

Insurance status of gunshot trauma patients affects mortality outcomes

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New research findings published in the March issue of the *Journal of the American College of Surgeons* indicates that despite similar injury severity, uninsured patients were significantly more likely to die after hospital admission for gunshot injury than were insured patients. This difference could not be attributed to demographics or hospital resource use, and held true even after adjusting for the effects of race, age, gender, and injury severity.

In 2007, U.S. Census figures reported that 45.7 million Americans, or about 15.3 percent of the population, lacked health insurance, an increase of 19 percent since 2000. Poor outcomes for a number of chronic medical conditions and acute illness and [injury](#) have been associated with race and lack of health insurance. However, the impact of race and insurance coverage on outcomes after gunshot trauma - which predominantly affects young males - had not been studied to date.

"This is an important study because it shows that lack of insurance is a strong and independent predictor of death after gunshot wounds," according to Kristopher Dozier, MD, resident, University of California, San Francisco, East Bay General Surgery Program. "We were surprised to see pronounced disparities in outcome in a relatively young patient population. These findings underscore the need for improvement in social determinants of health, like insurance coverage, among people affected by violent trauma."

The trauma records for gunshot injury victims and their insurance status

were retrospectively reviewed at a university-based urban trauma care center in Alameda County, CA. All adult (age 18 to 64 years old) gunshot trauma patients from January 1998 to December 2007 with a length-of-stay less than 31 days were analyzed. In order to focus on in-hospital mortality, patients who were dead on arrival to the trauma bay were excluded from the study.

A total of 2,164 gunshot traumas were reviewed in this analysis. One-quarter of these patients had insurance (n=544), nearly three-quarters were uninsured (n=1,620), and less than one percent had Medicare or Medicaid (n=16). Almost three-quarters of these patients were African American (n=1,586), less than one-quarter were Hispanic (n=444), and six percent were Caucasian (n=134). The average age of the gunshot [trauma patients](#) was 28 ± 9 years, and 92 percent were male. There was no difference in the percentage of patients who underwent radiographic examination (53 percent vs. 50 percent) or underwent an operation (37 percent vs. 35 percent) based upon insurance status.

The in-hospital mortality rate for uninsured patients was nine percent versus six percent for insured patients ($p=0.02$). Even after adjusting for age, gender, race and injury severity with logistic regression analysis, the odds of dying from a gunshot trauma were 2.2 times greater for uninsured patients in comparison with insured patients (95 percent CI 1.1 to 4.5).

Provided by Weber Shandwick Worldwide

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