Transportation safety

0105 YOUNG DRIVER LICENSE EXAMINATION OUTCOMES IN RELATION TO AGE, SEX, LENGTH OF LEARNER PERMIT AND COMPLETION OF DRIVER TRAINING

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Statement of purpose The on-road examination (ORE) for licensure marks the transition from supervised to unsupervised driving, but also to a driver's highest lifetime crash risk. The period pre- and post- licensure has been studied, yet the point of licensure itself is less documented. We describe license examination outcomes in relation to applicant age, sex, length of learner permit and completion of driver training.

Methods/Approach We utilized unique access to the State of Ohio's de-identified administrative licensing data. We examined all drivers under the age of 25 who attempted the on-road examination (ORE) for the first time across the state of Ohio in 2018. This dataset contained age at the ORE, sex, an indication of completed driver training (mandatory for those under 18 years), and ORE outcomes. We derived length of learner permit and categorical age groups to examine the impact of age-defined driver training regulations.

Results Applicants aged 16 and 17 spent 6 and 9 months (respectively) in the learner permit, on average. Applicants aged 18 years had a shorter learner period and only 27% completed driver training before attempting the ORE. Fail rates were lowest for the youngest applicants, with a linear increase in fail rates with increasing age. About 40% of applicants aged 18+ years failed the ORE at first attempt, compared to only 23% of those younger than 18 years.

Conclusions Older applicants without complete training are more likely to fail. Almost no applicants finished training before attempting the ORE if they were older than the age set by regulation, which strongly indicates that participation in driver training is driven by statute.

Significance These results should be considered when states contemplate policy that mandates driver training. Future work that relates license examination performance and driver training to crash outcomes will determine their impact on young driver safety.

Domestic & intimate partner violence

0106 PREDICTORS OF PARTNER VIOLENCE AGAINST WOMEN IN ANGOLA

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Statement of purpose Angola is still an under-explored country in the context of domestic violence and was therefore chosen as our focus of interest. The objective of our study was to

identify socio- demographic determinants of IPV against women in Angola.

Methods/Approach We used nationally representative data from female respondents of the 2015 Angolan Demographic and Health Surveys (DHS). Simple bivariate and multiple logistic regression analyses were used to assess the relationship between the experience of IPV and the womens' individual and contextual characteristics.

Results Out of the 7,699 respondents, 3,070 (41.1%) reported having experienced at least one form of violence by their partners, with physical violence being more prevalent (32.5%) than emotional (27.7%) and sexual violence (7.2%). The partner's use of alcohol, the respondent's tendency to hurt her partner, her having witnessed her father beating her mother and being the first wife showed significantly higher odds of experiencing one or more types of IPV, whereas being older than the partner appears to have protective effects.

Conclusion Our results reflect the widespread prevalence rates of violence against women in African countries. Future intervention programs should focus on women with risky background characteristics to help decrease domestic abuse in Angola.

Significance Our findings can help to identify women at risk more easily and to create more effective prevention programs against IPV in Angola.

Prescription drug overdose/opioids

0108 LIMITATIONS OF OPIOID USE DISORDER (OUD) ICD CODES: DEVELOPMENT AND VALIDATION OF A NEW OUD IDENTIFICATION ALGORITHM IN ELECTRONIC MEDICAL RECORDS

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Statement of purpose In the US, over 130 lives are lost from opioid-related drug overdoses each day. Accurate and prompt diagnosis of opioid use disorders (OUD) may contribute substantially to prevention of overdose deaths. However, OUD research is limited because ICD codes used to identify OUD are specific but not sensitive, resulting in underestimation OUD prevalence. Further, the specificity and sensitivity of the OUD ICD codes is unknown due to the lack of a gold standard.

Methods/Approach In this study, eight pain and addiction medicine clinical experts across four large healthcare systems in two southern United States (two experts per healthcare system) reviewed 166 electronic medical records (EMR) from 2014–2017 which may or may not have been assigned OUD ICD codes. The experts relied on Diagnostic and Statistical Manual of Mental Disorders-5 criteria for making OUD diagnoses. These 'gold standard' charts were used to 1) develop and validate a highly sensitive OUD identification algorithm over four iterations and 2) examine the sensitivity and specificity of OUD ICD codes.

Results Of the 166 EMR charts, 100 (60%) were reviewed by two experts and exhibited 83% agreement. After four

iterations, the algorithm identified OUD with >90% sensitivity and 67% specificity. The OUD ICD codes had 59% sensitivity and 93% specificity, underscoring the extent underestimation.

