WEAPONS USE AMONG HOSPITAL SECURITY PERSONNEL

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INTERNATIONAL HEALTHCARE SECURITY & SAFETY FOUNDATION

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Final Report to the

International Healthcare Security and Safety Foundation

July 2014

Project title: Weapons Use Among Hospital Security Personnel

Contract: Duke University Medical Center

Project period: December 1, 2013 – May 31, 2014

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ABBREVIATIONS

CI	Confidence Interval
CMS	Centers for Medicare and Medicaid Services
CPI	Crisis Prevention Institute
GEE	Generalized Estimating Equations
IAHSS	International Association for Healthcare Security and Safety
IHSSF	International Healthcare Security and Safety Foundation
MOAB	Management of Aggressive Behavior
OC	Oleoresin Capsicum
OSHA	Occupational Safety and Health Administration
PR	Prevalence Ratio

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SCIENTIFIC REPORT

Background

Violence in the hospital setting, particularly violence perpetrated by patients and visitors, is a growing public health concern. The economic impact of workplace violence has been estimated at annual losses of 1.8 million work days and $55 million in wages, as well as lost productivity, legal and security expenses, property damage, and harm to public image (US Department of Labor Occupational Safety and Health Administration, 2011). Adverse physical and mental consequences on workers have been described as well (Dement JM, Lipscomb HJ, Schoenfisch AL, & Pompeii LA, 2014; Pompeii LA et al., 2013). Although most occupational safety and health research related to hospital violence has focused on the impact on direct patient care staff (e.g., nurses, nurses' aides, and physicians), police and security personnel have been described as being at particularly high risk. In a recent study examining violence perpetrated by patients and visitors against hospital workers, police officers and security personnel had the highest rate of violent event-related injury (5.1 per 100 full-time equivalents) – notably higher than that of inpatient nurses (1.8 per 100 full-time equivalents) (Pompeii LA et al., 2013).

Several observational studies have described security practices and policies in the hospital setting, including the availability of weapons for use by security personnel (Campus Safety Magazine, 2011; Ho JD et al., 2011; Lavoie FW, Carter GL, Danzl DF, & Berg RL, 1988; Meyer H & Hoppszallem S, 2011). Although some of these studies provide an overview of hospitals' security practices at the national level, none address comprehensively the relationship between weapons availability and hospital violence. Given an increase in violence in the hospital setting and continued attention on hospital security programs, there is a need to examine current hospital safety and security practices and how they relate to the prevention and mitigation of events of hospital violence, including the use of weapons by security personnel.

Study Purpose

The purpose of this study was to examine the carrying and use of weapons among security personnel working in the hospital setting, including the assessment of how weapons use in hospital violent events may vary by hospital characteristics. In addition, the study aimed to assess the incidence of violence in the hospital setting in the prior 12 months, including the association between violence and weapons use among security personnel.

Methods

Research Design

This study employed an inter-disciplinary approach that involved the expertise of current hospital security personnel through an International Healthcare Security and Safety Foundation (IHSSF)-established Working Group and academic researchers. Specifically, a cross-sectional questionnaire was developed. Designed to take approximately 15 minutes to complete, the questionnaire ascertained details about participants' work experience and recommendations to improve hospital security, as well as information on up to three hospitals in which they worked: hospital demographics, type and number of security staff employed, workplace violence in the prior 12-months, the nature of these events, the availability and use of weapons by security, hospital security policies and practices as they pertain to use of weapons.

Members of the International Association of Healthcare Security and Safety (IAHSS) working in hospital settings in the US were invited to participate in this study. IAHSS provided a membership list that included each member's email address, membership status, and employer details (establishment name, city, state, zip code). Dillman (2000) online survey techniques were employed to recruit participants (Dillman DA, 2000). Participants were not offered financial compensation for participation.

Questionnaire data were collected through Qualtrics' online survey platform (www.qualtrics.com) and imported into SAS data analysis software (www.sas.com) for analyses.

All study procedures were reviewed and approved by the Duke University Institutional Review Board.

Outcomes of interest

Several primary outcomes of interest were examined in this study: weapons availability, workplace violence (any type of event), and workplace violence (physical assaults). Regarding weapons availability, the term "weapon" is used to refer to any of the following tools that security personnel may use to defend themselves or others in an event or potential event of violence: hand gun, K9 unit, TASER[®1], OC product, baton, hand cuffs, or other device used to control a violent or potentially violent individual. In examining this outcome, weapons were always stratified by type of weapon.

Workplace violence was defined in the questionnaire was "any form of physical abuse, verbal abuse/threats, or sexual harassment/abuse. The perpetrator of violence may be a patient/visitor, staff members, spouse significant other (i.e., domestic violence on property), or any other individual performing an act of violence in the hospital setting." Recognizing that hospitals may have different definitions of workplace violence on which their collected data (provided by participants in this study) are based, we had some concerns about misclassification of this outcome variable. To reduce the potential for misclassification in this outcome of interest, we also conducted analyses of workplace violence restricted to physical assaults only.

Additional factors of interest

Participants were asked to provide details on a variety of factors potentially relevant to weapons availability and/or hospital violence: hospital characteristics (e.g., private vs. public, size, type), security policies and procedures (e.g., policy components, training, security codes, use of metal detectors, publications, data collection related to workplace violent events), security personnel[2] (e.g., type, undercover, hard look, coverage, roles, rapport with other staff), characteristics of available weapons (e.g., type of weapon, carrying by security personnel type, time in use, training required), and characteristics of workplace violent events (e.g., perpetrator type, event type, injury occurrence, weapon use, legal action, regulatory follow-up).

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[1] Similar to clarification provided to participants in the questionnaire, the term "TASER[®]" is used throughout this report to refer to this popular brand-name as well as any other similar type of device.
[2] Unless otherwise stated, the term "security personnel" is used throughout this report as a broad term, encompassing sworn, non-sworn, employed, and contracted individuals, as well as police officers

Basic descriptive statistics were calculated to describe the study populations of participants and hospitals. The prevalence of weapons availability by type of weapon was calculated. Using SAS's GENMOD procedure, log-binomial regression models were used to calculate crude, stratified, and adjusted prevalence ratios (PR) and 95% confidence intervals (CI) describing weapons availability, for each type of weapon separately, across categories of hospital characteristics and security-related practices and features. Multivariate models were constructed to examine adjusted prevalence ratios for hand guns and TASERs[®] for which there has been considerable debate in the literature. All variables of interest were included in initial models, with the exception of police/sworn presence (to reduce the potential for over-adjustment given the inclusion of variables indicating staff with the authority to arrest and issue citations). Insignificant variables (p>0.05 based on type III likelihood ratio statistics for class variables) were removed one at a time using a backward elimination process, given their removal did not lead to >10% change in any other parameter estimates.

The number of workplace violent events at the study hospitals in the previous 12 months was examined for violent events overall and for physical assaults only, separately. Mean number of events per hospital were calculated by hospital characteristics, security practices and procedures, and weapons availability. The stratified data were examined using negative binomial regression. These models were deemed appropriate for the analysis of count data which are characterized by highly skewed distributions and variability that increases as mean counts increase (Hilbe JM, 2011). In multivariate analyses, all variables of interest were included in initial models, and generalized estimating equations (GEE) specifying an exchangeable correlation structure were used to account for correlation between outcomes per hospital (Liang KY & Zeger SL, 1986). A backward elimination process was then used, removing insignificant variables (Wald p-value >0.05 in all levels of a variable) one at a time, given their removal did not lead to >10% change in any other parameter estimates. Count ratios generated from models examining the number of violent events are interpreted as risk ratios. This interpretation assumes the time at risk was the same for all study hospitals.

In all analyses, members' employer details assisted us in ensuring we did not analyze duplicate data from members employed at the same hospital. In instances in which more than one participant provided details on a particular hospital, data were limited to those provided by the most tenured participant.

Participants' free-text responses highlighting recommendations and comments related to workplace violence prevention were analyzed using content analysis (Patton MQ, 2002) in which codes were assigned to free-text passages. Coded data were summarized quantitatively and qualitatively for presentation.

Results

Participant characteristics

During the six weeks the questionnaire was open, there were 299 respondents, for a response rate of 15%. Most participants (94%) were senior IAHSS members (Figure 1a), and over half (62%) worked in healthcare security for at least 10 years (Figure 1b). Participants represented 42 states and the District of Columbia. A small subset of participants (2%) was from Canada.

Nearly all respondents (99%) personally received some form of industry-specific workplace violence prevention training, including an accredited course (81%), hospital-developed training (62%), training through another employer (33%), or training through some other experience (22%) (e.g., military training, law enforcement training) (Figure 1c).

Hospital characteristics

Ninety-five percent (95%) of respondents were currently employed in a security role in the hospital setting, and one-third (34%) of these participants worked in more than one hospital.

Participants provided details for a total of 340 hospitals. Most of these hospitals (77%) were private, non-profit/not-for-profit (Figure 2a). Seventy-eight percent (78%) were part of a larger health care system. Common hospital types were general tertiary care (43%) and trauma centers (39%) (Figure 2b). The distribution of hospitals by the number of staffed beds and the number of employees is presented in Figures 2c and 2d.

Hospital security policies

Participants were asked whether the hospital's security policy included each of the following components: employee involvement, management commitment, incident reporting and recordkeeping, training of security staff, hazard prevention and control, and worksite analysis. The distribution of hospitals with each component is presented in Figure 3a. Nearly all hospital policies (99%) had at least one component. About half of hospitals (55%) had all of these components included in their security policy, and this proportion did not vary by hospital status, type, size, or whether the hospital was part of a larger system.

Participants were also asked about unit-specific security policies at the hospital. Half of hospitals (50%) had at least one unit-specific security policy in place. Unit specific policies were most common in the emergency department (40%), followed by inpatient psychiatry units (27%), newborn nurseries (25%), and pediatric units (23%) (Figure 3b). The proportion of hospitals with any unit-specific policy did not vary by hospital status, type, size, or whether the hospital was part of a larger system.

Hospital security personnel and non-security personnel training

Eighty-seven percent (87%) of hospitals required all hospital security personnel to receive training specific to workplace violence. This proportion did not vary by hospital status, type, size, or whether the hospital was part of a larger system. Most hospitals (98%) offered some type of workplace violence training to their security staff (Figure 4a). The types of workplace violence training offered at the hospitals for security staff did not vary by hospital size or whether the hospital was part of a larger system. Offered training was generally similar across hospital types, although active shooter training was more likely to be offered to security staff in tertiary care centers (81%) than in trauma centers (70%) ($p=0.0382$). Notably, private hospitals were more likely than public hospitals to offer general WPV training (85% and 71%, respectively; $p=0.0190$) and active shooter training (81% and 58%, respectively; $p=0.0006$).

Many hospitals required non-security staff to receive workplace violence training (Figure 4b). These groups commonly included direct patient care staff (64%), housekeeping (28%), food service workers (27%), and facilities' workers (4%). Some hospitals required training of workers within particular units or areas, notably the emergency department (8%) and psychiatric/

behavioral health patient units (7%). Fourteen percent (14%) of hospitals required all staff to be trained in workplace violence prevention.

Security codes

Most hospitals (97%) utilized a security warning code(s) to alert staff of a violent, or potentially violent, event. The most common type of code was for a missing or abducted infant or child (87%), followed by codes for an active shooter (82%), an aggressive or combative individual (79%), and elopement (49%) (Figure 5). The use of particular security warning codes varied by hospital characteristics. Private hospitals were more likely than public hospitals to have active shooter codes (84% versus 69%; *p=0.0125*), and tertiary care hospitals were more likely than trauma centers to have a code for aggressive/combative individual (83% versus 73%; *p=0.0413*). Compared to larger hospitals, smaller hospitals were more likely to have codes for active shooter (86% versus 75%; *p=0.0151*) and aggressive/combative individual (86% versus 68%; *p<0.0001*).

