

# Hospital-Based Shootings in the United States: 2000 to 2011

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**Study objective:** Workplace violence in health care settings is a frequent occurrence. Emergency departments (EDs) are considered particularly vulnerable. Gunfire in hospitals is of particular concern; however, information about such workplace violence is limited. Therefore, we characterize US hospital-based shootings from 2000 to 2011.

**Methods:** Using LexisNexis, Google, Netscape, PubMed, and ScienceDirect, we searched reports for acute care hospital shooting events in the United States for 2000 through 2011. All hospital-based shootings with at least 1 injured victim were analyzed.

**Results:** Of 9,360 search "hits," 154 hospital-related shootings were identified, 91 (59%) inside the hospital and 63 (41%) outside on hospital grounds. Shootings occurred in 40 states, with 235 injured or dead victims. Perpetrators were overwhelmingly men (91%) but represented all adult age groups. The ED environs were the most common site (29%), followed by the parking lot (23%) and patient rooms (19%). Most events involved a determined shooter with a strong motive as defined by grudge (27%), suicide (21%), "euthanizing" an ill relative (14%), and prisoner escape (11%). Ambient society violence (9%) and mentally unstable patients (4%) were comparatively infrequent. The most common victim was the perpetrator (45%). Hospital employees composed 20% of victims; physician (3%) and nurse (5%) victims were relatively infrequent. Event characteristics that distinguished the ED from other sites included younger perpetrator, more likely in custody, and unlikely to have a personal relationship with the victim (ill relative, grudge, coworker). In 23% of shootings within the ED, the weapon was a security officer's gun taken by the perpetrator. Case fatality inside the hospital was much lower in the ED setting (19%) than other sites (73%).

**Conclusion:** Although it is likely that not every hospital-based shooting was identified, such events are relatively rare compared with other forms of workplace violence. The unpredictable nature of this type of event represents a significant challenge to hospital security and effective deterrence practices because most perpetrators proved determined and a significant number of shootings occur outside the hospital building. [Ann Emerg Med. 2012;60:790-798.]

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## INTRODUCTION

The workplace is a common site of hostilities, with approximately 2 million Americans falling victim to workplace violence each year.<sup>1</sup> In fact, homicide is one of the leading causes of job-related deaths in the United States.<sup>2,3</sup> There were 8,666 occupational homicides in the 14-year period from 1997 to 2010, the majority (79%) perpetrated by firearms.<sup>4</sup> Unfortunately, the health care setting is not immune to workplace violence.<sup>5-11</sup> The rate of assaults on health workers is 8 of 10,000 compared with 2 of 10,000 for private-sector industries.<sup>5</sup>

Perhaps the most feared form of assault is gun violence. Although hospital shootings are often high profile, attracting intense media coverage,<sup>12</sup> little is known about this particular

form of violence in medical settings. After a recent shooting at our own institution, and because of the hospital staff's sense of vulnerability,<sup>12</sup> we sought to characterize and determine the extent of gun violence in US hospitals to help develop appropriate mitigation and response strategies.

Accordingly, we reviewed hospital-related shootings from 2000 to 2011 to determine circumstances of gun-related violence in hospitals and to profile shooters. To our knowledge, this is the first attempt to comprehensively review hospital-related shootings during any significant period.

## MATERIALS AND METHODS

Using LexisNexis and public search engines (PubMed, Google, Netscape, and Bing), we conducted a search of all