Conclusions This is the first study to measure the sensitivity and specificity of OUD ICD codes and develop an algorithm to address OUD underestimation. This work can be used in future research on OUD prevention and management.

Significance Strategies to address the opioid epidemic have primarily focused on prevention of overdose deaths. Underdiagnoses of OUD may contribute to frequent failure in connecting patients to treatment. From an injury pyramid perspective, preventing OUD development or escalation would reduce overdoses and improve quality of life for patients with OUD.

Youth violence

0109 DO ANTI-BULLYING LAWS WORK? A 26 YEAR ANALYSIS OF LAWS IN THE UNITED STATES

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Statement of purpose Although all 50 states have enacted anti-bullying legislation, research is limited on the effectiveness of these laws. The goal of this study is to evaluate whether these laws prevent bullying and other forms of youth violence.

Methods/Approach We linked 1991–2017 student-level reports of youth violence collected through the Youth Risk Behavior Surveillance System (YRBSS) with 1999–2017 data on codified anti-bullying policies and their amendments developed by the Public Health Law Research Center (Temple University). We employed survey-weighted logistic regression models that examined time-varying state policies to compare the annual rates at which bullying and physical fighting change over time in states with and without anti-bullying policies. The effects of specific policy components (e.g., definitions, scope, funding, training) were also individually assessed. We additionally examined one-, two-, and three- year lagged effects.

Results We observed a modestly more rapid reduction over time in the occurrences of physical fighting at school within states that enacted anti-bullying policies relative to those that did not (Ratio of Odds Ratios (ROR): 0.971, 95% CI: (0.965, 0.977)), which corresponded to a predicted 2600 fewer physical fights per million students. However, we did not observe comparable protective effects for bullying. Results for lagged effects were similar in magnitude. Effect sizes for individual policy components ranged from ROR = 0.952 to ROR = 1.035 among models corresponding to physical fighting, and ROR = 0.974 to ROR = 1.022 among those corresponding to bullying. Policies that enforced training for prevention programs had the strongest protective effect for physical fighting (ROR=0.952).

Conclusion Although anti-bullying policies overall have modest impacts on school violence, these effects are associated with reduced burden at a population-level. Policy makers may want to focus on individual components, such as requiring training for prevention programs, which may play a larger role in reducing violence outcomes.

Health equity

0110 EMOTIONAL/BEHAVIORAL DIFFICULTIES AND RACIAL AND ETHNIC DISCRIMINATION AMONG YOUTH AND FAMILIES: RESULTS FROM A PILOT STUDY

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Statement of purpose Racial discrimination presents a lifelong chronic stressor and has been found to impact mental health outcomes for individuals and their families. In a sample of families receiving before- and after-school services, we surveyed children and parents on their experiences with racial discrimination and correlated results to children's emotional and behavioral difficulties.

Methods/Approach Using a community-engagement approach, children and parent dyads were recruited from Twin Cities Boys and Girls Clubs. Parents and children completed questionnaires on their experiences with racial discrimination along with the Strengths and Difficulties Questionnaire for children. Linear regression adjusted for gender and race to compare racial discrimination scales to both parent- and self-reported emotional and behavioral difficulties for children.

Results 32 racially diverse child-parent dyads were enrolled into the study and returned the cross-sectional survey. Overall, 91% of parents and 80% of children reported some form of racial discrimination in their lifetime, such as receiving unfair treatment at work or school, experiencing threats or harm, or being insulted, devalued, or excluded because of their race or ethnicity. An increase in children's emotional/behavioral difficulties was observed with each additional experience of racial discrimination reported by children ($\beta=1.5$, 95% CI 0.4–2.5) as well as with each unit increase in the lifetime racial discrimination scale for parents ($\beta=5.0$, 95% CI 0.8 – 9.2).

Conclusions Racial discrimination, including the effects of lifetime racism experienced by their parents, can impact the emotional and behavioral health of children. Early intervention is critical to reducing the adverse effects of transgenerational racism and ethnic discrimination.

Significance This pilot study underscores the importance of preventing childhood trauma among racially and ethnically-diverse communities. Community-based injury research may benefit from considering both the experiences of children and parents in relation to children's injury or mental health outcomes.

Occupational safety

0111 AN ANALYSIS OF FORKLIFT RELATED FATALITIES IN THE UNITED STATES FROM 2001 TO 2017

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Statement of purpose The recent growth of online retailing has been reflected in similar growth in the transportation and warehousing industry. There is concern that online retailers are jeopardizing worker safety in order to speed up product delivery. The safety of workers around forklifts—ubiquitous in