Metal detectors

Metal detectors were used in one-third (33%) of hospitals. At these hospitals, metal detectors were most commonly placed in the emergency department's main entrance (40%). Metal detectors were more likely to be used in larger hospitals compared to smaller hospitals (44% versus 26%; *p=0.0009*), including at the emergency department main entrance (22% versus 8%; *p=0.0005*). Trauma centers were more likely to have metal detectors at the main entrance of the ED compared to tertiary care centers (23% vs 7%; *p=0.0001*). Metal detectors were rarely placed at the main hospital entrance (3%). Hand-held wands and/or portable metal detecting devices were used in 17% of hospitals.

Annual security report

Approximately two-thirds of hospitals (68%) published an annual security report. Among those, 39% make the report available to all hospital staff. Private hospitals, compared to public hospitals, were more likely to publish an annual security report (71% versus 54%; *p=0.0233*).

Hospital security personnel and roles

Hospitals employed and/or contracted with a variety of types of security personnel (Figure 6a), with the most common being non-sworn security personnel employed (i.e., not contracted) by the hospital (68%). The presence of non-police security personnel did not vary by hospital characteristics. Police officer presence, however, was more likely in public hospitals compared to private hospitals (35% versus 18%; *p=0.0075*) and in larger hospitals compared to smaller hospitals (28% versus 16%; *p=0.0108*). As expected, the average number of security personnel per hospital increased with the number of staffed beds and the number of employees (Figures 6b and 6c).

Twelve percent (12%) of hospitals had security personnel <u>undercover</u>. Among these, 90% of all other security personnel were outfitted in a "hard look." Among hospitals <u>without</u> undercover security, 70% had all of their security personnel outfitted in a "hard look." Trauma centers were more likely than tertiary care hospitals to have undercover security (18% versus 9%; *p=0.0354*). Undercover security utilization was also more likely in larger hospitals compared to smaller hospitals (18% versus 8%; *p=0.0055*). Seventy-four percent (74%) of hospitals had constant security presence in the emergency department.

The proportion of hospitals with security personnel having the responsibility of performing various tasks (i.e., arrest, issue citation, take down or restrain, hand cuff), overall and by security personnel type, is presented in Figures 6d and 6e, respectively. Overall, 88% of hospitals had security personnel with the capacity to hand cuff. Approximately two-thirds (64%) had security personnel with the authority to take a patient down or restrain a patient. About half of hospitals had security personnel whose duties included issuing citations (54%) or arresting (49%). Compared to hospitals without police and/or sworn security personnel presence, hospitals with police and/or sworn security personnel presence were more likely to have security personnel with the authority to arrest (92% versus 34%; *p<0.0001*), issue citations (86% versus 46%; *p<0.0001*), and take down or restrain (94% versus 59%; *p<0.0001*). There was no difference in the authority of hospital security personnel to hand cuff by presence of police or sworn security personnel.

Similarly, hospitals differed by whether various tasks could be performed. Public hospitals, compared to private hospitals, were more likely to have security personnel who could arrest (76% versus 51%; *p=0.0019*). Trauma centers, compared to tertiary care hospitals, were also more likely to have security personnel with the ability to arrest (63% versus 46%; *p=0.0064*). Larger hospitals, compared to smaller hospitals, were more likely to have security personnel who could arrest (67% versus 48%; *p=0.0011*) and take down or restrain (84% versus 63%; *p<0.0001*).

Interaction between security and non-security personnel

We asked participants to describe the rapport between security personnel and non-security hospital workers. At 72% of hospitals, rapport was described as "excellent." Among the 28% of hospitals with "some difficulties," common reasons for such difficulty included the following: a lack of clarity in job roles, poor communication, a need for training, and a need for enhance respect of security personnel (Table 1). No hospitals were characterized as having "major difficulties." The level of rapport did not vary by hospital status, type, size, or whether the hospital was part of a larger system.

At most hospitals (92%), assistance for security services could be requested by any staff member. Requests could be made by telephone (98%), alarm button (e.g., on wall, under desk) (95%), verbally (90%), or through use of a pager (33%). Other methods of seeking security services included use of the following: cell phones, radios, and internet/email.

Degree of security by patient condition

The proportion of hospitals requiring security presence for patients varied by patient condition or circumstance (Figure 7). Over half of hospitals required security personnel to be present with a suicidal patient (62%) and with patients on whom restraints were being applied (59%). Security presence was also common for prisoners (51%) and patients who were involuntarily committed (48%). About one-third of hospitals (36%) required security presence with patients with a known history of aggression at the hospital.

Required security presence for patients who were suicidal, receiving restraints, prisoners, an involuntary commitment, or under the care of the Department of Social Services did not vary by hospital characteristics. Security personnel presence was more likely required for previously aggressive patients at tertiary care hospitals compared to trauma centers (44% versus 30%; *p=0.0163*).

Weapons availability

Hand cuffs were the most common type of weapon available to be carried and used by hospital security staff (96%), followed by batons (56%), OC products (52%), hand guns (52%), TASERs® (47%), and K9 units (12%) (Figures 8a and 8b). For nearly all weapon types, approximately 70% to 80% of hospitals had them available for at least 5 years (Figure 8c). The exception was TASERs® which were available for use only more recently. Among hospitals with a particular type of weapon, documented training in weapons use was required in approximately 90% of the hospitals for nearly all types of weapons (Figure 8d). The exception was for K9 units (58%). Among hospitals that required documented training, the frequency of required training was typically recurrent, though not annually (Figure 8e).

The proportion of hospitals with particular types of weapons available varied somewhat by hospital characteristics (Table 2). Most notable was the greater availability of weapons in hospitals with police or sworn security personnel present, as well as in hospitals with security personnel who had the authority to arrest or issue citations. Although differences were not always significant, weapons availability was also greater in larger (versus smaller) hospitals and in trauma centers (versus tertiary care hospitals). In multivariate analyses (Table 3), hand guns and TASERs® (examined separately) remained more prevalent in hospitals with security personnel who had the authority to arrest or issue citations.

<u>Events of violence in the hospital setting</u>

Most hospitals (99%) collected some type of data on events of workplace violence, most commonly the type of event (97%), whether a physical injury occurred (95%), and perpetrator type (94%) (Figure 9a). Eighty-three percent (83%) of hospitals collected information on whether a weapon was used by security personnel in management of the event. Other commonly-collected details included whether legal action was taken against the perpetrator (collected by 73% of hospitals) and whether the event resulted in follow-up by a regulatory agency (collected by 57% of hospitals). The proportion of hospitals collecting violent event details generally did not vary by hospital characteristics; the exception was larger hospitals which, compared to smaller hospitals, were more likely to collect information on whether a weapon was used in the event (89% versus 79%; *p=0.0160*) and whether legal action was taken against the perpetrator (83% versus 68%; *p=0.0037*).

Among hospitals that collected information on perpetrator type, the perpetrators of violence most commonly included patients (75%), followed by visitors (9%) or outside individuals (6%) (Figure 9b). Among hospitals that collected information on event type, threats and verbal assaults were most common (41%) (Figure 9c). Twenty-nine percent (29%) of events included a physical assault. Less than 1% of events were characterized as sexual assaults. Among hospitals that collected information on whether a physical injury occurred, details were provided on the recipient of such injuries for 20% of events. Among these events, the injured commonly included security personnel (57%) or other hospital workers (38%) (Figure 9d). The perpetrator was described as the injured individual in 4% of events. Finally, among hospitals that collected relevant details, 4% of events involved the use of a weapon(s) by security personnel, 7% of events resulted in legal action being taken against the perpetrator, and less than 1% of events resulted in regulatory follow-up.

In the previous 12 months, 89% of hospitals had <u>at least one event</u> of workplace violence. The number of events per hospital in the previous 12 months ranged from 0 to 3,000, with an average of 123 events per hospital. The risk of violence varied somewhat by hospital

characteristics (Table 4). It increased with hospital size. It was 54% higher in trauma centers compared to tertiary care hospitals, and 75% higher in hospitals with police and/or sworn security officers, although these patterns did not persist in adjusted analyses (Table 5). In terms of security-related factors, the risk of violence was lower in hospitals with K9 units (adjusted RR 0.52; 95% CI 0.28-0.97) and higher in hospitals with OC products available for use by security personnel (adjusted RR 1.93; 95% CI 1.08-3.43).

When focused on the subset of violent events that were characterized as physical assaults (Tables 4 and 6), similar patterns as those seen for violent events overall were observed for hospital type and size. Notably, a lower risk of physical assault was observed in hospitals with staff who had the authority to issue citations (adjusted RR 0.46; 95% CI 0.25-0.86), hospitals with K9 units (adjusted RR 0.49; 95% CI 0.25-0.95), and hospitals with TASERs[®] (adjusted RR 0.59; 95% CI 0.39-0.90).

Participants' recommendations

Participants recommendations related to improved hospital security and workplace violence prevention fell into several distinct categories (Table 7). The most commonly mentioned recommendation was training (63% of responses), with respondents often indicating the need for training of all staff. Financial barriers to training were described (e.g., limited financial resources allocated to staff training; not paying staff to attend training), as was the need for training in specific topics (e.g., defensive tactics, hands-on restraint). Increased levels of security personnel staffing and/or nursing staffing was recommended by 21% of respondents. Fifteen percent (15%) of respondents highlighted the need for increased weapons availability for security staff and/or increased ability for security staff to defend themselves. With regard to weapons, the addition of TASERs[®] was specifically recommended. The need for increased reporting and evaluation of data related to workplace violent events was highlighted by 14% of participants. Twelve percent (12%) of participants also called for increased support from hospital administration in addressing issues related to workplace violence, including the following: hospital policies aimed at realistic prevention approaches, proactive (versus reactive) approaches, visitor control, handling of specific situations (e.g., "Active Shooter"), and follow-up to events with legal action as appropriate. Finally, 9% of respondents recommended enhanced environmental security measures, primarily physical access controls (e.g., through use of metal detectors, card access, etc.).

Notably, in making recommendations, participants provided insight into the context in which hospital violence – and efforts to prevent hospital violence – took place. They commented on the importance of security programs being well-integrated in a hospital system, rather than an independent effort. One participant noted:

> "*Effective security is an ongoing partnership. There are no "silver bullets". We seek to have security in depth and have designed some redundancies into the systems deployed. However, the critical element is an aware and engaged hospital community.*"

Participants highlighted broader factors that influence workplace safety as well:

> "*Government regulations focusing on patient rights makes employees less safe or is cost prohibitive.*"

> "*Violence against healthcare workers, particularly for those assigned to the emergency department, is a growing problem. Widespread cuts of funding and programs to treat the mentally ill and addicted have mushroomed, sending surges of these patients into emergency departments. Long waits for placement and dedicated treatment has culminated into a perfect storm of fear…*"

Finally, they noted the importance of effective primary prevention approaches:

> "*We know action is faster than reaction.*"

> "*Let's not settle for a little. If we are going to do [violence prevention training], then do it right.*"

Discussion

In this report, questionnaire data collected from members of the International Association for Healthcare Security and Safety were used to describe various facets of hospitals' current security practices, including the availability of weapons for use by hospital security personnel to prevent or mitigate events of violence, as well as their experiences with events of violence. Further, it explored the relationship between hospital security personnel and other hospital workers, as well as the broader context in which violent events occurred and were managed.

In line with what is known about violence in the health care sector, the most common type of violence observed in these hospitals was type II, in which the perpetrator is a customer receiving services by the company (e.g., patient or visitor). Threats and verbal abuse were more common than physical assaults or sexual abuse. Among events in which a physical injury occurred, the observation that injuries most often occurred to security personnel (versus other hospital workers or the perpetrator), is notable, particularly given the emphasis of prior studies on violence against direct patient care staff such as physicians, nurses, and aides.

