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

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Introduction

Workplace violence in the healthcare industry is a serious problem (NIOSH 2017). The Healthcare and Social Assistance Sector (NAICS Code 62) had a rate of injury from workplace violence that was 5 times that of the overall private sector in 2018 (BLS, 2018). The overall Healthcare and Social Assistance Sector had a rate of workplace injury from violence with days away from work of 10.4 per 10,000 full time workers, hospitals had a rate of 12.8 (NAICS code 6220), and nursing care facilities (NAICS code 6231) had a rate of 14.9, compared to a rate of 2.1 for all industries combined (BLS, 2018). These injuries have a significant impact on the industry, especially those organizations facing staffing shortages. The large number of workers injured has a measurable impact on the healthcare sector, such as skilled nursing care facilities, because these facilities often have trouble retaining employees and reaching the required staffing levels needed to provide care (Blando, J. 2020). For example, 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; accessed on 2/20/20 at: https://www.bls.gov/iif/oshwc/osh/case/cd_r4_2018.htm). Prior research has also demonstrated far reaching impacts on the healthcare industry beyond just staffing levels. Violence in healthcare impacts employee stress levels, productivity, patient satisfaction, and patient outcomes (Gates et al. 2011; Jackson et al. 2002; Roche et al. 2010). Astrom et al. (2004) and Josefsson et al. (2007) also demonstrated that nurses who experience aggression in the workplace showed less empathy to their patients, and medical staff who experience aggression show more apathy towards their patients. Employee perception of workplace violence and risk is important to fully understand the impacts on staff.

In addition to operational impacts on healthcare facilities, there have also been changes in the regulatory approach to workplace violence in healthcare. The United States Government Accountability Office (GAO, 2016) reported that there are 8 states with comprehensive state regulations and one state with minimal regulations addressing workplace violence prevention programs. Currently, at the federal level H.R. Bill 1309, “*Workplace Violence Prevention for Health Care and Social Service Workers Act*”, was passed by the House

of Representatives on 11/21/2019 and is currently with the Senate Committee on Health, Education, Labor, and Pensions ([Congress.gov](https://www.congress.gov), accessed 2/23/20). This federal bill would require the Healthcare and Social Assistance Sector to develop comprehensive plans to protect healthcare workers from violence including: assessments of risk; employee training; investigations of incidents; record keeping requirements and prohibiting discrimination and retaliation against employees who report incidents ([Congress.gov](https://www.congress.gov), accessed 2/23/20).

Recently, questions about weapons encountered in healthcare facilities have also moved to the forefront. Smalley et al. (2017) demonstrated 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 weapon encountered and represented 56% of all weapons confiscated (Smalley et al., 2017). A recent study by Aumack et. al. (2017) reported a national trend showing increasing incidents of gun discharges in hospitals over time, with between 15 – 20 incidents in 2006 and 50 – 55 incidents in 2016. These studies suggest that the results of further assessment and analysis of data related to weapons in healthcare facilities is merited and would provide valuable information for hospital security directors.

In recognition of this serious problem for the healthcare industry, surveys among healthcare facilities, staff, and security professionals can aid in identifying current and innovative practices, attaining a deeper understanding of the characteristics of workplace violence in healthcare facilities, and identify unresolved issues and questions. This paper summarizes the findings from surveys of perceptions, attitudes, and beliefs of staff members and security directors, prevention strategy surveys, and surveys of weapons policies and experiences.

