

2020

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Original Publication Citation

Blando, J. D., Lou Ridenour, M., & Hartley, D. (2020). Surveys of workplace violence perceptions, prevention strategies, and prevalence of weapons in healthcare facilities. *Journal of Healthcare Protection Management*, 36(2), 76-87.

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Surveys of workplace violence perceptions, prevention strategies, and prevalence of weapons in healthcare facilities

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This review of multiple surveys addresses from several angles the causes and remedies for workplace violence.

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Workplace violence in the healthcare industry is a serious, all too familiar problem [1]. Surveys of healthcare facilities, staff, and security professionals can provide a deeper understanding of the characteristics and impacts on staff of workplace violence in these facilities, aid in identifying current and innovative practices, and highlight unresolved issues and questions. This paper summarizes the findings from surveys of perceptions, attitudes, and beliefs of security directors and other staff members, as well as surveys relating to prevention strategy and to policies and experiences relating to weapons.

BACKGROUND

According to the U.S. Bureau of Labor Statistics (BLS), in 2018 the rate of injury from workplace violence in the Healthcare and Social Assistance Sector (NAICS Code 62) was five times that of the overall private sector [2]. Overall, the average number of employees experiencing workplace violence injuries serious enough to require an employee to miss at least a day of work in the Healthcare and Social Assistance Sector was 10.4 employees per 10,000 full-time workers; hospitals (NAICS code 6220) had a rate of 12.8, and nursing care facilities (NAICS code 6231) had a rate of 14.9, whereas the rate for all industries combined was 2.1 [2]. These injuries have a measurable impact on the healthcare sector, especially on organizations, such as skilled nursing care facilities, that face staffing shortages. Skilled nursing care facilities often have trouble retaining employees and reaching the staffing levels needed to provide care [3]. BLS data on workplace violence in skilled nursing care facilities shows that in 2018 there were 1,790 cases of injury with days away from work

for employees who were intentionally injured by another person. (See Table R4: “Number of nonfatal occupational injuries and illnesses involving days away from work by industry and selected events or exposures leading to injury or illness, private industry, 2018,” in BLS’s *Survey of Occupational Injuries and Illnesses*. https://www.bls.gov/iif/oshwc/osh/case/cd_r4_2018.htm).

Earlier research has demonstrated the far-reaching effects of workplace violence on the healthcare industry beyond just staffing levels. Violence in healthcare affects employee stress levels, productivity, patient satisfaction, and patient outcomes [4, 5, 6]. Sture Åström and his colleagues and, independently, Karin Josefsson and her colleagues have demonstrated, moreover, that nurses who experienced aggression in the workplace showed less empathy to their patients, and medical staff who experienced aggression showed more apathy towards their patients [7, 8].

Legislators have taken steps to address the workplace violence in healthcare. The U.S. Government Accountability Office reported in 2016 that eight states

had comprehensive state regulations and one state had minimal regulations addressing workplace violence prevention programs [9]. At the federal level, the bill H.R. 1309, the “*Workplace Violence Prevention for Health Care and Social Service Workers Act*,” was passed by the House of Representatives on November 21, 2019 [10] and, as of this writing, is with the Senate Committee on Health, Education, Labor, and Pensions. This act would require the Healthcare and Social Assistance Sector to develop comprehensive plans to protect healthcare workers from violence, including plans for risk assessments, employee training, investigations of incidents; record keeping requirements, and prohibiting discrimination and retaliation against employees who report incidents.

Recently, questions about weapons encountered in healthcare facilities have moved to the forefront. Courtney M. Smalley and her colleagues demonstrated in 2017 that approximately 3% of emergency department visits in their urban hospital resulted in a weapon being confiscated from a patient or visitor. They found that edged weapons, such as

knives, were the most common type encountered and represented 56% of all weapons confiscated [11]. Another 2017 study reported a national trend showing increasing incidents of gun discharges in hospitals over time, with 15–20 incidents in 2006, and 50–55 incidents in 2016 [12]. These studies suggested that a survey related to weapons in healthcare facilities would provide valuable information for hospital security directors. Below, we begin with results from earlier surveys, relating to staff perceptions of violence in healthcare and then turn to surveys focused on prevention strategies and on weapons.