Current security practices observed in this study varied somewhat from those reported in the literature and suggest increased attention to hospital security over time, in line with anticipated increases or maintenance of security funding reported by many hospitals (Meyer H & Hoppszallem S, 2011). In this study, a larger proportion of hospitals had security personnel outfitted in a "hard look" compared to that observed by Lavoie et al. (1988). Hospitals were also more likely to have constant security presence in the emergency department (74%, compared to 56% reported by Lavoie et al. (1988).) The presence of security personnel with the authority to arrest was greater in this study as well (49% versus 29% in the Lavoie et al. (1988) study.)

The observed proportion of hospitals with weapons that could be carried and used by hospital security personnel varied with that reported in the literature as well, although the direction and magnitude of the difference varied by type of weapon. Compared to several previous studies, a greater proportion of hospitals with hand guns and/or TASERs® available for security personnel to use was observed in this study. Specifically, hand guns were available in 52% of hospitals in this study, compared to 22% (Meyer H & Hoppszallem S, 2011) and 7% (Campus Safety Magazine, 2011) seen in other studies. The observed proportion of hospitals with TASERs® available to be carried and used by hospital security personnel (47%) was greater than that in a previous study in which security personnel in 12% of hospitals carried TASERS®, with 9% of hospitals thinking about implementing such devices (Meyer H & Hoppszallem S, 2011). Another recent study observed TASERs® were carried by security personnel in 26% of hospitals (Campus Safety Magazine, 2011). The higher proportion observed in this study may reflect, in

part, a changing profile of types of security personnel providing services to hospitals, as well as recent adoption of TASERs® for use in the hospital setting. Hand guns and TASERs® were more likely to be available in hospitals who had police and/or sworn security personnel (versus non-sworn security personnel only) as well as among hospitals with security personnel having more powerful abilities related to the control of perpetrators (i.e., authority to arrest and/or issue citations). Also, compared to other weapons available for hospital security personnel to carry and use, TASERs® were in place more recently; among hospitals with weapons available, TASERs® had been in place for at least 5 years in 51% of hospitals, compared to a range of 73% to 84% for other types of weapons.

Perhaps the most striking finding with respect to TASERs® was the 41% lower risk of physical assault among hospitals with TASERs® available for security personnel to carry and use compared to those without TASERs®, even when controlling for hospital characteristics and the availability of other weapons and security measures. Although a causal association cannot be confirmed, these findings are in line with the few studies that have focused on the effectiveness of TASER® use in the hospital setting in which reductions in injuries to both security officers and patients were observed (Ho JD et al., 2011; Meyer H & Hoppszallem S, 2011). We note that the association reflects availability of TASERs® for use by security personnel in the hospital setting, not their actual use during a particular event. We lacked details on the latter in this study. It is notable, however, that in the study by Ho et al. (2011) in which a 420-bed medical center observed declines in the number of injuries, paid lost days, and restricted work days incurred by hospital staff following the introduction of the TASER®, most of the TASER® use in the 12 month study period was defined as visual introduction only (24/27=89%), rather than actual deployment.

The effectiveness and appropriateness of TASERs® in the hospital setting with regard to both staff and patient safety has received considerable attention in recent years. These devices are designed to deliver temporary high-voltage, low-amperage pulses to a perpetrator, causing impairing their motor abilities. They can be equipped with lasers to enhance accuracy, as well as video recording capability to provide credibility to the circumstances surrounding utilization of the devices. Several advantages of TASERs® over other intermediate weapons have been described. For example, use of OC spray, particularly in a confined indoor environment, has the potential of unintentionally affecting bystanders, and the use of batons can cause broken bones or other unintended injuries to the perpetrator (Ho JD et al., 2011; Meyer H & Hoppszallem S, 2011). Similar observations were echoed by this study's participants in their recommendations to improve hospital security. Despite the potential for TASERs® to provide a safer alternative to other intermediate devices, concerns over risk of injury or death, as well as liability stemming from violations of patient care practices and standards, remain (Bastianelli BT, 2013; Greene J, 2011; Tuttle S, 2010).

The risk of violence, including that restricted to physical assaults only, was also lower in hospitals with K9 units compared to hospitals without K9 units. However, it is noted that only a small percent of hospitals had K9 units available. A few reports have described the use of K9 teams in the hospital setting (Eddinger C, 1990; Johnson D et al., 2005; Katz J & Spiegel C, 1991). In addition to their use for violence prevention and mitigation, K9 units may provide positive health benefits to patients who are nervous or depressed.

A higher risk of violence, including physical assaults alone, was observed in hospitals with OC products available, even when controlling for the availability of other types of weapons such as K9 units and TASERs®. Some studies suggest the use of OC spray may be associated with injury to police officers (Jenkinson E, Neeson C, & Bleetman A, 2006; MacDonald JM, Kaminski

RJ, & Smith MR, 2009). Use of OC spray in an indoor hospital setting may increase the potential for security personnel to be affected by the spray (versus foam) form of this device and subsequently injured. It is also plausible that – unlike hand guns, TASERs®, and K9 units – OC products may lack power to prevent a violent event through their visible presence alone (e.g., brandishing). In this study, we were not able to discern the type of OC product available (e.g., spray, foam) or the manner in which it was used in a violent event (e.g., brandished, released).

A decade ago, the Occupational Safety and Health Administration (OSHA) has issued guidelines to prevent workplace violence for health care workers, including effective violence prevention program recommended elements: management commitment and employee involvement, worksite analysis, hazard prevention and control, safety and health training, and recordkeeping and program evaluation (US Department of Labor Occupational Safety and Health Administration, 2004). Approximately half of hospitals described in this study had all of these components included in their hospital security policy. Further, participants recognized the importance of each of these components as reflected in their recommendations for improving hospital security and preventing workplace violence.

Focused efforts were made in this study to examine workplace violence-related training in particular, including types of violence prevention training offered to hospital security personnel and types of hospital workers required to receive such training. OSHA's guidelines support the training – and refresher training – of all personnel, including supervisors, managers, and security personnel (US Department of Labor Occupational Safety and Health Administration, 2004). Nearly all hospitals offered some type of training specific to workplace violence to their security staff. In addition to often requiring training of security staff, many hospitals required direct patient care and auxiliary staff (who may double as security, particularly in smaller hospitals) to be trained as well. Despite a high observed prevalence of training among hospital security personnel, participants highlighted the need for continued efforts to enhance training availability, content, and reach. Training was most commonly-mentioned by participants when asked to provide recommendations to enhance hospitals security and prevent workplace violence. Further, a lack of education/training was a commonly-mentioned source of difficulty between security and non-security personnel.

Recommendations observed in this study also provided a broad picture of the context in which hospital violence is addressed, including the influence of (sometimes opposing) factors being balanced in the hospital setting (Greene J, 2011; Warren B, 2013). Examples of such factors include: the deterrent value of a security approach versus a hospital's public image, staff safety versus patient safety and satisfaction, and provision of patient-level violence history information to security personnel versus conservation of patient privacy. Despite hospitals' best efforts, achieving balance can be challenging. For example, in the study by Lavoie et al. (1988), 16% of hospitals had at least one litigation against emergency department staff (including security) in the previous 5 years, with litigation focused on restraining violent patients, as well as failing to restrain violent patients. In this study, metal detectors were rarely placed at the main hospital entrance, perhaps a reflection of the desire to create an open, inviting environment of care despite participants' acknowledgment of the need to enhance visitor control, in part through environmental measures such as metal detectors. Regarding patient safety versus staff safety in particular, experts have described "a regulatory disconnection" between the federal agencies tasked with overseeing patient safety and worker safety (Greene J, 2011).

Finally, this study highlights an important interaction to consider in the prevention, recognition, and management of hospital violent events, namely that which occurs between security personnel and clinical personnel. The relationship between these two groups – described as

having "some difficulties" in approximately one in four hospitals – can have implications for both staff and patient safety. As past president of the IAHSS Bryan Warren, MBA, CHPA, CPO-I recently stated in regards to care of patients in the emergency department, "…healthcare security officers today need to be truly integrated as part of the patient care team along with their clinical teammates both in training and certification in disciplines such as conflict resolution, verbal de-escalation, and patient restraint techniques…" (Warren B, 2013). In addition to their integration with clinical staff, the involvement of security personnel is called for in the planning of violence prevention approaches as well, including in hospitals' architectural design stages (Meyer H & Hoppszallem S, 2011).

Strengths

Few studies have examined the occurrence and management of hospital violence in occupational groups or units outside of nursing, physicians, emergency departments, and behavioral health/psychiatry. This study – through a collaborative approach – adds to the literature on security practices in the hospital setting, including availability of particular types of weapons and incidence of hospital violence, as well as the occupational safety and health of security personnel. The sample size of the study allowed for examination of weapons availability and hospital violence for specific types of weapons and the sub-group of violent events characterized by physical assault. The collection of qualitative data through free-text response fields in the questionnaire is a notable strength of this study. Such data, analyzed in combination with the quantitative data, were essential in providing an understanding of the broader context in which hospital violence occurs and security personnel work.

Limitations

The cross-sectional design of the questionnaire precludes the ability to infer causality in the associations between various factors and the outcomes of interest. Our response rate of 15%, while comparable to that of another US nationwide survey (Meyer H & Hoppszallem S, 2011), was lower than expected and raises the concern of selection bias. Compared to all hospitals in the US, the hospitals on which data were provided by study participants were larger (based on number of staffed beds) (American Hospital Association, 2011), potentially influencing the generalizability of study findings. The questionnaire was lengthy, particularly for participants who provided details on more than one hospital. To ease the time burden, we did provide all invited members with a downloadable, printable worksheet to assist in their collection of hospital-related details prior to starting the online questionnaire. We provided study participants with a comprehensive definition of workplace violence that included several types. However, definitions of violence, as well as recording criteria for such events, may vary across hospitals. Accordingly, when asked to provide details on the events of workplace violence in their hospital over a 12 month period, a participant's responses may be guided by their hospital's definition, rather than that provided in the questionnaire. Therefore, we decided to restrict some of our analyses to events of physical assault in an effort to examine an outcome which should be less affected by misclassification.

Conclusion

There is a clear need for hospitals to continue to address violence in the hospital setting, particularly that perpetrated by patients and visitors. Security personnel, often called to provide tertiary prevention once an event arises, are at particularly high risk of being injured by hospital violence. They need continued training and enhanced tools to perform their job in a way that maximizes their safety as well as that of other hospital staff and patients. Recent debate has

centered on the availability and utilization of weapons by security personnel in the hospital setting, with particular interest in the use of – and risks associated with – TASERs®. In this study, a lower risk of physical assaults in hospitals in which TASERs® (or similar devices) were available to security personnel suggests these devices may be useful tools for de-escalating and controlling potentially violent (or already violent) situations. Similar findings were observed for K9 units. Future robust studies examining the association between the availability of K9 units and TASERs®, as well as their level of use (e.g., for TASERs®: brandishing only, laser display, firing), and hospital violence is warranted. Further, weapons implementation should not be a stand-alone intervention but rather part of a comprehensive violence prevention plan that reflects the characteristics of the hospital and includes administrative support, relevant policies, staff training, and involvement of various stakeholder groups (e.g., security, nursing staff, local law enforcement).

Regulatory and industry groups are pushing for enhanced, comprehensive security programs in the wake of increasing violence in the hospital setting. Experts recognize the need for security to be at the table in developing and implementing comprehensive workplace violence prevention and management approaches, in addition to their presence in the clinical setting. This study suggests that the effective involvement of security will require a focus on the relationship between security and other staff in the hospital setting, with an emphasis on defining these groups' roles, enhancing between-group communication, and addressing training needs. Further, violence prevention programs should recognize the context in which hospital violence occurs, including the sometimes opposing - but potentially influential - factors hospitals balance.

