Sports injury

165 LACROSSE-RELATED INJURIES AMONG BOYS AND GIRLS TREATED IN US EMERGENCY DEPARTMENTS, 2000–2016

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Purpose Lacrosse is one of the fastest growing sports in the United States (US). Research is limited, and there are no known studies utilizing a nationally representative data set to analyze lacrosse injury patterns in the youth population over several years. This study sought to describe the epidemiology of lacrosse-related injuries treated in United States (US) hospital emergency departments (EDs).

Methods/Approach We conducted retrospective analysis using the National Electronic Injury Surveillance System data for youth aged 11–18 years who were treated for lacrosse-related injuries in US EDs from 2000–2016. Based on review of the case narratives, we created and coded a new injury mechanism variable. We generated national estimates from 6,408 cases.

Results An estimated 206 274 lacrosse-related injuries to youths aged 11–18 years were treated in US EDs from 2000–2016. The rate of injuries per 10,000 youths significantly increased from 1.9 in 2000 to 5.3 in 2012 ($p < 0.0001$), followed by significantly decreasing to 3.4 in 2016 ($p = 0.020$). Injury mechanism, body region injured, and diagnosis differed by sex. Boys were 1.62 times (95% CI: 1.25–2.09) as likely to be injured by player-to-player contact. Girls were 2.21 times (95% CI: 1.96–2.49) as likely to have non-contact injuries. Patients were divided into different age groups: 11–12, 13–14, 15–16, and 17–18. As age increased, the percentage of injuries from lacrosse sticks decreased and player-to-player contact increased.

Conclusions Despite additional protective regulations in the sport, injuries still occur and differ by the sex and age of the athlete. This study supports the continuation, modification, and addition of rules aimed to reduce lacrosse injury risk.

Significant and contribution to the field Understanding lacrosse-related injuries is critical as lacrosse-related injuries are a significant source of pediatric injury and ED utilization.

Motor vehicle crashes: epidemiology and interventions

167 RANDOMIZED TRIAL OF SOCIAL COMPARISON FEEDBACK AND FINANCIAL INCENTIVE STRATEGIES FOR REDUCING HANDHELD PHONE USE WHILE DRIVING IN A NATIONAL USAGE-BASED AUTO INSURANCE PROGRAM

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Statement of Purpose We conducted a randomized trial (#NCT03833219) of behavioral interventions to reduce handheld phone use while driving among 2,108 customers from 42 states in a usage-based insurance program (Progressive

Insurance Snapshot Mobile). We hypothesized that behaviorally designed incentives would be more effective than a standard insurance incentive.

Methods/Approach Participants were randomized to 6 arms in a 50-day intervention period: (1) control (usual care); (2) social comparison feedback; (3) standard end of rating period incentive (max \$50); (4) standard end of rating period incentive (max \$50) + social comparison feedback; (5) weekly, loss framed incentive (max \$50) + social comparison feedback; and (6) weekly, loss framed incentive (max \$100) + social comparison feedback. We used fractional regression to compare handheld phone use (seconds/hour of driving) measured by the Snapshot Mobile app between intervention arms versus the usual care arm.

Results Compared with usual care, neither social comparison feedback alone, or a standard incentive (max \$50) alone lead to a statistically significant reduction in phone use. However, when the standard incentive was paired with social comparison feedback, handheld phone use was reduced by -31 (95% CI: -74 to -13) seconds/hour of driving. The group assigned to a weekly, loss-framed incentive (max \$50) paired with social comparison feedback experienced the largest reduction in handheld phone (-63 [95% CI: -95 to -31] seconds/hour of driving).

Conclusions In a national usage-based auto insurance program, augmenting standard financial incentives with weekly feedback comparing a driver's phone use to other customers, and redesigning incentives to be delivered more frequently and to leverage loss-aversion reduced phone use while driving.

Significance and Contributions to Injury and Violence Prevention Science Given that American drivers average 300 hours of driving per year, behaviorally designed incentives for reducing phone use while driving have major potential for public health impact.

Domestic and sexual violence

168 AMPLIFYING DAY-TO-DAY SEXUAL VIOLENCE HEALING EXPERIENCES THROUGH PHOTOGRAPHY AND STORYTELLING

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Purpose The purpose of this work is to discuss the therapeutic and translational value of using creative research activities to describe the healing journeys of survivors of campus sexual violence.

Approach Ethnographic narrative interviews ($n = 24$) and follow up photo-elicitation interviews ($n = 19$) were conducted with survivors of undergraduate sexual violence to help them describe their healing journeys. These stories were translated into a video and an interactive photography exhibit built with community partners to build a group narrative about what healing after sexual violence looks and feels like.

Results Overall, participants noted the therapeutic value of engaging in this type of research and that the visual nature of the work gave them new ways of looking at their situation. Two hundred forty six people attended our interactive exhibit and attendees noted the exhibit's ability to educate them about the healing process while also validating and shedding light on the experiences of sexual violence survivors. Our

video won an award at Awareness Film Festival and has been used for service organization and student trainings since.