SURVEYS OF PERCEPTIONS, ATTITUDES, AND BELIEFS

We have conducted several survey studies over the past 10 years to investigate perceptions, attitudes, and beliefs relating to violence in healthcare. One reported in 2012 investigated the perception and intuitive belief that workplace injury from violence in general acute care and trauma hospitals relates to the community crime rate of the

town in which a hospital is located [13]. This research question was motivated by the serious injury of a security officer in 2004 and by hospital executives stating that the injury was unexpected because their rural hospital was located in a “beautiful town.” (The incident is described in a 2014 article, “Violent Patients, Abusive Staff” [14].) Assessing data collected by past surveys and comparing the results to the FBI’s Uniform Crime Report (<https://www.fbi.gov/services/cjis/ucr>) revealed that small hospitals located in towns with low-index crime rates had the second-highest rate of injury from workplace violence. (*Index crime* refers to murder, rape, robbery, aggravated assault, larceny-theft, and motor vehicle theft; crime was considered *low index* if it fell below the median value of 31 index crimes per 1,000 residents.)

These small hospitals actually had a higher injury rate from violence compared to those in towns with high-index crime rates [13]. It was notable that small hospitals in low-index crime towns had implemented the fewest security program features and had frequent security budget decreases while at the

same time having high net patient service revenue per bed [13]. This pattern suggested that finances were not the cause of security budget decreases and further suggested that low implementation of security program elements may be as important or more important than community crime as a predictor of injury from workplace violence. It was not uncommon during our site visits to observe facilities located in high-crime areas with comprehensive and well-funded security programs having low injury rates from workplace violence. The perception that security is not needed if a hospital is located in a “beautiful town” appears to be misguided.

As a follow-up, we and another colleague decided to delineate different staff members’ perceptions of workplace violence, because perception probably affects reporting [15], which in turn affects the data that is collected to assess rates of violence in the healthcare industry. We published the results in 2015. One instigation for this research was an interview that James Blando conducted many years earlier, in which a nursing home aide stated that although she was stabbed

in the back with a fork, she had not considered it violence and did not report it as a violent act because the patient had dementia (unpublished observations). She interpreted the incident as just an accident that did not require a review by security. In addition to the effect on reporting, whether nurses and other staff feel safe is very important to employee well-being and its associated benefits for the workplace climate [4, 5].

A 2013 survey of nurses had also indicated that nurses' perception of safety was significantly influenced by workplace characteristics and the nurses' confidence in their security officers and programs [16]. Nurses who felt that security response time and security equipment were adequate were 5.4 times and 3.8 times, respectively, more likely to report feeling safe at work. In addition, rates of verbal abuse were a significant predictor of nurses' perception of their safety, with nurses who experience frequent verbal abuse tending to feel less safe. *Frequent* was defined as more than one verbal-abuse incident per three shifts. This finding implies that verbal threats and abuse should be taken seriously be-

cause they affect employees' sense of well-being.

That survey also showed that different types of nurses perceived workplace violence differently. For example, 14% of ED nurses reported feeling unsafe, with 18% reporting frequent verbal abuse, whereas only 4% of nurses in the behavioral health unit reported feeling unsafe, with 27% experiencing frequent verbal abuse [16]. This finding was interpreted to imply that nurses in the emergency department were also more likely to consider verbal abuse as violence and as a security issue, whereas nurses in behavioral health units were less likely to consider verbal abuse as violence because they typically attributed aggression to a mental illness that needed to be treated as a disease rather than something requiring a security response [16]. The upshot is that security directors should be aware that under-reporting of violent events is likely to be greater in behavioral health units than other areas of the hospital.

