Effective Controls on Emergency Department Violence

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The healthcare field is expected to grow by 16% from 2020 to 2030. According to the U.S. Bureau of Labor Statistics, healthcare is growing rapidly and will add approximately 2.6 million new jobs by 2030. There is expected to be more growth in jobs in healthcare than in any other industry. Job growth in healthcare is expected to grow much faster than all other occupations into 2031 (US Bureau of Labor Statistics, n.d.). Violence is more prevalent in healthcare than in any other industry. The Occupational Safety and Health Administration (OSHA) states that approximately 70% to 74% of the 25,000 assaults occurring in the workplace annually happen in healthcare and the social service setting (OSHA, 2015). Workplace violence is defined by the National Institute for Occupational Safety and Health (NIOSH) as the act or threat of violence. NIOSH describes that violence can range from verbal abuse to physical assaults that are directed toward a person while on duty at work. NIOSH describes a wide range of impact from violence such as psychological issues, injury, and death. NIOSH also describes how nonfatal violence resulting in days away from work is the greatest for those working in healthcare (Occupational Violence, n.d.).

The American Hospital Association (AHA, 2022) has been advocating for a federal law to protect those working in healthcare from violence and intimidation similar to the law for those working in the airline industry. The AHA describes how healthcare has had an increase in workplace violence since the beginning of the COVID-19 pandemic. The AHA points out that 44% of nurses reported experiencing an increase in physical violence since the pandemic. In addition, the AHA reported 68% of nurses stated that they had experienced an increase in verbal

abuse since the COVID-19 pandemic. The AHA argues that nurses and physicians cannot provide attentive care if they have fear for their own personal safety or are distracted by patients and family members who are disruptive or are even traumatized from prior violent incidents. AHA states that studies show violence in the workplace damages productivity of employees, increases chances for adverse medical events, and even reduces patient satisfaction (AHA, 2022).

Security Magazine reported a survey that showed 92% of all healthcare workers actually experienced workplace violence in April 2022 at their medical facilities. This report described how 9 out of 10 healthcare workers experienced or directly witnessed violence from a patient or their caregiver in the month of April of 2022. Three out of four healthcare workers encountered verbal and physical assaults during that month. Almost half of the healthcare workers needed to call security or another coworker to assist them with a violent situation (Security, 2022).

The International Association for Healthcare Safety and Security (IAHSS) Foundation 2022 Crime Survey found that the rate of hospital violent crime, which includes murders, rapes, robberies, and aggravated assaults, increased to 2.5 incidents per 100 beds in 2021, which was a 47% increase compared to 2020 when the rate of violent crime was 1.7 per 100 beds. The crime survey showed that 119 hospitals reported not having an inpatient psychiatric/behavioral health unit. There were 105 hospitals (45%) that reported having an inpatient behavioral health unit. The hospitals having a psychiatric/behavioral health unit tended to be bigger, averaging 399 beds as opposed to 234 bed average for hospitals without a psychiatric/behavioral health unit. These hospitals having psychiatric/behavioral health units were not only larger but also had more security officers. In addition, the survey showed that hospitals with threat management teams and visitor management programs tend to be more prevalent in larger hospitals with more beds.

Disorderly conduct and simple assault rates were higher in hospitals that had threat management teams. The violent crime rate in hospitals with visitor management programs was higher than hospitals that did not have them. This survey stated there should be no conclusions drawn from data about the effectiveness of threat management teams or visitor management programs because hospitals facing higher crime rates may be more likely to deploy such measures (IAHSS Foundation, 2022).

U.S. hospitals spent $4.7 billion on security in 2016 and an estimated $847 million was cost specifically to address workplace violence according to the American Hospital Association. Workplace violence is defined in many different ways depending on the organization. However, the IAHSS Council on Guidelines (2023) defines workplace violence as an act or threat occurring at the workplace that can include any of the following: verbal, written, or physical aggression; threatening, intimidating, harassing, or humiliating words or action; bullying; sabotage; harassment; physical assaults or other behaviors of concern involving staff, licensed practitioners, patients, visitors, or others on site or off-site when related to the healthcare facility.

Three factors contribute to healthcare workplace violence issues and are described as the root of the problem including clinical risk factors, environmental risk factors, and organizational risk factors (Terry, 2022). To combat these risk factors there are five responses that should be considered. First there should be engagement with healthcare staff, leadership, and external partners. Second is the development of a workplace violence prevention program. Third is to mitigate threats by using the IAHSS guideline 01.09.03 *Violence in Healthcare Threat Management* to develop your program and policies. The fourth is to conduct ongoing workplace violence prevention training for staff. Finally is the implementation, ongoing review, and quality improvement process for the workplace violence program at your organization.

