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# Medical Response and Factors Leading to Violent Death in the United States Incarcerated Population



Allison Moore, BA,<sup>a</sup> Heather Carmichael, MD,<sup>b</sup> and Catherine Velopulos, MD, MHS<sup>b,\*</sup>

<sup>a</sup> University of Colorado School of Medicine, Aurora, Colorado

<sup>b</sup> Department of Surgery, University of Colorado, Aurora, Colorado

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## ABSTRACT

**Background:** This study aims to characterize trauma-associated deaths in the United States prison system. We hypothesize that incarcerated victims are less likely to receive appropriate medical care compared to the non-incarcerated.

**Methods:** We utilized 2015-2017 National Violent Death Reporting System data. Victims were classified by whether they were seen by emergency medical services, in the emergency room, or hospitalized prior to death, with the latter considered higher levels of care. Propensity score matching was used to compare highest level of care received by incarcerated versus non-incarcerated victims with similar age, sex, race/ethnicity, weapon type, and state where the incident occurred.

**Results:** Of 101,054 victims, 1229 (1.2%) were incarcerated at the time of fatal injury; 64.4% died by suicide. For suicide, the proportion of minority victims was higher in the incarcerated compared to the non-incarcerated population, but the opposite was true of homicide. Firearms were more commonly used in the non-incarcerated population. After Propensity score matching, we found that incarcerated victims received higher levels of medical care following suicide ( $P < 0.001$ ) while there was no difference for homicide ( $P = 0.28$ ). However, when only victims injured in public settings were included, we found that incarcerated homicide victims were less likely to receive hospital-based medical care.

**Conclusions:** Contrary to our hypothesis, overall, incarcerated victims received similar levels of medical care as compared to non-incarcerated victims following lethal injury. However, this fails to account for the highly supervised setting of prisons. Our findings reinforce that violence prevention methods should be tailored to specific populations.

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\* Corresponding author. Department of Surgery, University of Colorado, Aurora, CO 80045. Tel.: 303-724-2728; Fax: 303-724-8366.

E-mail address: [catherine.velopulos@cuanschutz.edu](mailto:catherine.velopulos@cuanschutz.edu) (C. Velopulos).

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