Perception, attitudes, and beliefs surveys

Three surveys were conducted to investigate perceptions, attitudes, and beliefs. Blando et al. (2012) investigated the perception and intuitive belief that workplace injury from violence in general acute care and trauma hospitals was related to the community crime rate of the town where a hospital was located. This research question was motivated by a serious injury of a security officer in 2004 (which is described in Blando et al., 2014) where the hospital executives stated that the injury was unexpected simply because their rural hospital was located in a “beautiful town.” After assessment of data collected from prior surveys and a comparison to the FBI’s Uniform Crime Report (<https://www.fbi.gov/services/cjis/ucr>), it was found that hospitals with the second highest rate of injury from workplace violence were small hospitals located in towns with low index crime rates. (Low index crime was considered below the median value of 31 index crimes per 1000 residents, and index crime refers to murder, rape, robbery, aggravated assault, larceny theft, and motor vehicle theft.) These small hospitals actually had a higher injury rate from violence compared to towns with high community index crime rates (Blando et al., 2012). 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 had high net patient service revenue per bed (Blando et al., 2012). This suggested that finances were not the cause of budget decreases and further suggested that lack of security program elements implemented 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 for us 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, different staff members’ perceptions of workplace violence were important to delineate because perception likely impacts reporting (Blando et al., 2015), which in turn impacts data collected when assessing rates of violence in the healthcare industry. For example, the genesis of this research question resulted from an interview that was done by the primary author of this paper many years earlier where a nursing home aid stated that although she was stabbed in the back with a fork, she had not considered it violence and didn’t report it as a violent act because the patient had dementia (unpublished observations). She interpreted it as just an “accident” that did not require a review by security. In addition to reporting, whether nurses and other staff feel safe is also very important in terms of employee well-being and its associated benefits for the workplace climate (Gates et al, 2011; Jackson et al., 2002).

Blando et al. (2013) found that nurses’ perception of safety was significantly impacted by workplace characteristics and their confidence in their security officers and programs. 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 because it impacts employees’ sense of well-being. This survey also found that there was a difference in perception of workplace violence by different types of nurses. 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 (Blando et al. 2013). This 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 (Blando et al., 2013). The result 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.

Blando et al. (2015) also investigated what healthcare workers perceived as the most significant barriers to an effective security program (see Table 1).

As you will note, item #2 in Table 1 demonstrates that the perception of violence by staff was considered a significant barrier because it impacts reporting and with under-reporting of incidents it becomes difficult to have data driven evidence-based security decisions. It is notable that table 1 item # 7 references community problems as a significant challenge to an effective security program and this is corroborated with a later finding that security directors have the same belief as workers, that community problems such as mental illness

and addictions are significant sources of violence in the healthcare setting (Blando et al., 2017a).

Prevention Strategy Surveys

Workplace violence prevention is key to protecting workers and often prevention programs and controls for workplace violence can be applied across 5 program elements (Table 2) (OSHA, 2015). OSHA points out that management commitment and employee participation are crucial (OSHA, 2015).

Blando et al. (2017b) found that security directors reported sensible access control as a key engineering control of a healthcare facility to prevent violence and that utilization of data and surveillance as particularly helpful in allowing security to target specific areas in the facility for security emphasis. Security directors reported that they believe cameras do not deter violence events from occurring but rather serve as an excellent source of documentation when events do occur. This survey found that a particularly strong belief by most security directors was 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, having a general awareness training for all employee but more advanced and comprehensive training for employees at a greater risk of workplace violence (e.g. emergency department staff, behavioral health, security, etc.) (Blando et al., 2017b). This survey also found that many survey respondents (40%) felt that in-house security officers provide the best option for quality security services because the officers are more invested in the program, provide greater consistency, know the hospital staff, and have the most familiarity with their facilities (Blando et al, 2017b). Some security directors in this survey (Blando et al. 2017b) questioned the ability of former law enforcement officers to transition from a police mentality to a more customer-oriented security role, which led to a more detailed analysis of data presented in Blando et al. (2017a). In the more detailed analysis of security director attitudes and beliefs, it was found that security directors with a law enforcement background tended to cover more than one facility, represented a smaller percentage of those who analyze data, were a smaller percentage of those who offer web-based training, and also typically represented a smaller percentage of those who ran structured and formal security or safety committee meetings but rather had an ad-hoc meeting style (Blando et al., 2017a). This finding is not surprising in that it matches what behavioral scientists have found with respect to the approach and worldview of security and police personnel, such as more highly valuing “street smarts” over data analysis (Patterson et al. 2009). In addition, a comparison of compliance among the New Jersey hospitals in this survey (Blando et al, 2017a) found that having a security director with a law enforcement background was not associated with a significantly higher compliance rate compared to those security directors without a law enforcement background when using the New Jersey workplace violence in healthcare facilities regulations as a benchmark.

Surveys of Weapons Policies and Experiences

Based on the previously cited surveys of hospital security directors, there appeared to be many unresolved questions about weapons policies and use in healthcare facilities. As a result, Old Dominion University faculty in the School of Community and Environmental Health embarked on a survey of security directors that were members of the International Association of Healthcare Security and Safety (IAHSS; <https://www.iahss.org/default.aspx>) to ascertain weapons policies and experiences in the hospital setting (Blando et al., 2019; Blando et al., 2020).

