

proportions of the excess deaths due to each intent/mechanism were calculated by dividing the intent/mechanism-specific excess deaths from the total excess deaths by urbanization level and age group.

Results Rural areas had the highest excess TBI mortality rates. Overall, 18.1% of TBI deaths would be prevented if all areas had the TBI mortality rate of large urban areas. Excess TBI mortality rates in rural and medium/small urban areas were primarily due to motor vehicle crashes (33.2% and 28.5%) and intentional self-harm (38.9% and 44.8%). This was consistent for all age groups except individuals aged ≥ 75 years in medium/small urban areas, for whom unintentional falls and intentional self-harm accounted for the largest share of excess TBI mortality rates.

Conclusions TBI mortality increased with rurality and excess TBI mortality rates were predominantly attributable to motor vehicle crashes and intentional self-harm, with differences by age regarding magnitude and mechanism.

Significance and Contributions to Injury and Violence Prevention Science TBI mortality increases with rurality. Prevention in rural areas may want to focus efforts on reducing TBI-related deaths due to motor vehicle crashes, intentional self-harm, and falls among older adults.

Firearm violence

143 BALTIMORE'S UNDERGROUND GUN MARKET: AVAILABILITY OF AND ACCESS TO GUNS

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Statement of Purpose Underground gun markets create opportunities for individuals who are prohibited from gun ownership to gain access to them. Understanding how these individuals obtain guns, as well as their unsuccessful attempts to get guns, is key to developing interventions that effectively restrict the supply of guns in an underground market.

Methods/Approach We recruited 195 men outside of parole and probation centers in Baltimore City. We conducted surveys with these criminal justice system-involved men about their experiences in the underground gun market. The survey data was gathered using an audio-assisted computer survey instrument. The survey was composed of questions about ability to acquire firearms, why they were desired, and selling/trading behaviors.

Results 30% of respondents (n=58) reported having experience in the underground gun market. More than half of these individuals were unsuccessful in their most recent attempt to obtain a firearm due to cost- or source-related barriers. Over 80% of individuals who did not already have access to a gun but wanted one (31/38) reported wanting to acquire one for safety or protection. Most respondents who had access to firearms had handguns (90%). Individuals reported selling or trading a gun (n=35) for money (69%), drugs (46%), or other guns (23%), or accepting guns as payment for drugs.

Conclusions Although an underground market can facilitate access to firearms, barriers exist that can prevent acquisition by high risk individuals.

Significance and Contributions to Injury and Violence Prevention Science This is the first study to understand the availability of and access to guns in Baltimore's underground gun market. Efforts should focus on strategies that increase accountability and restrict the supply of guns in an underground market or those that provide alternatives to gun carrying to feel safe.

Motor vehicle injuries and policy

146 EXAMINING CHILD RESTRAINT USE AND ORIENTATION AMONG CRASH-INVOLVED CHILD PASSENGERS: DRIVERS' FAILURE TO COMPLY WITH EXISTING LEGISLATION

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Purpose Based largely on biomechanical modeling, several states (including NJ) recently enacted legislation requiring child passengers <2 years to remain in rear-facing child restraints and passengers <4 years in an approved rear- or forward-facing restraint. However, little is known regarding adherence with this legislation. Thus, we examined child restraint use and orientation (rear- vs. forward-facing) for child passengers involved in motor vehicle crashes in NJ.

Methods Utilizing data from the NJ Safety and Health Outcomes warehouse—which includes both driver- and passenger-level data from police-reported crashes—we selected all passengers age <9 who were in an identified seating location at the time of a 2017 crash (n=25,978). As a first step, we describe child passenger demographics and restraint use and orientation.

Results There were equal proportions of male and female passengers with an average age of 4.2+2.5 years. The majority (94%) were seated in the vehicle's second or third row at the time of the crash. Over one-third (38%) of children <1 and almost half (48%) of children between ages 1 and 2 were not properly restrained in rear-facing restraints. Overall, nearly one in five (17%) children <4 were not properly restrained in either a rear- or forward-facing restraint. As age increased, use of restraints decreased, with the majority of children >6 using vehicle seat belts.

Conclusion Findings reflect a preliminary investigation of real-world child restraint use and orientation. Despite legal requirements for rear-facing restraint use for the youngest passengers, many children are improperly restrained and perhaps at greater injury risk.

Significance of Contributions This project is among the first to examine real-world child restraint use across an entire state, providing novel information regarding restraint orientation. Future research will leverage linked hospitalization data to examine child passenger injury outcomes and the contribution of driver-, child- and neighborhood-level characteristics to nonadherence.