CHARACTERISTICS OF HOSPITALS THAT CARE FOR PATIENTS WITH FIREARM INJURIES: EVIDENCE FROM THE NATIONWIDE EMERGENCY DEPARTMENT SAMPLE

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Statement of Purpose Firearm injury is a public health crisis in the United States, but little is known about the distribution of firearm injury care among health systems. We examined national estimates of ED visits and hospital admissions to describe the hospitals that care for patients with firearm injuries. This research aims to identify areas of focus for practice improvement and hospital-based violence prevention.

Methods Data was collected from the Nationwide ED Sample (NEDS) for 2016. The NEDS is a 20% stratified sample of all U.S. EDs weighted to provide national estimates. We identified firearm-related injuries using ICD-10 external cause-of-injury codes. We described the distribution of firearm injuries among hospitals and characterized hospitals that treat an average of 2 firearm injuries per week (100/year) according to hospital size, ownership, region, teaching status, urban-rural location, and region.

Results Of the 953 hospitals in the NEDS, 818 hospitals were selected to represent 3,892 hospitals nationally treated a total of 97,608 firearm injuries in 2016. The median firearm injuries treated was 8 (interquartile range 3, 19). The 226 hospitals (5.8%) that treated >100 firearm injuries cared for 47.4% of all firearm injuries, 69.0% of 26,812 admissions, 60.3% of 12,775 severely injured patients, and 58.3% of 7,626 deaths. Eighty-two percent were Level I or II trauma centers and 91% were metropolitan, teaching hospitals, with 57% located in major urban centers. Forty-six percent were in the South, 37% in the West, 29% in the Midwest, and 8% in the Northeast.

Conclusions Most U.S. hospitals care for firearm injuries, but care is concentrated in a small minority of hospitals, primarily in metropolitan trauma centers in the South and West.

Significance and Contributions to Injury and Violence Prevention Science Hospitals treating substantial numbers of gunshot wound patients may be the most appropriate sites for hospital-based violence intervention programs.
distinct differences. North TC (NTC): higher cliffs with trails towering over the beach; South TC (STC): lower shoreline cliffs. All injury event data available were reviewed from both sites, including prehospital and media. Medical record and registry data collected include demographics, diagnoses, procedures, outcomes.

**Results** 159 trauma patients treated at sites were identified. Males comprised 67%, mean age 31.5 years. 48% occurred between 2014–2016. NTC had more events (54% vs 41%), younger patients (29 vs 34 years) and more complex injuries. Mean length of stay was similar (8 vs 7 days) but differences in gender, age and injuries were evident between sites. Activities prior to injury included hiking, hang gliding and intentional jumping into ocean. 47% with positive alcohol. Fall distance ranged 10–300 feet. 75% discharged home, 4 hospital deaths, 10 at scene.

**Conclusions** Coastline cliffs continue to change with erosion and development. Communities continue to fight to preserve natural beauty while ensuring public safety. Incidence increase corresponded with documented surge of social media for gathering and intentional cliff jumping but has since subsided slightly. Visitors, unfamiliar with the environment were common, as well as alcohol use combined with poor judgment; potentially fatal combinations.

**Significance and Contributions to Injury and Violence Prevention Science** There exists common behaviors, severity and outcomes demonstrating opportunities to develop education and prevention interventions, and still enjoy that sunset.

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