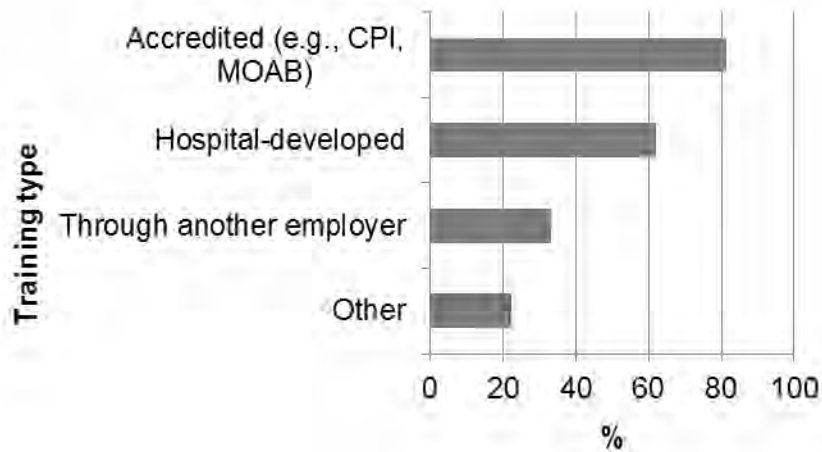**Figure 1. Characteristics of study participants**

a. Distribution of participants by member type
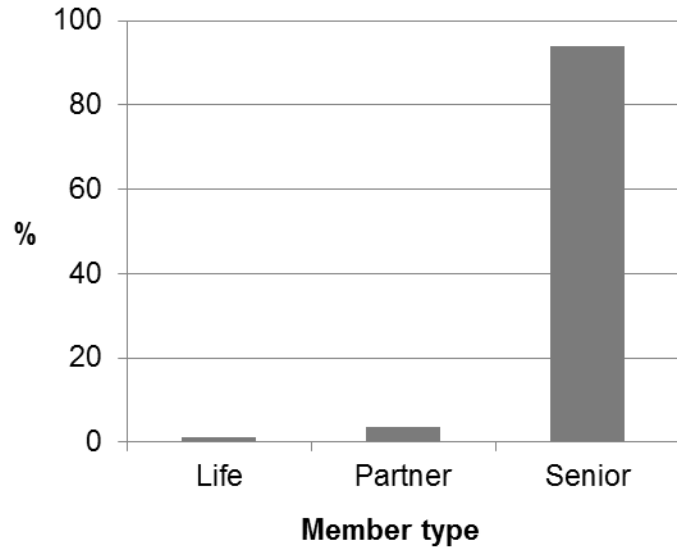
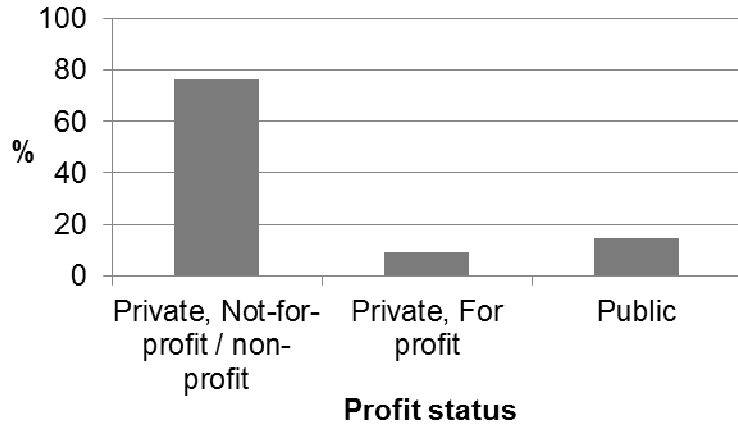**b. Distribution of participants by years in healthcare security**
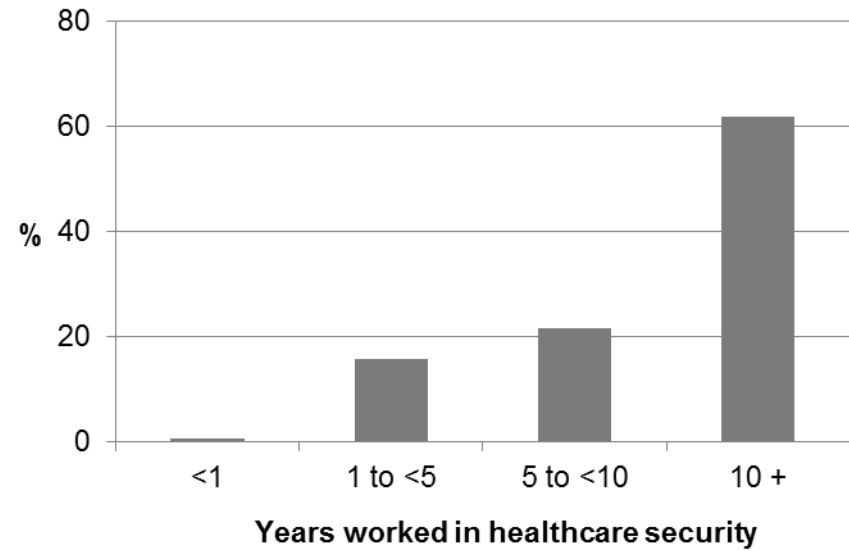
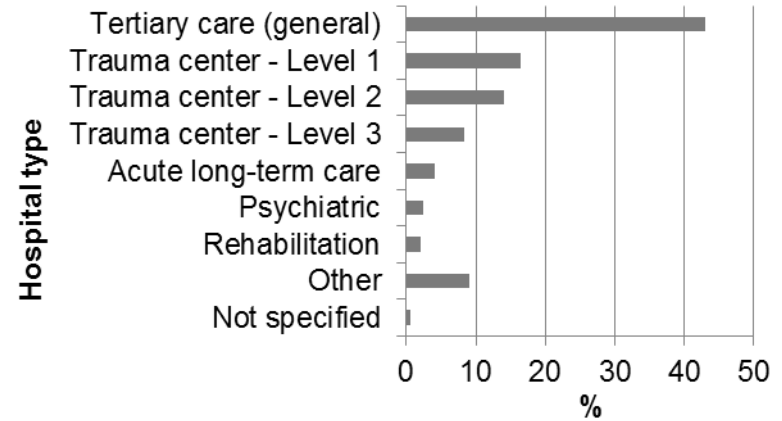**c. Distribution of participants by training personally received**

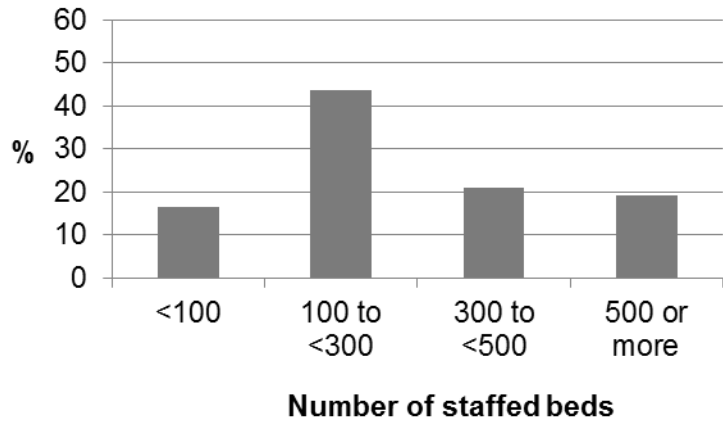**Figure 2. Characteristics of study hospitals**

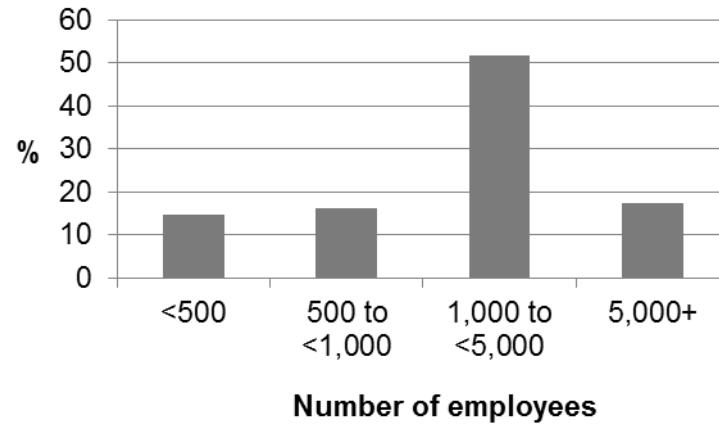**a. Distribution of hospitals by profit status**

b. Distribution of hospitals by type

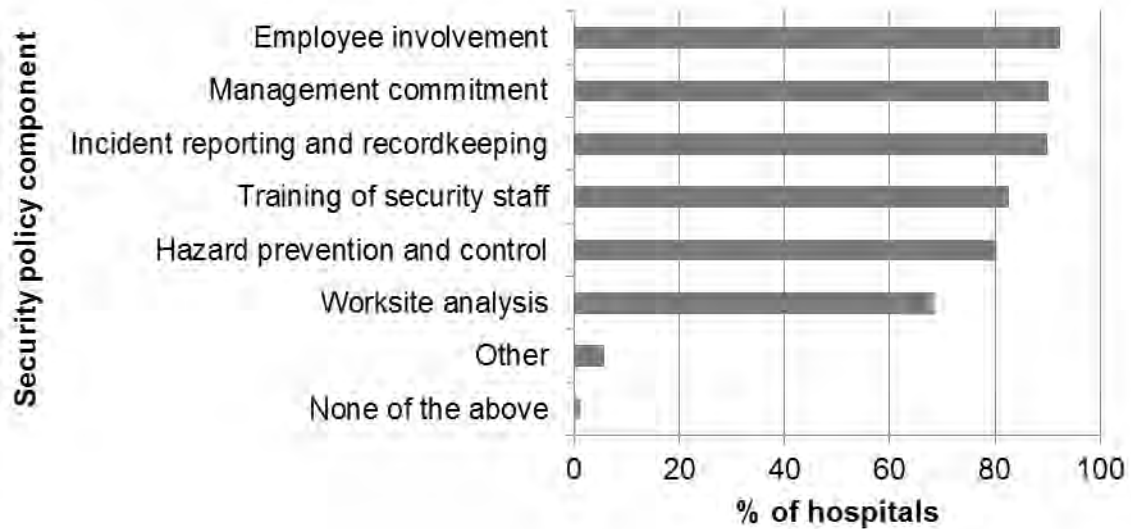**c. Distribution of hospitals by number of staffed beds**

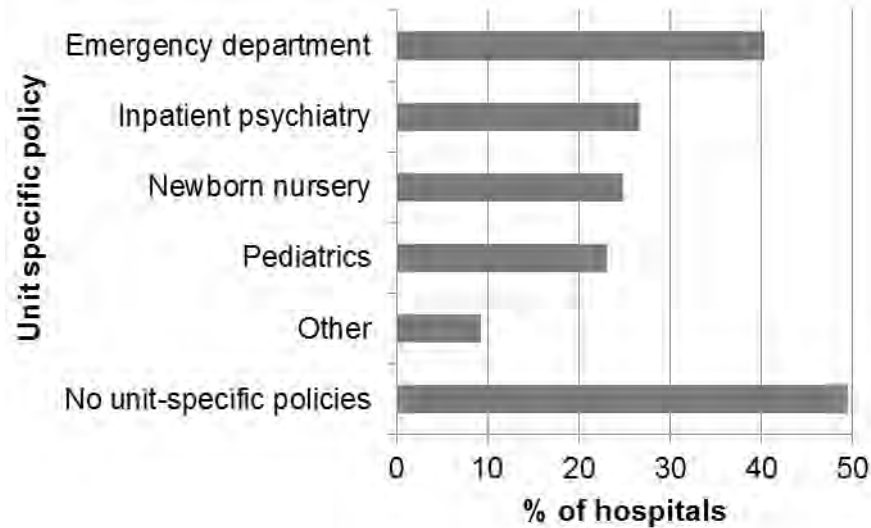**d. Distribution of hospitals by number of employees**

20

Figure 3. Hospitals' security policies and procedures

a. Components included in hosptials' security policies (not mutually exclusive)

b. Unit-specific security policies available at study hospitals (not mutually exclusive)

"Other" includes neurology, pharmacy, radiology, physical therapy, women's health, memory support, and outpatient clinics.

