles). All children admitted to a TC incurred higher charges, even after adjusting for operative management, Figure 1. After adjusting for pertinent covariates, rural and urban children experienced higher daily charges at TC, \$2,678 (95% CI: \$1,796-\$3,560) and \$1,731 (95% CI: \$1,061-2,402), respectively. Rural and urban children admitted to TC experienced a 25.9% and 16.2% longer LOS, respectively, than those admitted to NTCs.

Conclusions: This is the first study to examine the role of regionalization in pediatric trauma care. We show increasing utilization of TCs. However, there is a significant increase in travel distance, higher charges, and longer lengths of stay.

Further investigation on potential overtriage and outcomes in this patient population is imperative.

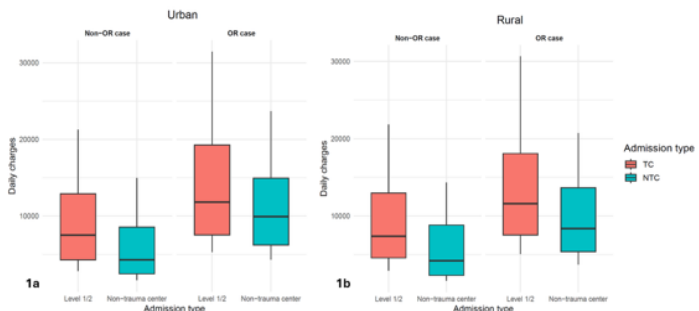


Figure 1a-1b. Daily charges for urban-residing (1a) and rural-residing (1b) pediatric patients admitted for moderate traumatic injuries, comparing children admitted to a Level 1 or Level 2 trauma center (TC) vs non-trauma center (NTC), stratified by whether they underwent operative intervention (OR case) during their admission

AUTOPSY REVEALS PROFOUND MEASUREMENT BIAS IN INJURY SEVERITY SCORES FOR PATIENTS ARRIVING IN TRAUMATIC ARREST

Kaique Filardi, MD; Sara Saeidishari, MD; Brett Donshik, BS;
Monika Nelson, RN; Phillip Kim, MD, MBA; Jonathan Gates, MD
Hartford Hospital

Introduction: Injury Severity Score (ISS) underpins trauma registry reporting, risk adjustment, and benchmarking. These rely on uniform injury ascertainment – often violated in traumatic cardiac arrest (TCA), where early death prevents full evaluation. As a result, ED-based ISS may underestimate true injury burden, introducing structural measurement bias.

Methods: We performed a retrospective analysis of consecutive trauma patients arriving in TCA at a single Level 1 trauma center from January 2023 to June 2025 (N=115). All patients underwent autopsy; pre-autopsy ISS was derived from ED-available information at time of death. Patients were stratified by CT acquisition in the ED (CT, n=55; No CT, n=60). The primary outcome was change in ISS after autopsy (Δ ISS = post – pre-autopsy ISS). Secondary outcomes included reclassification across ISS thresholds (≥ 16 and ≥ 25) and process measures reflecting diagnostic opportunity (ED length of stay [LOS], ED disposition). Paired comparisons used Wilcoxon signed-rank testing; between-group comparisons used Mann–Whitney U and χ^2 tests.

Results: Among CT patients, pre-autopsy ISS was 35 (IQR 26–43) and remained unchanged after autopsy (post-autopsy ISS 35 [26–43]); all had Δ ISS=0. In contrast, patients without CT exhibited marked underestimation at ED arrival: pre-autopsy ISS 9 (IQR 1–10.5) increased to post-autopsy ISS 34 (26–75), with median Δ ISS 26.5 (12–49.25) ($p<0.01$). ISS discordance differed markedly by CT status ($p<0.01$). In the No-CT group, autopsy-driven reclassification was frequent: proportion meeting $\text{ISS} \geq 16$ rose from 20% to 90% (42/60 crossing) and $\text{ISS} \geq 25$ from 15% to 80% (39/60 crossing). Patients without CT had shorter ED LOS (0.21 h [0.15–0.49] vs 2.5 h [1.6–3.82], $p<0.01$) and were more often pronounced in the ED (morgue disposition 93.3% vs 16.4%, $p<0.01$).

Conclusions: In TCA, ISS is highly dependent on diagnostic opportunity conditioned on short term survivorship. When CT is not obtained, ED-based ISS substantially underestimates autopsy-confirmed injuries, leading to widespread misclassification across severity thresholds used for registry reporting. These findings suggest that risk-adjusted mortality and inter-center benchmarking may be distorted in early trauma deaths. Reporting ED-available and autopsy-informed ISS separately for TCA populations may improve the validity of this performance assessment.