

## Health disparities and violence

### 81 INJURIES CAUSED BY LAW ENFORCEMENT AMONG YOUNG PEOPLE: DISPARITIES AND TRENDS AMONG CALIFORNIA EMERGENCY DEPARTMENT AND HOSPITAL PATIENTS, 2005–2014

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10.1136/injuryprev-2020-savir.22

Police violence is an important public health issue. Although research on police violence has substantially grown, few studies have examined its burden among young people. Given a broader literature that documents lasting adverse effects of early-life exposure to trauma and disproportionate policing of Black youth linked to racialized constructions of their being older and dangerous, further inquiry is warranted. This study examined the demographic and temporal distributions of injuries caused by law enforcement, severe enough to require clinical care, among young people. Using statewide data on all hospitalizations and emergency department visits in California, 2005–2014, we identified patients, ages 19 years or younger, with ICD-9-CM external cause of injury codes for legal intervention (LI) injury, and calculated rates using Census population estimates. From 2005–2014, 13,855 young people in California were treated for LI injury. Non-Hispanic Black males, ages 15–19 years, had the highest rate overall (217.5 per 100,000 person-years [PYs]), over three times that among same aged non-Hispanic White males (64.1 per 100,000 PYs). Among 10–14-year-olds, Black boys had five times (22.2 per 100,000 PYs) the LI injury rate as White boys (4.3 per 100,000 PYs), and, notably, the rate among Black girls (8.9 per 100,000 PYs) was twice and six times the rates, respectively, among White boys and White girls (1.5 per 100,000 PYs). Trends in annual rates also varied by race. Rates among White youth increased by 29.3%, peaking in 2009, but returned below the 2005 rate by 2014, whereas rates among Black youth increased by 63.6% by 2009, but did not return to the 2005 level by 2014. Results indicate that the burden of LI injuries among young people substantially varies by minoritized identity; in particular, Black boys and girls experience dramatically greater rates of LI injury, and inequities are even greater at younger ages.

## Policy efforts in substance use and abuse

### 82 EFFECT OF WASHINGTON AND COLORADO'S CANNABIS LEGALIZATION ON COMPLETED SUICIDES

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10.1136/injuryprev-2020-savir.23

**Statement of Purpose** In the U.S., death by suicide is a leading cause of death and was the 2nd leading cause of death for ages 15 to 24 in 2017. Though incomplete, much of the scientific literature has found associations between cannabis use and death by suicide. As 8 states and the District of

Columbia now permit recreational sale of cannabis, we sought to evaluate whether cannabis legalization has impacted suicide rates in Washington State and Colorado, the earliest states to legalize.

**Methods** We used a quasi-experimental research design with annual, state-level deaths by suicide data to evaluate the legalization of cannabis in Washington State and Colorado. Outcome data was from the National Center for Health Statistics-Restricted Vital Statistics. We used synthetic control models to construct policy counterfactuals, controlling for time-invariant and time-variant factors as our primary method of estimating the effect of legalization, stratified by age, gender, and mechanism.

**Results** Preliminary results suggest that 3-years post-implementation of recreational sale of cannabis, Washington state saw 2.8% increase in suicides, while Colorado saw a 6.5% reduction in suicides. However, both states saw increases in deaths by suicide among youth age 15 to 24 years (WA=20.2%; CO=14.9%). Additional results will discuss suicide completion stratified by mechanism and gender.

**Conclusion** Preliminary results suggest that the overall effect of recreational cannabis on deaths by suicide is heterogeneous. However, as deaths by suicides among 15 to 24-year olds increased post-implementation in both states, states with legalized cannabis, and states considering similar legislation, may need to consider the mental health implications of cannabis legalization for younger users

## Social determinants of health and injury

### 85 THE ASSOCIATION BETWEEN STATE MINIMUM WAGE LAWS AND FATAL OCCUPATIONAL INJURIES

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10.1136/injuryprev-2020-savir.24

**Statement of Purpose** Minimum wage laws (MWLs) have the potential to affect risk factors for occupational injury such as stress, job satisfaction, and health. A prior study found that increasing state MWLs was associated with an increase in non-fatal occupational injuries. This study evaluates the associations between state MWLs and fatal occupational injuries.

**Methods** Fatal occupational injury data from 2003–2017 were obtained from the national Census of Fatal Occupational Injuries. LawAtlas provided information about state MWLs. Fifty-state regressions were fitted, with state MWLs modeled as: 1) an indicator variable, when state law exceeded the federal minimum wage, in a comparative interrupted time series and 2) a continuous variable, representing the dollar value of the state minimum wage, in a Poisson regression. Model covariates included: measures of poverty, share of the state population in the riskiest industries, other laws that might affect fatal occupational injuries, and state demographic variables.

**Results** State MWLs higher than the federal rate are associated with a nonsignificant 1.63% decrease (CI: -9.18% to +5.91%) in fatal occupational injury rates. Every one dollar increase in the state minimum wage is associated with a nonsignificant 3.43% decrease (CI: -7.80% to +1.12%) in fatal occupational injuries.