According to OSHA, working in healthcare makes you four times more likely to be a victim of violence than in other industries (OSHA, 2015). The healthcare and social assistance industry experienced injury rates at 10.4 per 10,000 full-time workers in 2018 compared to 2.1 with all other workers (Bureau of Labor Statistic, 2018). This data shows healthcare workers are five times more likely to suffer workplace violence injury than other workers. Emergency Departments inside the healthcare setting maintain one of the highest risks of workplace violence. Employees working inside of an Emergency Department (ED) are too often experiencing violence with 70% of ED nurses stating they have been hit or kicked while on duty (American College of Emergency Physicians - ACEP, 2022a). ED nurses also report being frequently assaulted with one out of every four being assaulted on the job (American Nurses Association – ANA, 2018).

It is clearly documented that workplace violence is a national epidemic (Marcisz, 2022). It has been documented for many years that there is a significant issue of workplace violence in the ED, and that workplace violence often goes unreported (Ford, 2012). Healthcare workers often will not make a report on workplace violence incidents for multiple reasons. Healthcare staff often have a perception as though violence is part of the job and also state they do not know who to report workplace violence incidents to (Jacobson, 2014). Healthcare workers report they are often discouraged from reporting workplace violence incidents, and they also report they get very little support to press charges as a victim (Skerrett, 2015). The Joint Commission (2022) accredits hospitals and state healthcare workers are four times more likely to be victimized than in other industries. The Joint Commission references the Occupational Safety and Health Administration in their Sentinel Even Alert #59 (The Joint Commission, 2018). The alert states that 75% of workplace assaults annually are in healthcare. In addition, the Joint Commission

reports only 30% of nurses report incidents of violence, and only 26% of ED physicians report workplace violence. According to The Joint Commission, underreporting happens because of the perception that violence is part of the job.

Healthcare staff deal with a range of emotions including fear and anger even well after the incident has occurred (Stevenson et al., 2015). Employees experiencing workplace violence incidents can have post-traumatic stress disorder (PTSD), and many other issues such as problems sleeping, being depressed, and even decreased work performance (Workplace Violence, 2009). Rates of PTSD in the ED have even been reported as higher than in other workplaces (Laposa et al., 2003.) There are many precipitating factors that contribute to the violence concern in the ED. For example, patients dealing with issues such as financial concerns, mental health, and substance use disorder can exacerbate the workplace violence concern in an ED. Other factors that contribute to increased violence in the ED include some patients being frequent users of the ED and when a patient dies (Gillespie et al., 2013).

There is a generally recognized factor list that contributes to a stressful setting in healthcare (Clay, 2022). One factor is the providing of "bad news" such as a poor health diagnosis to those who have insufficient skills to cope with the bad news. Patients, visitors, or family who are under the influence of alcohol or a controlled substance or are dealing with behavioral disorders are other factors, along with the denial of narcotics or other controlled substances, refusal to meet illegitimate requests such as insurance reimbursement, or a diagnosis change to help them get on disability. Another factor contributing to violence is misplaced blame from the patients for a bad financial situation from charges related to their medical treatment. Not having enough inpatient health beds, which may result in patients not receiving appropriate care, is another factor. Other factors are "unarresting of a patient" until medically clear for

billing responsibility, or some law enforcement agencies using the hospital for care. Other factors contributing to violence are isolation of healthcare workers, lack of training on escalating and assaultive behaviors, and increased wait times in the ED.

The frequent and violent acts of violence on ED nurses, physicians, and patients are unconscionable and unacceptable (American College of Emergency Physicians, 2022a). The American College of Emergency Physicians (ACEP) states that the violence in the ED must not be tolerated any longer as part of the job. The ACEP (2022b) conducted a study polling 2,712 ED physicians that provided many findings. They found that 85% of ED physicians believe the violence rate has increased in the past five years, with 45% stating it has greatly increased. There were 66% of the ED physicians who reported being assaulted just in the past year. The survey showed that 98% of the assaults committed against ED physicians were committed by patients. The survey also showed that 64% of the assaults were verbal and included a threat of violence, which was first on the list. Hits and slaps were second at 40%, being spit on was reported by 31% of physicians, 26% reported getting kicked, and 25% reported getting punched. The ED physicians stated in this survey that 42% of the assaults come from psychiatric patients, and another 40% from those under the influence of drugs or alcohol. There were 85% of the physicians who reported emotional trauma and increased levels of anxiety as a result of violence in the ED (ACEP, 2022b).

There are multiple security issues that need to be addressed in regard to workplace violence. Each ED should have a security plan for their ED to address workplace violence while also training ED staff on signs of potential violence before it occurs (Emergency Department Violence Fact Sheet, 2015). There are multiple physical security issues that need to be addressed in a holistic manner. Lighting, barriers, and cameras should all be addressed (Goel et al., 2014).

The presence of security officers in the ED should be addressed in addition to policies, staffing, wait times, and panic alarms (Gillespie et al., 2013). The healthcare facility should implement a multi-disciplinary process to address violence in the workplace, along with preventing incidents and responding to them. The process should have five main components to help prevent workplace violence as clearly articulated in the International Association for Healthcare Security and Safety (IAHSS) General Industry Guideline 01.09 to address violence in the healthcare environment (IAHSS, 2023).