Figure 4. Workplace violence prevention training

a. Types of workplace violence prevention training offered to hospital security personnel (not mutually exclusive)

"Other" includes training in restraint application, firearms use, de-escalation, aggression management, physical confrontation management, lateral violence/bullying, physical security (e.g., panic alarm systems, card access), and pressure point control.

b. Percent of hospitals requiring workplace violence prevention training for specific workgroups, by type of workgroup
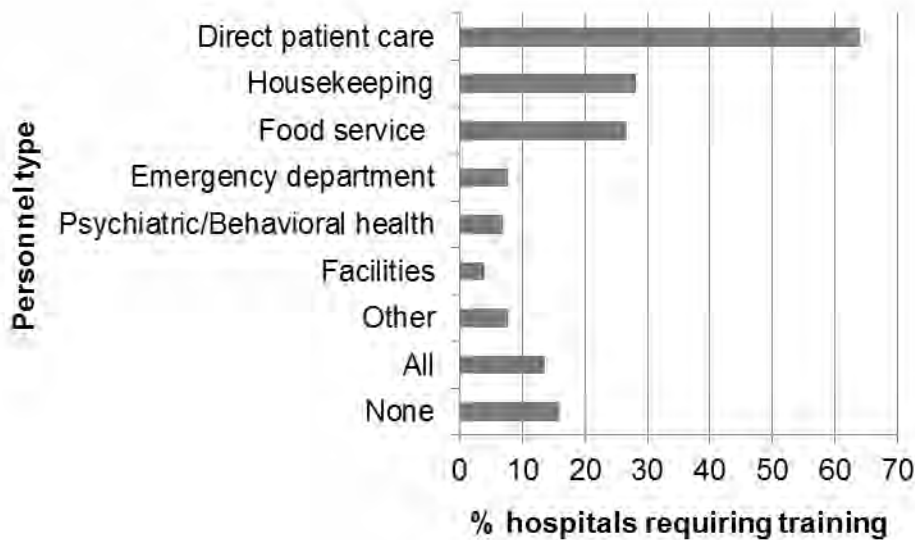
"Other" includes workers in high-risk areas, human resources staff, nurse managers, guest services, sitters, transporters, physicians, transplant team, nurses, support staff, and volunteers.

Figure 5. Hospitals' security warning codes related to violence (not mutually exclusive)
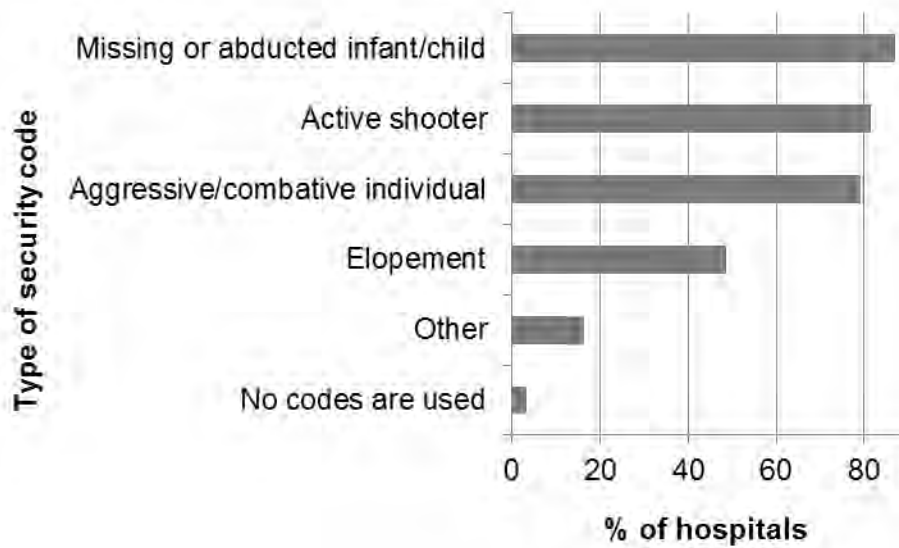
"Other" includes codes for a bomb threat, lock down, severe weather, fire, disaster/emergency, and hostage situation.

Figure 6. Hospital security personnel

a. Types of security personnel in the hospital setting (not mutually exclusive)
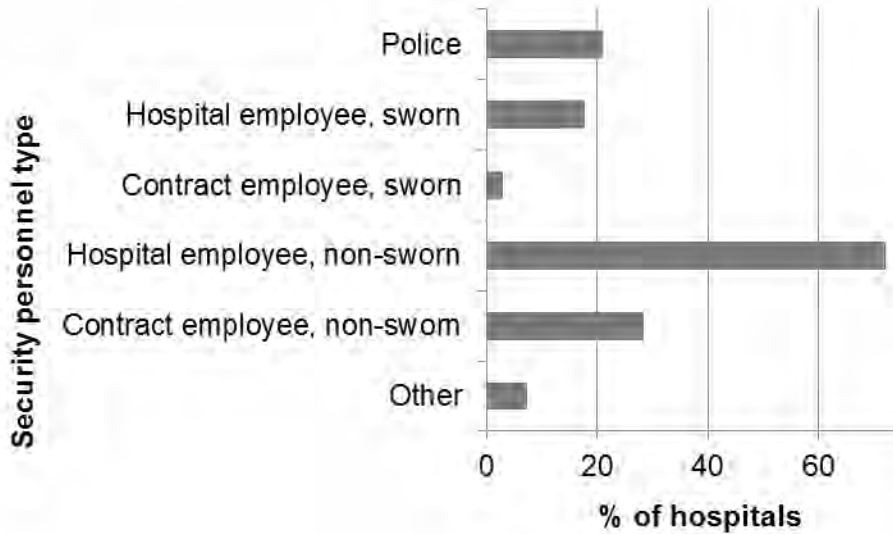
"Other" includes police telecommunicators, sheriff deputies, peace officers, engineering department staff, and maintenance department staff.

b. Average number of security personnel in the hospital setting by number of staffed beds
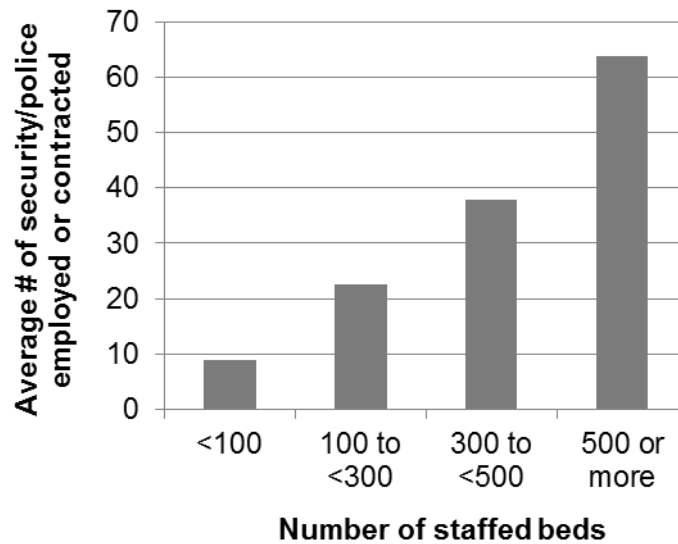
c. Average number of security personnel in the hospital setting by number of hospital employees
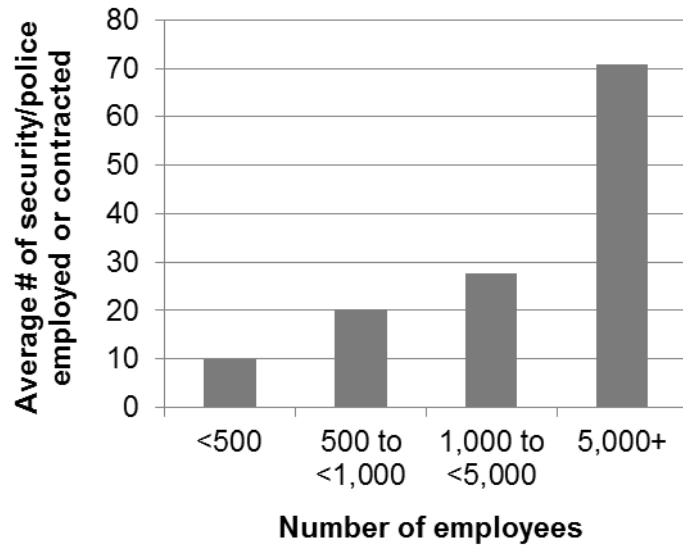
d. Percent of hospitals with security personnel who have the authority to arrest, issue citations, take down or restrain, and hand cuff perpetrators as part of their job
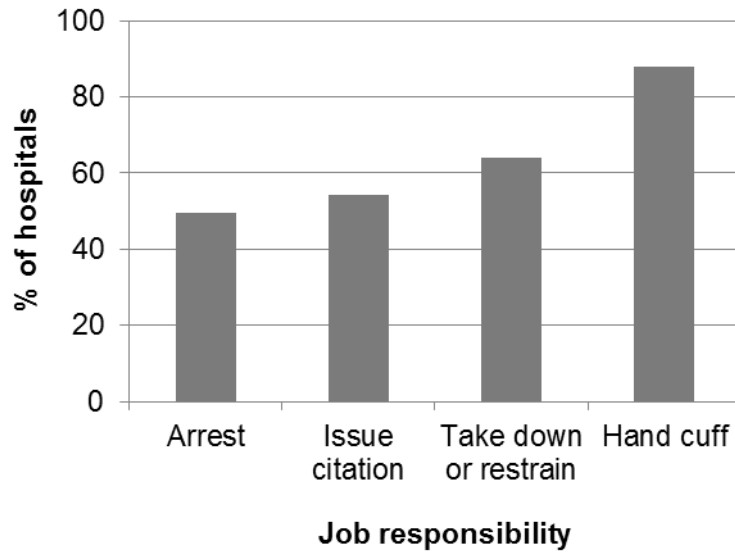
e. Percent of hospitals whose security personnel have the authority to arrest, issue citations, take down or restrain, and hand cuff perpetrators as part of their job, stratified by type of security personnel
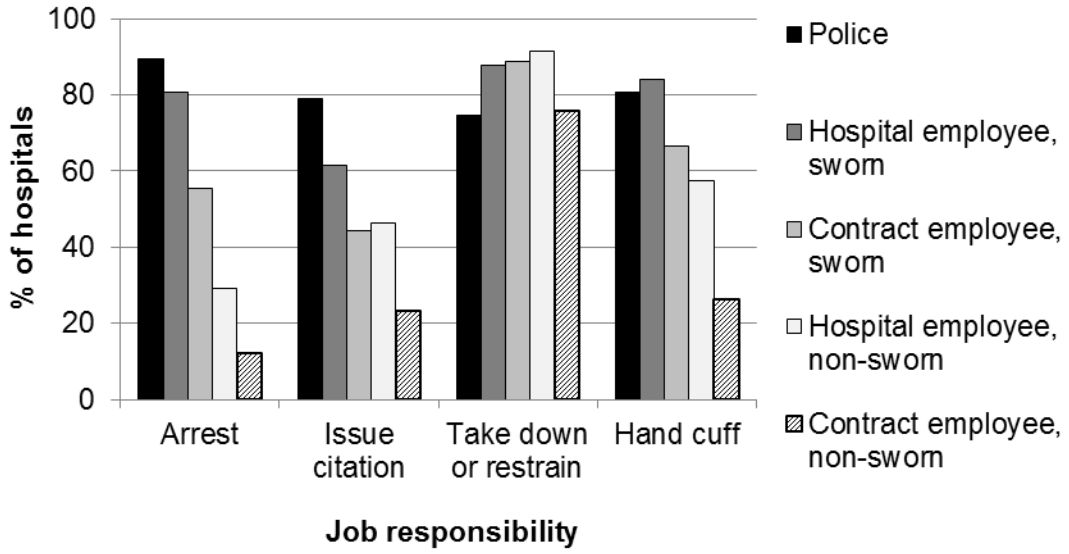
Figure 7. The percent of hospitals requiring the presence of security personnel for patients, by patient type or condition
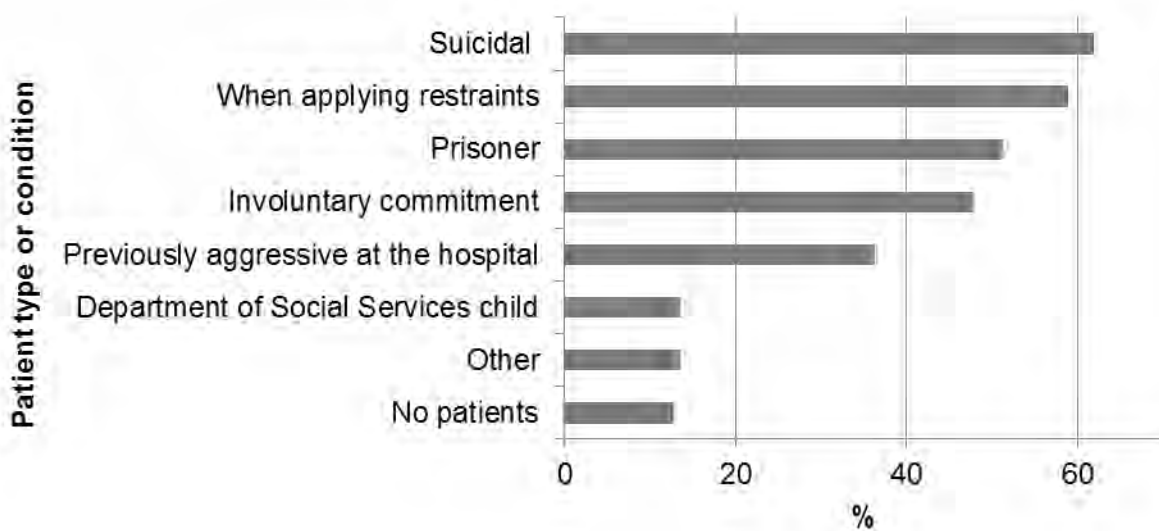
"Other" includes patients who are aggressive/combative, sitter cases (prior to sitter arrival), behavioral health/psychiatric, homicidal, drunk/disorderly, and voluntary commitment (prior to psychiatric evaluation.