The 2015 survey [15] investigated what healthcare workers perceived as the most significant barriers to an effective security

Table 1. Focus-Group-Identified Barriers to Effective Security	
1	Lack of action resulting from reporting
2	Varying perceptions of what constitutes violence
3	Bullying by coworkers or supervisors or both
4	Money- and profit-driven management models
5	Lack of management accountability
6	Intense focus of healthcare organizations on customer service
7	Weak social service and law enforcement approaches to mentally ill patients

program. These perceived barriers are listed in Table 1.

Note that item 2 in Table 1 indicates that the perception of violence by staff was considered to be a significant barrier; it is a major barrier because it can result in under-reporting of incidents that can hamper data-driven, evidence-based security decision-making. It is also notable that item 7 references community problems as a significant challenge to an effective security program; this view is corroborated by a later survey on perceptions of violence, which found that security directors have the same belief as other staff members, thinking that community problems such as mental illness and addiction are significant sources of violence in the healthcare setting [17].

SURVEYS ON PREVENTION STRATEGY

Workplace violence prevention is key to protecting workers, and prevention programs and controls for workplace violence can often be applied across five program elements that are identified by OSHA [18] and listed in Table 2. OSHA points out that management commitment and employee participation are crucial [18].

In a survey that we and another colleague published in 2017, security directors reported that sensible access control was a key engineering control for preventing violence in healthcare facilities and that utilization of data and surveillance was particularly helpful in allowing security to target specific areas in the facility

Table 2. Violence Prevention Strategies from OSHA

Control Category	Description	Example
Worksite analysis and hazard identification	Step-by-step process to identify existing and potential hazards	Walk-through surveys, asking employees about hazards
Administrative and work practices	Utilizes work practices and procedures to reduce risk	Employees do not work alone
Engineering controls and workplace adaptations	Utilizes equipment, physical layout, and design of workspace to reduce risk	Panic buttons, security officers, access control, lighting, visibility
Training	Utilizes education and awareness to reduce risk	De-escalation techniques, risk recognition
Recordkeeping and program evaluation	Investigation and documentation of incidents, and follow-up to assure program metrics are met	Incident reporting system and after-action reports. Program review by a designated committee

for security emphasis [19]. They said they believe that cameras do not deter violent events from occurring but rather serve as an excellent source of documentation when events do occur.

Most security directors in the survey also strongly believed that training and awareness were the most helpful features of their program and that differentiated training was the most realistic and effective way to train a large number of employees. In other words, they recommended having a general awareness training for all employees but providing more advanced and comprehensive

training for employees at greater risk of workplace violence (such as emergency department staff and behavioral health and security staff) [19].

Many survey respondents (40%) also felt that in-house security officers are the best option for quality security services, holding that the officers are more invested in the program, provide greater consistency, know the hospital staff, and have the most familiarity with their facilities [19]. Some respondents questioned the ability of former law enforcement officers to transition from a police mentality to a more customer-ori-

ented security role, which led to a more detailed analysis of the initial data gathered in the study that found that security directors think community problems are significant sources of violence in health-care facilities [17].

In the more detailed analysis, we found that security directors with a law enforcement background tended to cover more than one facility and represented a smaller percentage of those who analyze data as well as those who offer web-based training. They also typically represented a smaller percentage of those who ran structured and formal security or safety committee meetings; they were more likely to hold ad-hoc meetings instead [17]. This finding is not surprising, in that it matches what behavioral scientists have found when comparing the approach and worldview of security and police personnel, such as that the police tend to more highly value “street smarts” over data analysis [20]. In addition, a comparison of compliance among the New Jersey hospitals in this survey with New Jersey regulations found that having a security director with a law enforcement background was not associated with a significantly

higher compliance rate than that achieved by security directors who did not have a law enforcement background [17].