Management commitment should be obtained and maintained for the security program. In addition, staff involvement is important, and staff should also be trained in violence prevention and mitigation. A risk assessment, along with prevention and mitigation, should also be conducted. A worksite analysis should be conducted, and plans should be developed to respond to violence. Finally, the facility should gather data that is both internal and external, keep records, evaluate, and address reporting. A multidisciplinary team should create and maintain a workplace violence program that includes prevention strategies. The team should have representatives from security, clinical, risk management, legal, human resources, ancillary/support staff, executive leadership, and others as appropriate (IAHSS, 2023).

A large Ohio hospital stated they are exposed to violent outbursts literally daily, and in particular in the Emergency Department (Harris-Taylor, 2019). Those working in healthcare have increased risk for experiencing injuries from workplace violence. Incidents in which healthcare workers are injured by workplace violence incidents and had to take time off to recover are four times as likely in healthcare than in other industries (OSHA, n.d.). Workplace violence, specifically in EDs, has reached epidemic levels (Emergency Nurses Association [ENA], n.d.). Many EDs are not offering education to their nurses in regard to workplace

violence prevention (Walrath et al., 2010). As many healthcare institutions focus on cost reduction strategies, hospital security programs are further challenged to address the workplace violence concern by often having few resources (Ortmeier, 2012).

There are several security deficits significantly impacting healthcare which include a concern by employees and patients that the healthcare environments provide inadequate security (Marco & Hart, 2015). Other deficiencies and concerns include little or no de-escalation training programs along with a lack of security policies (OSHA, 2015). There is a culture of violence being tolerated in the ED workplace that creates more concerns and pressure on ED staff to not press charges against the perpetrators of violence (Stene, 2015). There are multiple engineering and physical security controls the ED should consider, including good barriers, lighting, security officers, metal detectors, panic alarms, cameras, and locks to help address the concern of workplace violence (Preventing Workplace Violence, 2015). The Emergency Department needs to consider administrative and work practice controls including training, procedures, minimizing the time the workers are alone, and ensuring properly trained security officers are in place (Digital Government & Service NL, 2016). There is a need for more literature addressing the impact of security controls such as the presence of a security officer upon workplace violence (Gillespie et al., 2013). Some EDs see increased workplace violence because of poor communication between security and the ED staff, the ED relies entirely on security to prevent violence, and finally, at times there is not a security officer posted in the ED (Corbin, 2015).

Purpose of the Study

The purpose of this study was to help identify effective controls on Emergency Department violence. A second purpose of the study was to identify the controls and the prevalence of controls used by hospital EDs.

The World Health Organization (WHO) released a three-year analysis in 2021 that described how 700 healthcare workers and patients have died with 2000 being injured because of violent attacks since 2017 (Bellizzi et al., 2021). Security controls such as policies, design of workplaces, training programs, obtaining feedback from staff, and utilization of security officers are all security controls that might have a positive impact on the workplace violence concern in the ED. (Emergency Department Violence Fact Sheet, 2015). Many issues contribute to increasing workplace violence issues in the ED including substance use disorder and increased risk with psychiatric patients (OSHA, 2015). As the budgets tighten, the current economic situation is challenging, then often patients have few options in regard to getting treatment for substance abuse disorder and psychiatric issues (Trebe, 2015). The security officer is often the first person who is called to respond when violence strikes in the healthcare organization (Peek-Asa et al., 2002).

Healthcare workplace violence is a serious concern that needs to be addressed. Those working in healthcare are more likely to be kicked, spat on, hit, grabbed or assaulted (Jacobson, 2014). Within a year 80% of nurses reported they were attacked (Jacobson, 2014). Over half of the nurses surveyed in 2011 stated they had experienced physical or verbal violence during their past week of work (Emergency Department Violence Surveillance Study, 2011). Basic security programs such as de-escalation training for staff working with patients and families who can become challenging are missing in many hospitals (Corbin, 2015). Hattersley (2015) found that 64% of hospitals said they did not have enough security officers to provide adequate security at their hospital. To compound this workplace violence concern further there is also an attitude of indifference that healthcare workers feel is sometimes present among criminal justice officials and hospital administrators (Jacobson, 2014).

Hospitals in America are not the only ones struggling to address the issues of workplace violence (Cooper & Swanson, 2015). A Swiss study was conducted for 12 months and concluded 72% of nurses had been a victim of verbal violence from a patient or visitor in the last year (Hahn et al., 2008). A study in Australia showed 65% of nurses perceived emotional abuse while working their shift (Roche, 2010). A study in Turkey shows over 80% of nurses had faced verbal abuse to the point that impacted their work performance (Gursel, 2006). Workplace violence in hospitals is an issue all over the world and continues to get worse.