Figure 8. Weapons availability

a. Weapons available for use by security personnel in the hospital setting, by type of weapon
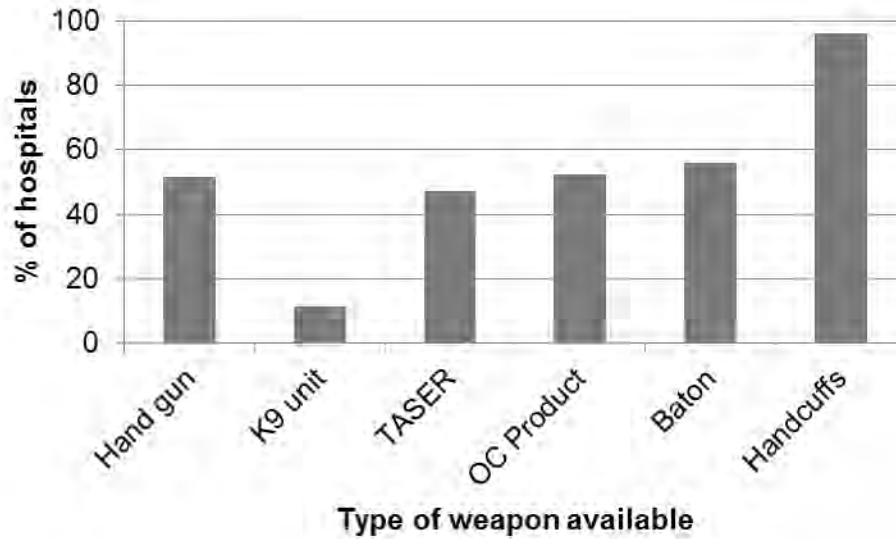
b. Weapons available for use by security personnel in the hospital setting, by type of weapon and type of security personnel
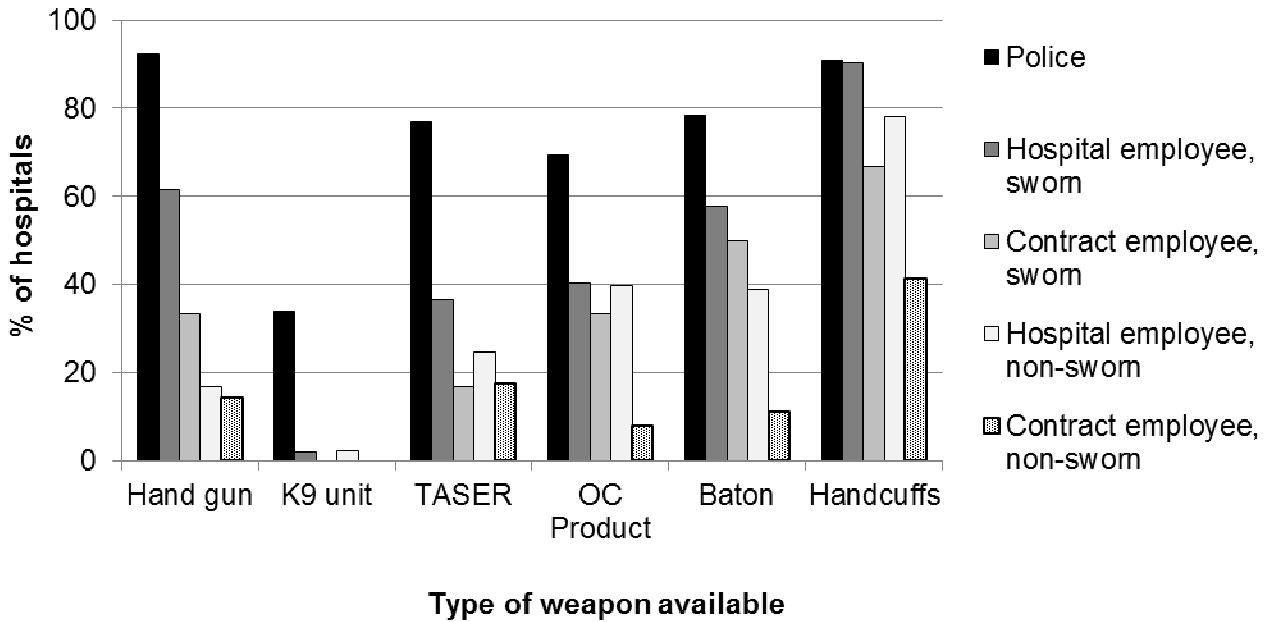
c. Length of time weapons have been available in the hospital setting, by type of weapon
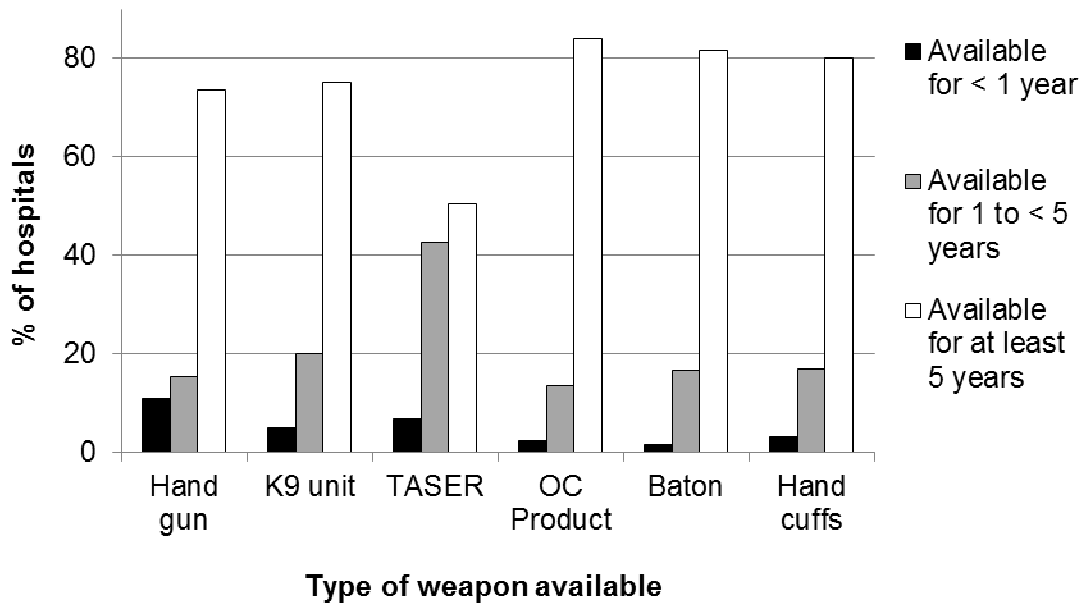
d. Among hospitals with particular types of weapons, percent of hospitals requiring documented weapons training prior to carrying and use of the weapon by security personnel at the hospital, by type of weapon
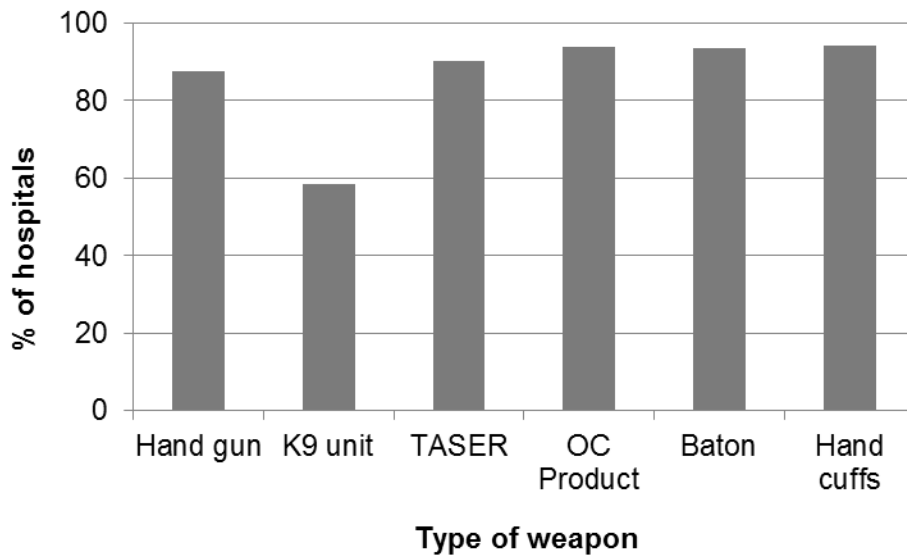
e. Frequency of required training in the carrying and use of available weapons in the hospital setting, by type of weapon
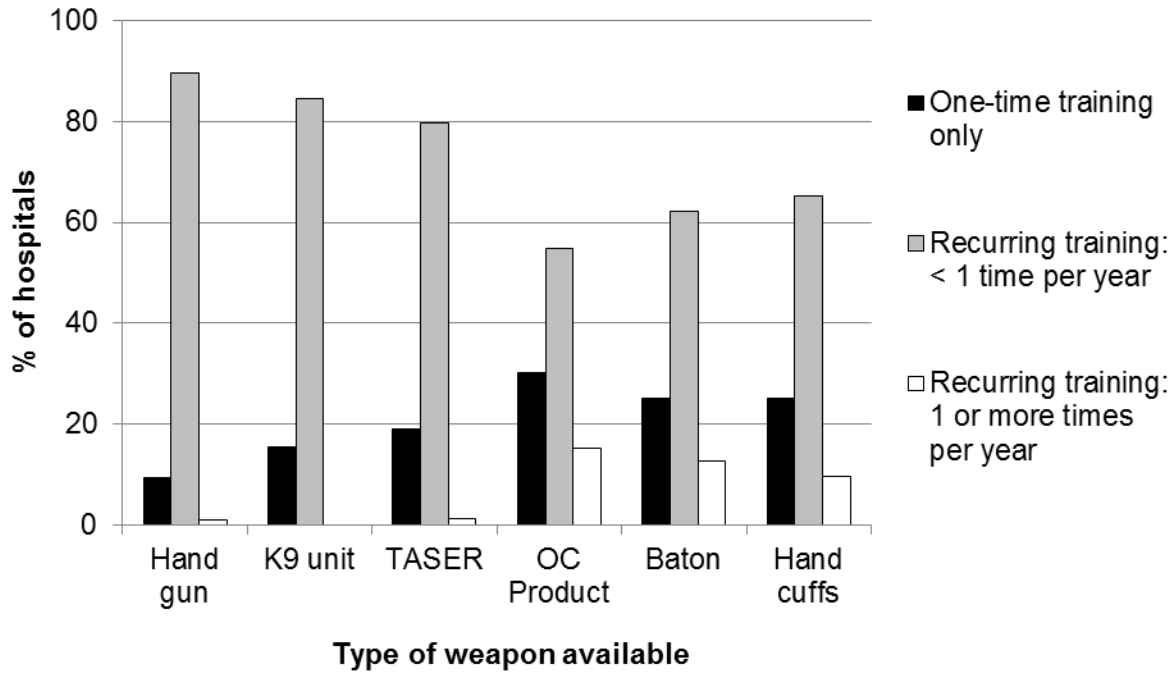
Figure 9. Violent event details

