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Introduction

Workplace violence poses a pervasive challenge to the American labor force with disproportionate risks in the healthcare industry. Despite ongoing efforts to address workplace violence in the United States, gun-related incidents are on the rise. Hospital based shootings, by nature, are characterized by a particularly complex dynamic. Kelen et al. conducted a study on hospital based shootings spanning from 2000 to 2011. Building upon this earlier work, this study investigates hospital-related shootings from 2000-2019 aiming to uncover the latest trends. The impact of this study lies in its ability to potentially inform and enhance effective mitigation strategies for the safety of healthcare professionals and patients.

Methods

A keyword-based search of the Nexis Uni database to identify hospital based shootings ("shooting" w/5 "healthcare") OR ("shooting" w/5 "health care") OR ("shooting" w/5 "hospital") OR ("shooting" w/5 "emergency room") OR ("shooting" w/5 "ER"). Hospital based shootings were defined as any shooting that occurred on hospital property where at least one person was injured. Specialty hospitals were excluded. News articles had demographic, motive, and disposition data abstracted by 2 independent reviewers (NR and GJ), with discrepancies resolved by a third reviewer (EH). Motives were categorized according to a previously published classification schema (Kelen 2011, et al).

Results

We identified 146 hospital-based shootings. 88 shootings occurred from 2010 to 2019 (60.3%, See Figure 1). There was a non-significant linear relationship between the yearly numbers of hospital-based shootings and the year (slope = 0.24, R value = 0.37, p = 0.11). When examining shooters, we found that most shooters (n = 88, 91%) were male. Shooters had a median age of 46 years old (interquartile range 30.3 to 57.0 years old). Shooters were most often motivated by social violence (n = 32, 22%) or Grudge (n = 29, 20%), see Table 1. Most shooters were either killed by suicide (n = 50, 34%) or were arrested without being shot (n = 46, 32%, See Table 2).

	Social violence	Grudge	Ill Relative	Mentally unstable	Escape Attempt	Unknown	Suicide
Number of Shooters	32	29	22	20	18	16	9

Table 1: Number of shooters by coded primary motivation.

Results

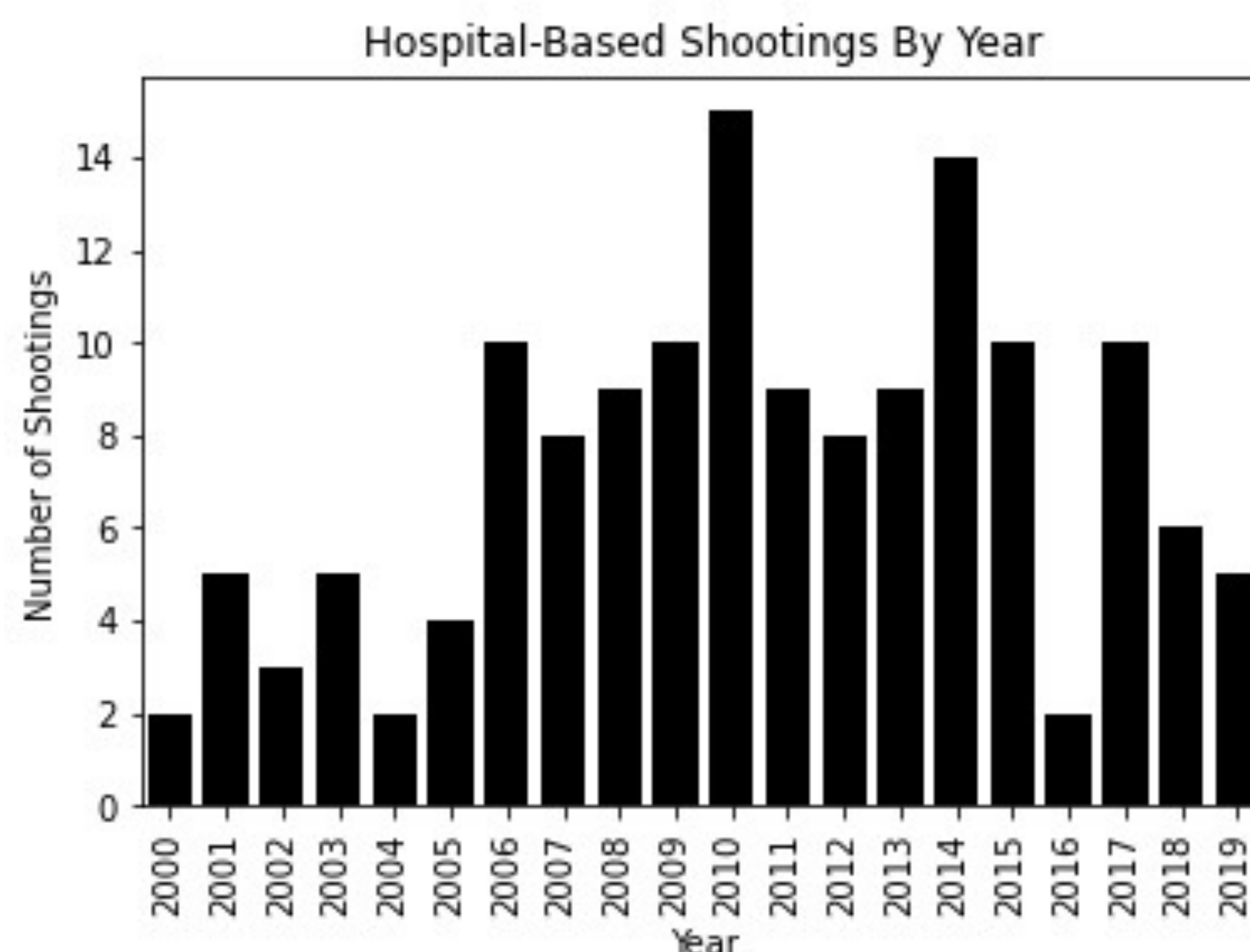


Figure 1: Number of hospital shootings per year.

	Suicide	Arrested	Shot and Killed	Shot and Arrested	Unknown	Died	Suicide
Number of Shooters	50	46	27	14	7	1	1

Table 2: Number of shooters per disposition category.

Conclusions

Hospital-based shootings are not a rare occurrence, with middle-aged male shooters appearing to be the most common perpetrators motivated by social violence or grudges. These events seem to be increasing over time and further study is needed to develop evidence based solutions.

Reference

Kelen GD, Catlett CL, Kubit JG, Hsieh YH. Hospital-based shootings in the United States: 2000 to 2011. *Ann Emerg Med.* 2012 Dec;60(6):790-798.e1. doi: 10.1016/j.annemergmed.2012.08.012. PMID: 22998757.

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