The Joint Commission (TJC) inspects and accredits hospitals. For many years the TJC has published standards that address security specific to the healthcare setting. Under TJC the hospital must address multiple specific security standards in their hospitals and in the ED. TJC states the hospital must have a security management plan that describes how the hospital will plan its overall security program. In addition, the plan must describe how the hospital will address risks in the healthcare environment and be specific to areas identified as security sensitive (The Joint Commission, 2015). TJC issued specific standards to address workplace violence prevention in 2022. These standards provide much more specific directions for the healthcare facility to address workplace violence. For example, the facility must conduct de-escalation training, conduct an annual worksite analysis related to its workplace violence prevention program, and collect, access, and address workplace violence incidents (TJC, 2022).

TJC requires hospitals to identify everyone coming into the hospital, and to control access to security sensitive areas (Preventing Violence in the Health Care Setting, 2010). Multi-disciplinary meetings should occur to help address security concerns in the ED (McNew, 2014). A security guideline that is specific to the Emergency Care area is 05.06 and has been published by the International Association for Healthcare Security and Safety (IAHSS, 2023). The IAHSS

guideline for the emergency care setting helps provide direction to provide access control, security equipment, cameras, and panic alarms as appropriate. The IAHSS also has published a guideline to address violence in the healthcare environment listed as 01.09 that healthcare security leaders should also be familiar with and utilize.

The workplace violence concern has been addressed extensively by the Occupational Safety and Health Administration (OSHA). OSHA (2015) has published a workplace violence guideline that healthcare institutions can use to address violence. This guideline has a checklist that can be used by the facility to assess their current level of security. The checklist addresses many different controls such as security officers being readily available to staff, and asks if they are trained on how to de-escalate violence. There is an expectation by OSHA that the facility audits the effectiveness of controls such as alarms, locks, officers, facility design, and barriers (Butera, 2015). It has been reported that the presence of security officers reduces violence in an ED (Catlette, 2005).

The Center for Medicare and Medicaid Services (CMS) issued a memorandum warning in regard to hospitals that fail to adequately respond and prevent workplace violence, stating they are at risk of violations of Condition of Participation (CoP). The memo gives surveyors three specific CoP tags to cite and gives examples where CMS has cited hospitals for alleged failures (Vernaglia et al, 2023.) The tags that were cited are listed as follows. Patient Rights, Privacy, and Safety Sections all refer to obligations to care for patients in a safe environment. Emergency, Preparedness/Training Programs is the second one referring to requirements for hospitals to train staff and to have policies and procedures aimed at protecting both the staff and patients. The last CoP tag mentioned was under Emergency Preparedness/Emergency Plan, and it indicates that CMS expects the emergency preparedness plan to be based on and include a facility based and

community-based risk assessment that is documented utilizing an all-hazards approach. Strategies must also be included to address items identified by the risk assessment such as emergency events and patient population risks including persons at-risk. Three specific examples where CMS has cited hospitals in the past for failing to address violence adequately were given, one where a nurse was sexually assaulted by a behavioral health patient. The facility did not have adequate staffing, and the patient was only stopped by another patient. The second example was a patient who actually died after the hospital and law enforcement did a takedown on a patient. The takedown ended with a housekeeper having his knee against a patient's back while the patient was on the floor, when the patient stopped breathing and died. The third example was of a patient who was shot in his hospital room by an off-duty police officer. This event occurred after the hospital failed to perform an appropriate assessment of the patient and failed to de-escalate the patient.

This study makes multiple contributions to the healthcare security industry. The findings from this study can be used by healthcare security leaders and healthcare administrators to help them address violence in EDs. This study provides information that can be used to help make security decisions to positively impact the ED. The findings from this study can be used to assist hospitals to conserve financial and human resources wisely by investing in security controls that make a positive impact to the ED environment. Identifying the effectiveness of security controls in the Emergency Department assists the hospital in making better use of the resources to positively impact workplace violence. This study will assist the healthcare security industry across the world to make better security decisions in the ED environment to create safer environments for the ED, its staff, and patients. The study also allows hospitals to be better aware of security controls, possible efficacy of those controls, and the perceptions of staff

regarding those security controls. The study can be utilized to help alleviate workplace violence concern in EDs.

LITERATURE REVIEW

Historical Perspective

Thirty years ago workplace violence was not recognized as a public health problem (Center for Disease Control, n.d.). There were multiple factors that contributed to workplace violence being recognized as a public health problem. The number of suicides and homicides rose in the United States as the U.S. became better at treating and preventing infectious disease. Pneumonia and tuberculosis were the two major causes of death along with other infectious diseases at the turn of the 20th century. However, these infections reduced significantly as controls were implemented including environmental controls, isolation, immunization, and new techniques. Homicide and suicide have been in the top 15 causes of death in the United States since 1965. A 1979 report from the United States Surgeon General addressed disease prevention and health promotion, stating that violence prevention was one of the top 15 priority areas for the nation. The report discussed the importance of preventing violence to improve the health of the nation. In the 1990s the public health approach shifted from describing violence to what can be done to prevent it. In 1992 the Center for Disease Control (CDC) received the first appropriations aimed at curbing violence. The CDC also began studies to see what worked to curb violence, particularly in youth. The CDC findings were that significant reduction in violent behavior was possible with violence prevention programs focused on social, emotional, and behavioral competencies, as well as a family. Globally the World Health Assembly made a declaration in 1996 that violence was a leading worldwide health problem.