a. Routinely collected violent event details collected at hospitals (not mutually exclusive)
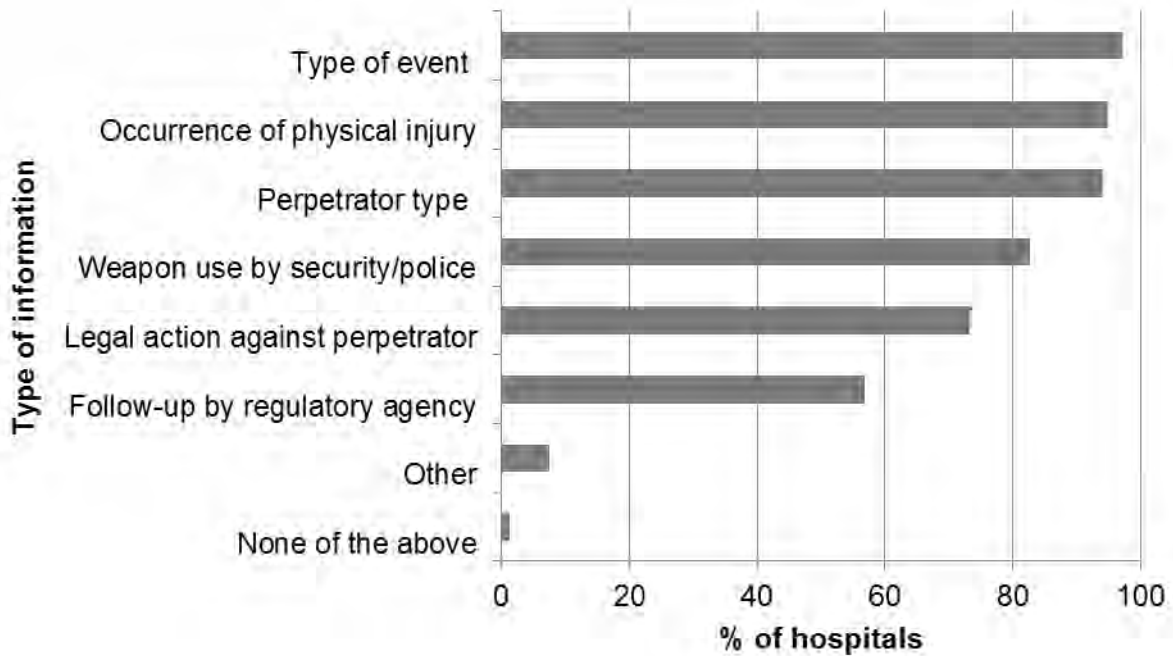
"Other" includes event location, past history, photograph, video footage, perpetrator background (e.g., criminal history), post-event report

b. Among hospitals that collect information on the type of perpetrator involved in hospital violent events, the distribution of perpetrators involved in events in the previous 12 months
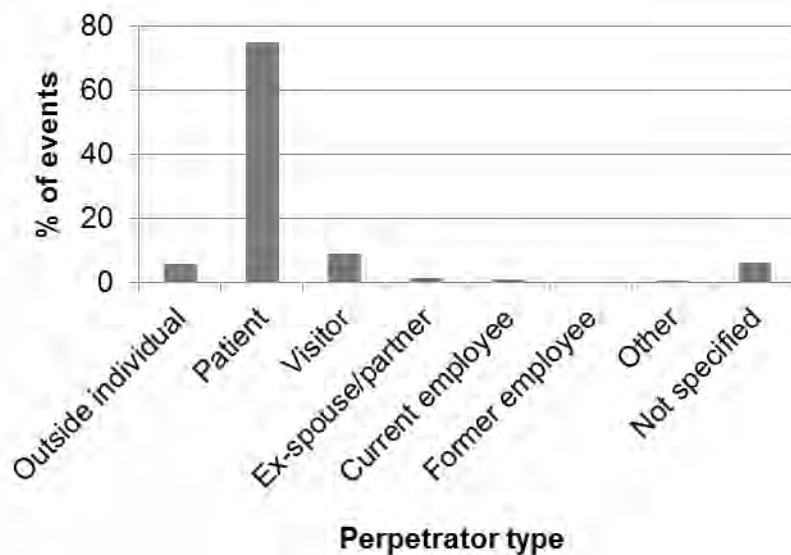
c. Among hospitals that collect information on the type of violent event, the distribution of event types in the previous 12 months
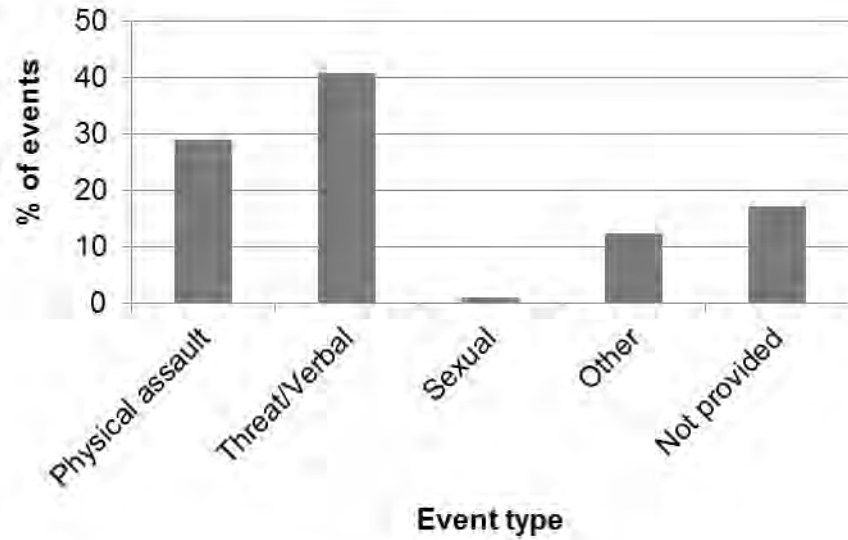
d. Among hospitals that collect information on whether a physical injury occurred in the violent event and provided details on the type of injured individual, the distribution of individuals injured in violent events in the previous 12 months
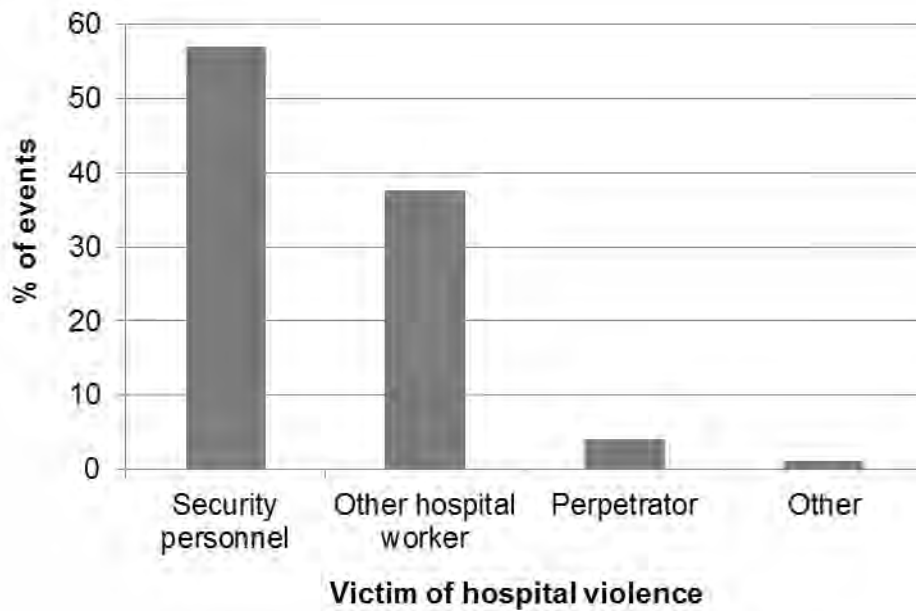
Table 1. Sources of difficulty in maintaining excellent rapport between hospitals' security and non-security workers, with the proportion of comments falling under each domain (not mutually exclusive) and examples

Domain	% of comments	Examples
Job role	51%	• Although most staff feel that security provides a safe environment, they do not like the fact that security officers are the enforcers of policies • Better understanding of what Security's role is and what exactly the department can or cannot do • Differing expectations from general staff on what security's role and services should be from the direction given by the management of the organization
Communication	23%	• Better communication regarding specific incidents • Communication concerning agitated or violent patient assessement • Communication with security when they arrive to an incident
Education/ Training	18%	• Clinical Education is severly lacking toward security, and lags roughly 2-3 years behind were the industry has evolved • Medical staff do not know how to handle violent or abusive patients. They do not understand the difference between aggression and frustration. This gives them the outward perception that [security personnel] are not doing our jobs correctly... • Security has never received any formal training and are not clear on their capabilities • We have started training events which team Security and Clinical personnel together
Respect	18%	• Difficulties persist in the perception that some Public Safety officers are too old or not physically fit to provide the level of service some hospital staff feel they need. These officers are long-time employees that have significant experience and continue to do well on the job. We are recruiting and working with a contract security vendor to dispel this perception. • [There is a need for] a better understanding of "walking a mile in each other's shoes." • There is very little respect from hospital staff toward security personnel. The prevalent attitude is that the police officers work here only because they can't get a job with a "real" police department.
Resources/ Staffing	7%	• Our emergency department staff would like a 24/7 security post presence in our emergency department. Currently, this area is staffed 10 hours through the night by security. Outside of these hours security responds as needed. • Staff would like 24/7 security on site
Security rules	7%	• For the most part security officers have a great relationship with employees, except when it come to parking and issuing of parking tickets • Doctors do not want to wear badges, park where they are supposed to, etc.
Reporting	3%	• Many hospital staff members are unwilling to report because of HIPAA • Most hospital staff do not report security related incidents / issues in a timely manner
Turnover	3%	• Staff has difficulty becoming comfortable with our contracted security force due to a high rate of turn-over