Security 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 were reported more frequently than arming security with guns in this survey (Blando et al, 2019). Some of the survey respondents expressed concern about potential for escalation of force during incidents while other survey participants thought additional weapons carried by security would add another layer of protection. The majority of the survey respondents (61%) felt that an officer losing control of their weapon was unlikely or very unlikely and 25% had a neutral opinion. Therefore, only 14% thought that a security officer losing control of their weapon was likely or very likely (Blando et al., 2019). Kelen et al. (2012) found that 8% of the shootings reported in their survey were the result of a security officer or police officer losing control of their gun. Regardless, the prevalence of carrying guns or other weapons among security officers is increasing, with 23% of the survey respondents indicating that there is an increasing tendency for security officers to carry guns and 38% reporting that officers use other weapons (such as Tasers) (Blando et al, 2019). The frequency of training with Tasers and guns was variable, with less frequent training with Tasers (Blando et al, 2019).

Additional analyses were conducted to investigate factors that contributed to more frequent weapons confiscation from patients and visitors by security. Blando et al. (2020) 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. 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 (Blando et al., 2020). The higher prevalence of weapons confiscation by facilities with in-patient psychiatric units likely resulted from the standard practice of searching psychiatric patients before admission. This 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 of the conundrums faced by security directors was the disposition of weapons that are confiscated, especially for 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 they are discharged from the hospital (Blando et al, 2019). However, this can represent a security concern if the patient is angry or emotionally unstable when they are discharged. Life changing and extreme life events occur in the hospital setting which can cause situations to escalate unexpectedly.

The addition of a firearm to this situation can further enhance the hazard associated with this situation. As a result, many survey respondents were very conflicted about the best procedures to return legally owned weapons that are confiscated.

Conclusions

Workplace violence in the healthcare sector is a serious public health concern and has far reaching and important impacts on many aspects of healthcare. It was notable that community crime rates do not predict injury rates from violence among staff but rather security program quality was an important predictor. This demonstrated the importance of effective and comprehensive security programs. The surveys summarized in this report demonstrated several other key characteristics, including variability in the perceptions of violence by staff with potential to impact reporting and impact prevalence calculations on the magnitude of the problem. These surveys also demonstrated that training of employees was considered to be very important by security directors, while 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 under-utilized by security programs. There are several unresolved questions that require further investigation, such as the appropriate practices for return of legally owned guns to patients and visitors once they leave the hospital and the training needs, appropriate circumstances, and results from arming security guards with firearms or other weapons. Further research in these areas may provide answers and guidance to further enhance security programs and improve worker and patient safety.

Disclaimer:

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention.

References

- Astrom S, Karlsson S, Sandvide A, Bucht G, Eisemann M, Norberg A & Saveman B-I (2004) Staff's experience of and the management of violent incidents in elderly care. *Scand J Caring Sci* 18, 410–416. [PubMed: 15598249]
- Aumack T, York T & Eyestone K (2017). Firearm discharges in hospitals: an examination of data from 2006–2016. *Journal of Healthcare Protection Management*, Vol. 33(1).
- Blando J; McGreevy K; O'Hagan E; Worthington K; Valiante D; Nocera M; Casteel C; Peek-Asa C (2012). Emergency department security programs, community crime, and employee assaults. *J Emergency Medicine*, 42(3): 329–338.
- Blando JD; O'Hagan E; Casteel C; Nocera M; Peek-Asa C (2013) Impact of Hospital Security Programs and Workplace Aggression on Nurse Perceptions of Safety. *Journal of Nursing Management*, 21: 491–498. [PubMed: 23406321]
- Blando J (2014). Violent Patients, Abusive Staff: A Summary of Unpublished Study Findings. *Nursing in the 21st Century*, 1(3): 64–74.
- Blando JD; Ridenour M; Hartley D; Casteel C (2015). Barriers to effective implementation of programs for workplace violence prevention in hospitals. *OJIN: The Online Journal of Issues in Nursing* (American Nurses Association) Vol. 20 No. 1. <http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/>