The Occupational Safety and Health Administration was signed into law by President Richard M. Nixon on December 29, 1970 (OSHA, n.d.). OSHA has helped make workplaces become safer by reducing the number of workplace fatalities, injuries, and illnesses. Even though there are no specific standards under OSHA for workplace violence the issue still needs to be addressed. The General Duty Clause of OSHA is Section 5 (a)(1), and states employers are required to provide employees a place to work that is free from hazards that are causing or likely to cause death or serious physical harm. According to OSHA, once an employer has experienced or becomes aware of the potential for violence the employer should implement a workplace violence prevention program. OSHA has developed guidance and procedures on inspections and issuing citations related to employees being exposed to workplace violence. OSHA expects employers on notice with a risk of workplace violence to enact workplace violence programs that have engineering and administrative controls, along with training (OSHA, n.d.).

In 1996 OSHA first published its voluntary guidelines for preventing workplace violence specifically for healthcare and social service workers. This OSHA document 3148 has been updated and specifically states how those working in healthcare are at significant risk of job-related violence. The document refers to the National Institute for Occupational Safety and Health (NIOSH) defining workplace violence as violent acts including physical assaults and threats of assaults directed to a person at work or on duty. OSHA documents that healthcare workers suffer just under 20% of all workplace injuries, however they suffer 50% of all assaults (OSHA, 2015). From 2011 to 2018 violence against those working in health care grew by 63%. Hospital safety directors discuss how aggression against hospital staff got worse as the COVID 19 pandemic got worse as well.

There are various reasons for aggression, including patient anger, patient confusion, grief over loved ones who are receiving medical care, and frustration. Frustration comes from many different areas including staffing shortages, delirium dementia, mental health disorders and many others. Here are a few examples of violence in healthcare from 2022. In an Oklahoma hospital a patient became angry about his continued pain after back surgery entered the hospital and shot the doctor who performed his surgery along with another doctor, another hospital employee, and a visitor. Staff at a Massachusetts hospital received threats of violence over the hospital's policy related to transgender healthcare for minors. There was also a man upset over the death of his parents who punched the nurse and made her unconscious in the intensive care unit at a hospital in Louisiana. There is also research that shows 23% of physicians are being attacked on social media about social views, political views, race, religion and even the care they delivered to patients. The Joint Commission accredits hospitals and after receiving increased reports on violence put new workplace violence prevention standards into effect in January of 2022. The standards focus on several key prevention measures such as a required annual worksite analysis relating to the workplace violence prevention program, training staff on violence prevention, and collecting information on, monitoring, and investigating violent incidents. The Joint Commission defines violence to also include aggression and states it is not limited to being physical in nature. Violence in the Joint Commission's definition includes bullying and humiliation, along with sexual harassment that can be electronic or in person. Congress has taken action to help the healthcare violence issue as well. They have proposed H.R. 1195 Workplace Violence Prevention for Health Care and Social Services Workers Act. This act passed the House, and Senate has received the bill and they have referred it to the Committee on Health, Education, Labor and Pensions. This bill would require certain employers to take action to protect their

workers from violence in the workplace. The standard would apply specifically to employers in healthcare, social service, and those in similar fields. The act could allow for those committing assaults against health care workers to face increased penalties (US Congress, n.d.).

Security Staff

De-escalation training and implementation are very important for healthcare security staff to effectively deal with a potentially violent situation. There are several key best practices to consider when training security staff (Stone, 2021). One best practice is to address the body language of the security staff to make the situation less confrontational and safer. Equipping security officers with other resources is important such as giving them phone numbers for additional services, pamphlets for social workers, or other resources that can help people. Redirecting can be a key practice to help the person refocus their attention by changing the environment, or maybe getting them a cup of water to de-escalate to help get to the root cause of problem. Some hospitals have success by allowing new security officers to train with existing officers. Officers also may be encouraged to achieve their healthcare security certification program sponsored by the International Association of Healthcare Security and Safety (IAHSS). In addition, security officers will go through de-escalation and crisis intervention training to help them be effective. Hospitals also utilize scenarios to help the security officers to train in a more realistic environment.

A phenomenological research study was conducted at a large medical center in Texas (Roberson, 2021) to obtain consequences of workplace violence exposure on security officers in the ED and to describe their perspectives of the issue. In the study Roberson (2021) interviewed 10 security officers who had experienced recent workplace violence in the ED where they worked and then conducted a content analysis of the qualitative data gathered from the

interviews. Common themes emerged from the data: job performance and leadership support were overarching themes. In regard to job performance, the researcher found there were variations in the interpretation of workplace violence. The next theme was communication. In regard to communication the researcher listed issues such as a lack of reporting, lack of understanding of roles and responsibilities. In regard to understanding the study, it highlights the importance of listening, understanding, talking, and sharing information in an effort to help decrease workplace violence incidents. The final theme that emerged was a stressful work environment. Participants mentioned several issues related to a stressful work environment such as homeless patients, mental health patients, gunshot wound patients/families, Level 1 Trauma Facility, staffing, and frequency of calls. In regard to the leadership support theme the subthemes were training, safety, and debriefing for process improvement. The need for leadership strategies as part of support strategies was obvious in the findings. Roberson discussed how shared leadership provided cohesiveness among the security officers and promoted trust as the professional security officer encountered violent acts.