Table 2. Crude prevalence ratios (PR) and 95% confidence intervals (CI) describing the relative prevalence of weapons availability by hospital characteristics, stratified by type of weapon

	Hand gun	K9 unit	TASER	OC product	Baton	Hand cuffs
	PR (95% CI)	PR (95% CI)	PR (95% CI)	PR (95% CI)	PR (95% CI)	PR (95% CI)
Hospital status						
Public	1.26 (0.94-1.68)	2.23 (1.06-4.71)	1.18 (0.84-1.64)	0.92 (0.64-1.31)	1.08 (0.80-1.45)	1.01 (0.95-1.08)
Private	1.00	1.00	1.00	1.00	1.00	1.00
Hospital type						
Tertiary care	1.00	1.00	1.00	1.00	1.00	1.00
Trauma center	1.23 (0.94-1.63)	2.45 (1.07-5.65)	1.17 (0.88-1.55)	1.35 (1.03-1.76)	1.17 (0.91-1.51)	1.04 (0.98-1.11)
Other	1.15 (0.79-1.66)	1.11 (0.30-4.05)	0.75 (0.46-1.22)	0.97 (0.64-1.47)	1.13 (0.81-1.58)	1.04 (0.96-1.12)
Hospital size						
300+ beds	1.22 (0.95-1.56)	1.17 (0.58-2.38)	1.01 (0.77-1.33)	1.26 (0.99-1.61)	1.43 (1.14-1.79)	1.05 (1.01-1.11)
<300 beds	1.00	1.00	1.00	1.00	1.00	1.00
Part of larger system						
Yes	1.17 (0.85-1.62)	0.88 (0.39-1.98)	1.31 (0.91-1.89)	1.20 (0.87-1.65)	0.99 (0.76-1.29)	1.05 (0.97-1.13)
No	1.00	1.00	1.00	1.00	1.00	1.00
Police/sworn presence						
Yes	3.72 (2.70-5.14)	9.92 (3.07-32.04)	2.35 (1.75-3.16)	1.28 (1.00-1.64)	1.86 (1.47-2.36)	1.04 (0.99-1.09)
No	1.00	1.00	1.00	1.00	1.00	1.00
Metal detectors used						
Yes	1.14 (0.89-1.46)	0.85 (0.40-1.82)	1.18 (0.90-1.55)	1.00 (0.78-1.29)	1.00 (0.79-1.27)	1.05 (1.00-1.09)
No	1.00	1.00	1.00	1.00	1.00	1.00
Security staff with the authority to:						
Arrest						
Yes	2.94 (1.91-4.54)	--	1.74 (1.21-2.49)	1.27 (0.95-1.69)	2.55 (1.74-3.71)	1.09 (1.01-1.17)
No	1.00	1.00	1.00	1.00	1.00	1.00
Issue citation						
Yes	1.83 (1.29-2.60)	--	1.55 (1.09-2.20)	0.98 (0.76-1.28)	1.85 (1.33-2.57)	1.07 (0.99-1.15)
No	1.00	1.00	1.00	1.00	1.00	1.00

Table 3. Adjusted prevalence ratios (PR) and 95% confidence intervals (CI) describing the relative prevalence of hand gun and TASER® availability

	Hand gun Adjusted PR (95% CI)		TASER Adjusted PR (95% CI)	
	Model 1	Model 2	Model 1	Model 2
Security staff with the authority to:				
Arrest				
Yes	2.62 (1.67-4.10)	2.66 (1.69-4.17)	1.65 (1.15-2.37)	1.61 (1.12-2.32)
No	1.00	1.00	1.00	1.00
Issue citation				
Yes	1.35 (0.97-1.89)	1.32 (0.94-1.84)	1.39 (0.99-1.95)	1.39 (0.98-1.97)
No	1.00	1.00	1.00	1.00

Model 1: Initial full model

Model 2: Reduced model containing "arrest" and "issue citation" only

Table 4. Total number, mean number per hospital, and risk ratios with 95% confidence intervals (CI) of violent events in the hospital setting in the previous 12 months, for violent events overall and physical assaults

	All violent events			Physical assaults		
Variable	Total # events	Mean # events	Crude risk ratio (95% CI)	Total # events	Mean # events	Crude risk ratio (95% CI)
Hospital status						
Public	3,381	86.7	0.67 (0.38-1.20)	777	25.1	0.64 (0.35-1.19)
Private	29,495	128.8	1.00	6,818	39.0	1.00
Hospital type						
Tertiary care	13,283	109.8	1.00	1,556	16.6	1.00
Trauma center	16,773	169.4	1.54 (0.99-2.41)	5,421	70.4	4.25 (2.72-6.64)
Other	2,820	58.8	0.54 (0.30-0.94)	618	17.7	1.07 (0.60-1.90)
Hospital size						
<100 beds	1,345	28.6	0.11 (0.06-0.22)	235	7.3	0.08 (0.04-0.17)
100-300 beds	11,078	89.3	0.35 (0.20-0.61)	1,848	18.1	0.20 (0.11-0.36)
300-500 beds	9,484	175.6	0.69 (0.36-1.31)	2,798	66.6	0.74 (0.38-1.43)
500+ beds	10,969	255.1	1.00	2,714	90.5	1.00
Part of larger system						
Yes	23,531	113.1	0.73 (0.44-1.19)	5,396	33.9	0.73 (0.43-1.22)
No	9,345	155.8	1.00	2,199	46.8	1.00
Police/sworn presence						
Yes	15,567	171.1	1.75 (1.14-2.69)	3,451	50.8	1.69 (1.07-2.68)
No	17,309	97.8	1.00	4,144	30.0	1.00
Metal detectors used						
Yes	14,027	152.5	1.42 (0.93-2.19)	2,875	38.9	1.09 (0.69-1.72)
No	18,849	107.1	1.00	4,720	35.8	1.00
Security staff with the authority to:						
Arrest						
Yes	18,905	139.0	1.29 (0.85-1.97)	4,640	46.4	1.56 (1.01-2.41)
No	12,992	107.4	1.00	2,947	29.8	1.00
Issue citation						
Yes	20,032	129.2	1.11 (0.72-1.70)	2,671	22.6	0.37 (0.24-0.57)
No	11,865	116.3	1.00	4,916	60.7	1.00
Weapons available for use:						
Hand gun						
Yes	14,023	140.2	1.14 (0.70-1.84)	1,730	24.4	0.46 (0.28-0.74)
No	11,838	123.3	1.00	3,878	53.1	1.00
K9 unit						
Yes	2,250	97.8	0.72 (0.34-1.51)	270	14.2	0.33 (0.16-0.68)
No	23,611	136.5	1.00	5,338	42.7	1.00
TASER						
Yes	10,792	118.6	0.83 (0.51-1.34)	1,280	18.8	0.33 (0.21-0.53)
No	15,069	143.5	1.00	4,328	56.9	1.00
OC product						
Yes	17,550	170.4	1.91 (1.19-3.07)	3,816	53.0	2.13 (1.32-3.44)
No	8,311	89.4	1.00	1,792	24.9	1.00
Baton						
Yes	16,198	157.3	1.51 (0.94-2.44)	3,455	50.1	1.74 (1.07-2.83)
No	9,663	103.9	1.00	2,153	28.7	1.00
Hand cuffs						
Yes	24,682	132.0	1.01 (0.32-3.18)	5,397	39.4	1.31 (0.42-4.09)
No	1,179	131.0	1.00	211	30.1	1.00

Table 5. Adjusted risk ratios and 95% confidence intervals (CI) of events of workplace violence

Variable	All violent events	
	Adjusted risk ratio	
	(95% CI)	
Hospital status		
Public	0.64	(0.37-1.12)
Private	1.00	
Hospital type		
Tertiary care	1.00	
Trauma center	1.10	(0.60-1.99)
Other	0.73	(0.38-1.39)
Hospital size		
<100 beds	0.17	(0.07-0.41)
100-300 beds	0.41	(0.19-0.88)
300-500 beds	0.82	(0.35-1.88)
500+ beds	1.00	
Metal detectors used		
Yes	1.31	(0.75-2.28)
No	1.00	
Weapons available for use:		
K9 unit		
Yes	0.52	(0.28-0.97)
No	1.00	
OC product		
Yes	1.93	(1.08-3.43)
No	1.00	

Model is adjusted for all variables shown.

Table 6. Adjusted risk ratios and 95% confidence intervals (CI) of physical assaults

Variable	Physical assaults Adjusted risk ratio (95% CI)	
Hospital type		
Tertiary care	1.00	
Trauma center	2.53	(1.48-4.31)
Other	1.00	(0.55-1.83)
Hospital size		
<100 beds	0.27	(0.12-0.64)
100-300 beds	0.57	(0.32-1.02)
300-500 beds	0.68	(0.33-1.42)
500+ beds	1.00	
Metal detectors used		
Yes	0.73	(0.47-1.13)
No	1.00	
Security staff with the authority to:		
Issue citation		
Yes	0.46	(0.25-0.86)
No	1.00	
Weapons available for use:		
K9 unit		
Yes	0.49	(0.25-0.95)
No	1.00	
TASER		
Yes	0.59	(0.39-0.90)
No	1.00	
OC product		
Yes	1.28	(0.83-1.96)
No	1.00	
Baton		
Yes	1.45	(0.85-2.47)
No	1.00	

Model is adjusted for all variables shown.

Table 7. Participants' recommendations to improve hospital security and prevent workplace violence, with the proportion of comments falling under each domain (not mutually exclusive) and examples

Domain	% of comments	Examples
Education/ Training	63%	• Training to enable intervention at the incipient stage in the aggression cycle • Request training from local departments and offer to host drill events for active shooter and criminal intruder. This will help responding agencies in knowing the layout of your buildings as well as what reponse to expect. • Ensure that appropriate hospital staff has de-escalation training (MOAB, CPI, or equivalent) and ensure that hospital security staff has periodic defensive tactics training and that they also receive periodic training on any and all weapons that they carry or are authorized to use. • It is essential to provide on going training and drills for security and non-security patient care providers in high risk departments (i.e., psychiatric units, emergency department, mother/baby unit, etc.)
Staffing levels	21%	• Increased security staffing levels • Employ more sworn officers with Power of Arrest • Availability of select hospital security staff as an armed tactical response team
Weapons availability/ Defense options	15%	• Providing Healthcare Security Officers with tools and defensive options to protect themselves or a third party from use of violence or physical force • Educate administration that "armed" or "unarmed" is a false choice and that there are several intermediate force options that are appropriate for our setting • Allow non sworn security staff to utilize handcuffs for immediate restraint to prevent injury to patient, or staff • TASERs as they are less lethal and less damaging to perpetrator than a strike with a baton
Data collection, reporting, and evaluation of violent events	14%	• Standardized template in which hospital security should operate their workplace violence data collection and reporting • Convince nursing and support staff that it is not "part of their job" to be grabbed, groped, hit, verbally assaulted, or kicked. They need to report incidents so we as security hold those of sound mind accountable for thier actions and provide the safest environment possible for our patients and staff. • Find a way to better report WPV events committed against Healthcareworkers. If Public Safety is not involved in the event or an injury is not reported, that event is unseen. • Ongoing risk assessments to determine further physical security system [needs].
Support from hospital administration	12%	• Stronger commitment from leadership toward training dollars • Security needs to be valued from the top of the organization down. Proactive thinking, planning and system support can be more successful in risk and cost mitigation than avoiding the issues until the dreaded event happens. • Develop realistic and workable strategies for the management of disruptive and combative behavioral health patients
Environmental approaches	9%	• A focus on the physical environment where care is administered: 1) what can be done to minimize potential weapons that can be used against a care provider and 2) how the physical design of the unit can work for or against the care provider • Metal detectors to assist in identifying presence of weapons • More card access and surveillance

ACKNOWLEDGMENTS

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