- Blando J; Ridenour M; Hartley D; Nocera M (2017a) Hospital security director background, opinions, and the implementation of security programs. *Journal of Applied Security Research*, 12 (4): 497–511.
- Blando J; Nocera M; Ridenour M; Hartley D (2017b) Workplace violence and hospital security programs: regulatory compliance, program benchmarks, and innovation. *Journal of Healthcare Protection Management*, 33(1), 89–105. [PubMed: 30351554]
- Blando JD; Cramer R; Szklo-Coxe M (2019). Hospital Security Programs and Policies related to Guns and Other Weapons, *Journal of Healthcare Management*, 64(3); 157–166. [PubMed: 31999265]
- Blando J (2020). Workplace Violence Prevention in Nursing Homes CDC Contract # 212-2012-M-51289, NIOSH Violence Prevention Mod 8 – Nursing homes, Final Report
- Blando J; Paul C; Szklo-Coxe M (2020). Risk factors for workplace encounters with weapons by hospital employees, submitted to Public Health Reports.
- BLS, Bureau of Labor Statistics, (2018). Incidence rates for nonfatal occupational injuries and illnesses involving days away from work per 10,000 full-time workers by industry and selected events or exposures leading to injury or illness, private industry, 2018; accessed 11/17/19 at: https://www.bls.gov/iif/oshwc/osh/case/cd_r8_2018.htm
- Congress.gov, H.R.1309 - Workplace Violence Prevention for Health Care and Social Service Workers Act 116th Congress (2019–2020), <https://www.congress.gov/bill/116th-congress/house-bill/1309> (accessed 2/23/20).
- Gates D, Gillespie G & Succop P (2011) Violence against nurses and its impact on stress and productivity. *Nursing Economics* 29 (2), 59–67. [PubMed: 21667672]
- Jackson D, Clare J & Mannix J (2002) Who would want to be a nurse? Violence in the workplace – a factor in recruitment and retention *Journal of Nursing Management* 10, 13–20. [PubMed: 11906596]
- Josefsson K, Sonde L & Wahlin T-BR (2007) Violence in municipal care of older people in Sweden as perceived by registered nurses. *Journal of Clinical Nursing* 16(5), 900–910. [PubMed: 17462040]
- Kelen GD, Catlett CL, Kubit JG, & Hsieh YH (2012). Hospital-based shootings in the United States: 2000 to 2011. *Annals of Emergency Medicine*, 60(6), 790–798. doi:10.1016/j.annemergmed.2012.08.012 [PubMed: 22998757]
- NIOSH (2017). Workplace Violence Prevention Course for Nurses. By Hartley D. and Webb S. Morgantown, WV: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication 2017–114.
- OSHA (2015). Guidelines for Preventing Workplace Violence for Healthcare and Social Service Workers, U.S. Department of Labor, Occupational Safety and Health Administration OSHA publication #3148–06R
- Patterson PH, Clarke P, Krause C, van Dijk M, Penman Y, & Shiell A (2009). The worldview of hospital security staff: Implications for health promotion policy implementation. *Journal of Contemporary Ethnography*, 38(3), 336–357.
- Roche M, Diers D, Duffield C & Catling-Paull C (2010) Violence Toward Nurses, the Work Environment, and Patient Outcomes. *Journal of Nursing Scholarship* 42(1), 13–22. [PubMed: 20487182]
- Smalley C, O’Neil M, Engineer R, Simon E, Snow G, & Podolsky S (2017). Dangerous weapons confiscated after implementation of routine screening across a healthcare system. *Am J Emerg Med*, 36: 1497–1520.
- United States Government Accountability Office (GAO). (2016). Workplace Safety and Health: Additional Efforts Needed to Help Protect Health Care Workers from Workplace Violence. (GAO 16–11). Washington D.C.

Table 1 –

Barriers to effective security programs identified by healthcare workers in a focus group survey.

	Themes Identified in Focus Group Sessions
1	lack of action resulting from reporting
2	varying perceptions of what constitutes violence
3	Bullying by coworkers and/or supervisors
4	impact of 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

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 Adaption	Utilizes equipment, physical layout, and design of workspace to reduce risk	Panic buttons, security guards, access control, lighting, visibility
Training	Utilizes education and awareness to reduce risk	De-escalation techniques, risk recognition
Recordkeeping and Program Evaluation	Investigating and documenting incidents and follow-up to assure program metrics are met.	Incident reporting system and after-action reports. Program review by designated committee.