A mixed-methods, quasi-experimental study looking at eight months of security incident data and patient satisfaction data was conducted at a hospital ED in Kentucky (Hill, 2017). In the study, Hill (2017) gathered eight months of security incident data and patient satisfaction data while a security officer was stationed in the ED, then the security officer was removed due to downsizing the department and eight more months of data were gathered. Interviews were also conducted with 26 ED staff members who were working during the eight months with a security officer, and then also during the 8 months post treatment when the security officer was removed. The quantitative data collected were analyzed running *t* tests comparing the period with a security officer and during the period without a security officer on the dependent variables of

patient's perception of security and security incidents. A content analysis was conducted on the qualitative data gathered from the interviews, allowing Hill to identify patterns and common themes. There were no significant findings in regard to the security officer's impact on security incidents. However, Hill noted that security incidents did decrease without a security officer being present. The researcher concluded this finding likely indicates that not all security incidents were reported or documented when a security officer is not present. The finding that security incidents are often unreported was supported in prior literature (Ford, 2012). The content analysis of the qualitative data showed common themes that a security officer stationed in the ED made the ED employees feel safe. The ED staff liked having a security officer stationed to be able to respond quickly to a concern they may have. In addition, another theme was the ED staff felt the security officer's presence actually deterred bad behavior from occurring in the ED and allowed for improved visitor control. The researcher found the ED staff did not feel the security officers are accessible in a timely manner when not stationed at the ED. The finding that the ED staff want more security officers to help protect them and their patients is also documented in previous literature (Kuhn, 2014). Finally, Hill found no significant findings related to the security officer's impact upon patients' perception of security. While the findings were not significant, the researcher did find that the patients' perception of security did decrease in the ED when a security officer was not present, another finding that is supported in prior literature (Bukowski, 2014).

One concept analysis identified three critical attributes that help develop a definition of violence against ED staff by patients and visitors (Hou et al., 2022). These are common attributes identified in workplace violence incidents, which are critical to understand because violent behavior requires each of them. First, a patient or visitor becomes an assailant. Second, there

must be the presence of a suitable target for violence. Third is the absence of capable guardianship in the ED setting. In the ED patients and employees can change their roles and become assailants and victims. Guardianship can be viewed in many different ways as the target is protected. Guardianship deters violence from occurring by providing a security officer, police officer or other security control to protect or deter violence.

Weyand et al. (2017) conducted a study of ED directors in Washington State regarding ED security and violence. There were 78 ED directors who completed a web-based survey. The ED directors reported that 45% of their current security levels were inadequate at their ED. There were 63% who stated they had 24-hour security coverage in their ED, while 28% stated that they had no security staff assigned to the ED. There were 88% of respondents who witnessed directly or heard about threats or acts of violence in the ED. The violence was directed toward nursing first, second was the ED physician, third was the security staff, and last was the administrative staff. Thirty five percent of the staff stated that the response from security would not be adequate and 26% stated no additional security would be able to respond within 15 minutes (Weyand et al., 2017).

The IAHSS has a comprehensive industry guideline 02.02 specifically addressing security officer training. The guideline discusses how the quality of the security training program is so important for the success of the healthcare security program. The guideline addresses how those in security should be trained to meet industry best practices and standards required legally. The guideline discusses how training should be specific to the facility and to the environment. Job descriptions are specifically addressed in the guideline along with the importance of training being relevant to the healthcare officer and that training results in competency that is acceptable. The guideline specifically mentions how training should have

identified learning outcomes, provide a foundation of knowledge in customer service, while addressing public relations, response to calls, and proper documentation. The guideline addresses several other areas in its intent statements, such as verbal de-escalation, how to manage physical disruptive behavior, and use of force. The guideline discusses how training should be ongoing for further development. In addition, the guideline emphasizes the importance of keeping training records with details documented. The guideline also encourages progressive certification levels that are developed by IAHSS. Finally, the guideline discusses having equivalent training between proprietary, contract, and law enforcement officers as appropriate in areas where jurisdiction prescribes mandatory training (IAHSS, 2023).

It is important to be aware of all IAHSS guidelines such as 01.02, which addresses the Security Management Plan. This guideline discusses how the healthcare facility should develop a plan that is comprehensive in nature. The guideline calls for a holistic approach to security by addressing systems, people, processes, and technology. This approach focuses on measures geared to prevent, protect, and respond while helping to provide a safe and secure environment. The guideline states how the plan should be based on the risk assessment, the needs of the facility, along with requirements to meet accrediting or regulatory agencies. The security management plan should include a mission statement, authority statement, security sensitive areas, documentation system, training programs for security and hospital staff, annual evaluation report, strategic plan, and several other items referred to specifically by the guideline. Finally the guideline states how the plan should be developed by using the IAHSS Healthcare Security Industry and Design Guidelines and evaluated and modified on an ongoing basis (IAHSS, 2023).