**Conclusion** State MWLs are not associated with an increased risk of fatal occupational injuries. Concerns that raising the minimum wage will cause employers to cut back on workplace safety measures may be unfounded. Further research is needed to determine if the non-significance of the results is caused by a lack of statistical power.

**Significance and Contributions to Injury and Violence Prevention Science** This work builds on previous literature calling low wages an occupational health hazard. It can inform discussions on whether social policy can be used to help protect workers from injuries.

## Violence research and prevention in healthcare settings

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### THE INCIDENCE AND RISK FACTORS OF CHILD MALTREATMENT-RELATED INJURIES RESULTING IN HOSPITALIZATIONS: A POPULATION-BASED STUDY

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10.1136/injuryprev-2020-savir.25

**Statement of Purpose** Child maltreatment has lifelong impacts on health and well-being, which can result in serious injuries and death. The objective of this study was to identify the incidence and risk factors of child maltreatment-related injuries resulting in hospitalizations for children under three for the population of Washington State.

**Methods/Approach** A prospective cohort study utilizing retrospective linked administrative data for all children born in Washington State between 1999 and 2013 (N=1,271,419). The data set comprised of linked birth discharge and hospitalization records for the entire state. Child maltreatment-related hospitalizations were identified using ICD-9 codes, both specifically attributed to and suggestive of maltreatment. Incidence rates were calculated for the overall population, by year, sex, maltreatment type, and child age. Risk and protective factors were identified using hierarchical linear modeling to test community-level poverty/disadvantage simultaneously with sociodemographic variables from the birth record.

**Results** A total of 4,078 hospitalizations related to child maltreatment were identified for an incidence rate of 3.21 per 1,000 births. More than half of all hospitalizations were related to neglect. Children whose mother resided in a census tract with high concentrated disadvantage at the time of the child's birth experienced child maltreatment-related hospitalizations at 1.2 times the rate of children who did not reside in high concentrated disadvantage census tracts.

**Conclusions** Hospitalizations can be a useful source of population-based child maltreatment surveillance.

These population-based data suggest that the community context, in addition to individual-level factors, contributes to the risk of a child being hospitalized for child maltreatment-related reasons.

**Significance and Contributions to Injury and Prevention Science** The identification of neglect-related hospitalizations as the most common sub-type, and likely the result of supervisory

neglect, are important findings for the development and implementation of prevention programming.

## Domestic and sexual violence

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### TECHNOLOGY-DELIVERED INTIMATE PARTNER VIOLENCE PERPETRATION AND VICTIMIZATION: PREVALENCE AND ASSOCIATIONS AMONG A NATIONALLY-REPRESENTATIVE SAMPLE OF YOUNG MEN

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10.1136/injuryprev-2020-savir.26

**Statement of Purpose** Determine prevalence and associations of technology-delivered intimate partner violence (IPV) among a nationally-representative sample of young men, using IPV groups of perpetration only, both perpetration and victimization, and victimization only.

**Methods/Approach** 1,052 men age 18–35 years in nationally-representative sample completed surveys in September 2014. Validated measures examined demographics, health service use, mental health and substance use, and technology-delivered IPV (insulted partner, sent threatening messages, asked partner where they were at, checked partner's phone without permission, accessed partner's account without permission) perpetration and victimization. We conducted survey-weighted descriptive statistics and multinomial logistic regression.

**Results** Among men (mean age 26.5, 42.4% non-White), prevalence of technology-delivered IPV perpetration only was 4.1%, both perpetration and victimization was 25.6%, and victimization only was 8.0%. Technology-delivered IPV perpetration only was associated with prescription pain medication non-medical use (AOR 2.67, 95% CI 1.40–5.09); both perpetration and victimization was correlated with mental healthcare visits (AOR 1.89, 95% C.I. 1.18–3.05), alcohol misuse (AOR 1.11, 95% CI 1.05–1.17), and illicit drug use (AOR 1.48, 95% CI 1.00–2.19); and victimization only was associated with regular doctor for care (AOR 0.45, 95% C.I. 0.22–0.91), marijuana use (AOR 0.79, 95% C.I. 0.63–1.00), and prescription pain medication non-medical use (AOR 2.19, 95% CI 1.10–4.36).

**Conclusions** In the U.S. among young men, technology-delivered IPV was reported by 1 in 25 for perpetration only, 1 in 4 for both perpetration and victimization, and 1 in 12 for victimization only. Health service use, alcohol and substance use, and prescription opiate misuse correlates were similar for both perpetration and victimization, and victimization only, groups.

**Significance and Contributions to Injury and Violence Prevention Science** Healthcare providers in primary care and mental health can consider clinical assessment of young men for technology-delivered IPV perpetration, victimization, or both, along with associated mental health and substance use.