SURVEYS ON WEAPONS POLICIES AND EXPERIENCES

The surveys described above made it clear that questions relating to weapons policies and use in healthcare facilities were unresolved. As a result, faculty at Old Dominion University in the School of Community and Environmental Health embarked on a survey of security directors who were members of IAHS to ascertain weapons policies and experiences in the hospital setting [21, 22].

The directors struggled with the question of whether they should arm their security officers with additional tools, such as Tasers and guns. The arming of security officers with Tasers was reported more frequently than arming with guns in this survey [21]. Some of the respondents expressed concern about the potential for an escalation of force during incidents, whereas others thought additional weapons carried by security would add another layer of protection.

The majority of respondents (61%) felt that an officer losing control of their weapon was unlikely or very unlikely, and 25% did not have a strong opinion. Therefore, only 14% thought that a security officer losing control of their weapon was likely or very likely [21]. In a study of hospital-based shootings, Gabor D. Kelen and his co-authors found that 8% of the analyzed shootings resulted from a security officer or police officer losing control of their gun [22].

In any case, the prevalence of guns or other weapons being carried by security officers is increasing, with 23% of the respondents in our survey indicating that there is an increasing tendency for security officers to carry guns, and 38% reporting that officers use other weapons (such as Tasers) [21]. The frequency of training with Tasers and guns was variable, with less frequent training being done for Tasers [21].

Additional analyses investigated factors that contributed to the frequency of weapon confiscations from patients and visitors by security. In 2020, Blando and two colleagues found that the use of metal detectors and the presence of an in-patient psychiatric

unit significantly increased the probability of having a high rate of weapons confiscation from patients and visitors [23]. This finding suggests that the use of metal detectors may be effective at removing weapons from patients and visitors. However, only 48% of the survey participants indicated that their hospital used metal detectors, which potentially represents a missed opportunity to prevent weapons from entering a healthcare facility [23]. The higher prevalence of weapons confiscation by facilities with in-patient psychiatric units probably resulted from the standard practice of searching psychiatric patients before admission. This pattern suggests that both using metal detectors and searching patients when there is a concern that they are carrying a weapon will help to remove weapons before they enter a facility.

One conundrum faced by security directors was the disposition of confiscated weapons—especially guns, because in some cases patients and visitors have a legal right to own and carry firearms. The majority of the survey respondents (51%) reported that a legally owned gun is given back to the gun owner when the indi-

vidual is discharged from the hospital [21]. However, this return can represent a security concern if the patient is angry or emotionally unstable at the time of discharge. Life-changing and extreme life events occur in the hospital setting, which can cause situations to escalate unexpectedly. The addition of a firearm can further increase the hazard associated with this situation. As a result, many survey respondents were very conflicted about the best procedures for returning legally owned weapons that have been confiscated.

CONCLUSIONS

Workplace violence in the healthcare sector is a serious public health concern and has far-reaching effects on many aspects of healthcare. It is notable that community crime rates do not predict injury rates from violence among staff; rather, security program quality is an important predictor. This finding demonstrates the importance of effective and comprehensive security programs.

The surveys summarized in this report offer several other insights, including that staff perceptions of violence are variable, and

this variability has the potential to influence both reporting and calculations of the prevalence and magnitude of the problem. These surveys also demonstrated that security directors consider training of employees to be very important, although worksite analysis, hazard identification, administrative controls, work practices, engineering controls, workplace adaptations, recordkeeping, and program evaluation can also enhance security programs.

Weapons encountered by healthcare staff appear to be an increasing problem, and metal detectors offer one effective intervention to reduce the exposure of staff to weapons. However, metal detectors appear to be underutilized by security programs. Several unresolved questions relating to weapons require further investigation, such as the appropriate practices for return of legally owned guns to patients and visitors once they are ready to leave the hospital, the training needs and appropriate circumstances for arming officers, and what to expect when security officers are armed with firearms or other weapons. Further research in these areas may provide answers and guidance to enhance

security programs and improve worker and patient safety.

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