IAHSS guideline 02.01. deals with Security Staffing and Deployment. While the guidelines describe how no single formula can determine an appropriate staffing level, the

guidelines do provide a significant amount of information in its intent statements. The security leader should be aware of these guidelines and specifics in it to help provide a reasonable and appropriate staffing deployment. For example, the guideline points out how a security vulnerability assessment should be conducted by a qualified security professional before staffing levels are determined. The guideline specifically discusses 13 specific factors to be considered to help lead to reasonable and appropriate staffing. Philosophy of the organization, staffing models, crime analysis, incident activity, duties and expectations, trends, fixed post assignments, scheduled routine functions, and total campus area are just some of the factors that need to be considered to address staffing appropriately (IAHSS, 2023).

Response Teams

Behavior that is disruptive from patients in hospitals has become a top area of concern for medical staff. Appropriate screening and interventions that are proactive have been shown to actually reduce inappropriate behavior. Patients who are hospitalized in a non-behavioral health unit and have psychiatric comorbidities are at increased risk for a longer length of stay for a couple of reasons (Morrison et al., 2020). First, the patient has complexities that make treatment more difficult. Second, the patient on a non-behavioral health unit struggling with disruptive behavior can be difficult to treat. According to research, 20-40% of patients who are hospitalized on general units that are non-behavioral health units have a diagnosis that is psychiatric in nature. These patients also have a length of stay that is 25% longer at 6.6 days versus those with no behavioral health diagnosis at 5.3 days. Patients exhibiting a psychiatric diagnosis also had a 17% higher mean variable cost per discharge at $11,307 vs $9,642 for those with no psychiatric diagnosis (Morrison et al., 2020).

A hospital in Tennessee conducted a study to gauge the impact of their response team, called a Behavioral Intervention Team (BIT; Morrison et al, 2020). The study included patients who were in the hospital and discharged and also included nursing staff on those units. The BIT team consults proactively and also proactively provides liaison psychiatric services. There were 623 staff nurses who participated and 58% of them reported situational anxiety in caring for the patients exhibiting psychiatric issues, while 50% of the nurses felt uncomfortable caring for the patients with disruptive behavior and 44% feared for their own personal safety. Fifty-six percent of these non-psychiatric nurses reported caring for behavioral health patients on a weekly basis. The study data suggested nursing turnover rates are higher in units that have higher rates of patients with psychiatric comorbidities. The BIT team is comprised of a psychiatric-mental health nurse, advanced practice nurse, a clinical social worker, and psychiatrist is consulted on non-psychiatric units. The team offers proactive screening upon admission, comprehensive chart review, and a brief interview if needed to identify patients with an increased risk of displaying disruptive behavior. The team then provides appropriate interventions, but also provides education and support to the patient care teams. The implementation of the BIT team occurred in regard to 1790 patients. There were two significant outcomes of the study. First, after the implementation of the BIT staff reported increases in their comfort level. Second, after implementation of the BIT staff also reported an increase in their confidence in dealing with psychiatric, threatening, disruptive, and acting out behavior (Morrison et al, 2020).

Medical rapid response team (RRT) first came out as a standard of care in 2004 as part of the 100,000 Lives Campaign (Heumann, 2018). Although there were medical codes in place for response to give cardiopulmonary resuscitation, these RRTs emerged to offer proactive team-based treatment to better assist the patient. Hospitals across the U.S. came together to better

serve the patient by offering RRTs. Today it is common for hospitals to have medical teams work together to limit risk related to medical issues such as strokes, obstetrical issues, heart issues, and many others. In many medical facilities medical emergencies are better addressed than behavioral emergencies. Behavioral emergencies refer to three different types that cause patients to react differently, including clinical psychiatric patients, patients coping with stress reactions, or patients dealing with conflicts due to iatrogenic insults. Clinical psychiatric emergencies are generally medial or pharmacological in nature such as patients dealing with agitated delirium. These emergencies are also developmental such as a patient with severe autism or neurobiological concerns related to a patient with decompensated psychosis or related to substance use. Patients who are dealing with coping/stress reactions discuss how their behavior issues come from receiving a bad diagnosis, bad news, or when feeling overwhelmed. The behavioral emergency issues coming from conflict due to iatrogenic insults emerge as patient experiences distress after experiencing poor treatment by staff due to a bias or stigma. Sometimes the iatrogenic insults or bad news may be reacted to by visitors or families as well. It is noted that patient distress is psychosocial and can be made worse by the behavior of the person responding (Parker et al., 2020).