Conclusion This work highlights the value of creative research strategies in exploring the healing journeys of survivors of sexual violence. This work also reveals the importance of research dissemination and how sharing survivor stories can build community and feelings of universality knowing that individuals are not alone in their experiences.

Significance This methodology will be tested as a potential intervention in the upcoming year and this event will be replicated in the Philadelphia community to further explore what sexual violence healing looks like within university institutions and their surrounding communities. This gives voice to those who do not have the privilege or desire to share their stories publicly themselves, but want to contribute to a larger group narrative to educate and advocate for survivors of sexual violence.

Epidemiology of substance abuse and overdose

171 A MIXED METHODS COMPARISON OF A NATIONAL VS. STATE OPIOID OVERDOSE SURVEILLANCE DEFINITION

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Statement of Purpose In 2018, federal opioid epidemic funding doubled to \$7.4 billion. National case definitions have been created to expand state-level surveillance efforts; we analyzed a CDC surveillance definition (Opioid V.1) to determine whether or not a state definition (NC DETECT) should be expanded to include additional ICD-10-CM codes and/or chief complaint keywords.

Methods/Approach Two clinically-trained independent reviewers retrospectively reviewed North Carolina (NC) ED visits to identify false positives generated by components of the Opioid V.1 definition not currently included in the NC DETECT definition. False positives were defined as any visit where available evidence, including triage notes and disposition diagnosis codes, supported an alternative explanation for patient presentation that reviewers deemed more likely than an opioid overdose. Following individual assessment, reviewers met to reconcile disagreements.

Results From 1/01/2018–7/31/2018, 2,296 ED visits were identified by Opioid V.1 but not NC DETECT criteria. Reviewers initially disagreed on 312 observations (13.6%); reconciliation led to 100% agreement. False positive rates ranged from 2.6%–41.4% for codes/keywords uniquely identifying at least 10 visits. Based on uniquely identifying 10+ visits and a false positive rate $\leq 10.0\%$, 4 of 16 (25.0%) ICD-10-CM codes evaluated were identified for NC DETECT definition inclusion. Only 2 of 25 (8%) keywords evaluated, 'OD' and 'overdose', met inclusion criteria.

Conclusions A detailed comparison of the CDC Opioid V.1 and NC DETECT opioid overdose case definitions showed significant variability in accuracy of keywords/diagnosis codes used in the federal surveillance definition.

Significance and Contributions to Injury and Violence Prevention Science The human and financial toll of the opioid epidemic produces an urgent need to ensure appropriate resource

distribution to areas most in need. Findings from this analysis show the importance of this type of investigation and may prove helpful for further state or national evaluations.

Motor vehicle injuries and policy

174 THE ENFORCEMENT OF TEXTING WHILE DRIVING LAWS: A NATIONAL SURVEY OF POLICE

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Statement of Purpose While virtually all states have passed testing while driving (TWD) legislation, there is evidence that these laws may be difficult for police to enforce. Thus, a national survey of police was conducted to determine if barriers to cellphone law enforcement exist.

Methods/Approach A web-based survey was developed using Qualtrics software. The survey was assessed for content validity, pilot-tested, and verified for test-retest reliability prior to its release. Police departments from all 50 states were randomly selected and sent an electronic link to the survey via the department's email or social media pages beginning in mid-November 2019. Frequencies and percentages of responses were assessed.

Results Despite its recent release, several officers (N=27) from numerous states (N=9) have responded. Among respondents, 85% (N=23) claimed that TWD is a serious threat to road user safety. Several officers (44%) report that they issue citations for TWD less than they issue speeding tickets. Nearly 48% reported that TWD citations are difficult to adjudicate (N=13). The largest barriers to enforcement are: narrowly focused laws (56%), laws which permit drivers to engage in some behaviors but not others (85%; e.g. driver is not permitted to text, but allowed to dial a phone number). Many officers (70%) felt drivers do not understand current distracted driving laws. The officers felt that making laws applicable to all licensed drivers (96%), a primary offense (93%), eliminating legal loop holes which permit some behaviors but not others (85%), and making one general law that eliminates any type of hand-held cell phone use could improve TWD enforcement (89%).

Conclusions Numerous barriers to TWD enforcement exist among police. Current legislation could be improved to facilitate enforcement.

Significance and Contribution to Injury and Prevention Science These findings may help direct future policy or interventional efforts to mitigate TWD.

Mental health consequences of violence

175 VARIABLE TRAJECTORIES OF POSTTRAUMATIC STRESS SYMPTOMS AMONG VIOLENTLY INJURED YOUTH

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Statement of Purpose It is common for posttraumatic stress symptoms (PTSS) to decline after a traumatic event; symptom