There has not been a widespread number of hospitals that have implemented behavioral emergency response teams (BERT) that are behavioral interventions centered on the patient. There seems to be an ongoing perception that having a BERT is not medically necessary and is optional only. However, another perception is that a BERT can be seen as a security threat. There are 21 state hospital associations that fail to back the implementation of a BERT, that is different from a security only response. The safety culture that is present is that for medical emergencies, medical rapid response teams are called to respond, however security is only often

called to respond to a behavioral crisis. The security department dispatches security staff who are trained to suppress violence that is imminent instead of focusing on treatment of the patient that is patient-centered. An argument can be made for a more comprehensive intervention that not only has oversight by the clinical team, but also includes patient advocacy with security being integrated to the response to address physical danger to others (Parker et al., 2020).

RRTs are called for medical emergencies, however US hospital staff are trained to call a security code when dealing with a behavioral emergency. As the team responds they are trained in how to suppress violence rather than how to promote patient treatment and care. There is a need to deliver clinical oversight and patient care while obtaining the assistance of security to closely watch for danger to staff or patients (Parker et al., 2020). Since the 2000s British Columbia has been progressive at implementing behavioral intervention teams. US hospitals have also been implementing behavioral emergency response teams (BERTs). BERTs are a mixture of interdisciplinary and psychiatrically trained team members who respond to whatever is needed to address a behavioral emergency, similar to response of a RRT to a medical issue. BERTs are important to allow the intervention to give care while also maintaining security with psychiatric emergencies in non-psychiatric settings (Parker et al., 2020).

BERT teams at a minimum have a psychiatrically trained clinician and secondary security assistance. The security staff will operate under the direction of the clinician and assist if needed (Parker et al., 2020). BERT clinicians may be fully dedicated to mental health and others may be cross trained. Other employees, such as pastoral care chaplains, social workers, patient advocates, and psychologists, might also accompany BERTs. Ideally a BERT is utilized proactively before the patient acts out inappropriately. In addition, the hospital can expect fewer

BERT calls as primary staff witness the BERT de-escalate situations and primary staff become more skilled to handle situations themselves.

There have been promising outcomes in relation to BERTs. BERTs have been shown to reduce assaults and workplace violence. BERTs have also been shown to reduce codes for active violence and decrease physical restraints that are used. BERTs reduce the overall security calls and have even been shown to reduce the length of stay. BERTs are started without increasing expenses while decreasing financial losses due to decreased staff injuries. When responding to a patient issue, BERT calls resulted in staff adjusting or initiating medication 36%-53% of the time to reestablish stability for the patient. There is a perspective that opportunities to intervene medically upon a mental health emergency may be overlooked due to a national tendency to perceive them as a security-based function only. If there are missed treatment opportunities there can be negative impact such as increased workplace violence incidents, decreased patient and provider satisfaction, and adverse patient outcomes (Parker et al., 2020).

A Medical Center in California formed a Behavioral Escalation Support Team (BEST). The BEST team is comprised of care providers who are trained in how to de-escalate conflict and are trained in mental health. Calling specially trained de-escalation teams to assist is a strategy hospitals are utilizing to respond to an increase of violent acts in healthcare (AAMC, 2022).

BERTs are utilized by a Pennsylvania Health System to deescalate behavioral health emergencies. The Healthcare System described how their BERT is a nursing led initiative that is used to de-escalate high risk patients or situations. The Health System shares stats with over 700 BERT calls being documented with approximately 75% being successfully deescalated. The hospital's BERT program was honored by the Hospital and Health system Association of

Pennsylvania (HAP) for their innovation, creativity, and commitment to the patient with their BERT (WellSpan Health, n.d.).

More hospitals are creating interdisciplinary groups of professionals to be able to rapidly respond to potentially violent incidents involving patients and visitors. The team at a California health system was made-up of a psychiatric nurse, mental health specialist, and other members specifically trained on safe lifting and transporting techniques. The California hospital system shares how they created their BEST team in 2020 and are on call to respond to requests so they can make an intervention. They share they want their staff to feel comfortable when they see a patient who is deteriorating emotionally to feel comfortable to request help. A large Ohio healthcare system started their behavioral emergency response team in 2019 and works with a team of nurses and other caregivers to help get the patient back on track. Their team is initiated after the patient starts to have challenges, is not complying, or is starting to become aggressive (Boyle, 2022).

A Massachusetts healthcare system also has specific safety teams that respond to actual threats aimed at specific employees (Boyle, 2022). When staff receives threats at this health system the actions include specific steps such as conducting a background check on the offender, assisting the staff, reaching out to the police as appropriate, talking to the person who made the threat, further restricting access to the staff member's work area, removing the staff member's name from the directory, or changing their parking space. In addition, a written report is completed so the hospital can have a better idea of what aggressive actions are occurring at the health system. The written reports also give the hospital an opportunity to evaluate what happened with the incident and what response worked appropriately. It is also an opportunity to give emotional support to potentially traumatized staff. It is important for the hospital to review

the incident reports so changes can be made to respond as appropriate based on the incidents. A healthcare system in Virginia reviewed their reports and showed that delirium and dementia are the most common precipitating factors among their aggressive patients (Boyle, 2022). Obtaining this data allowed them to provide easier access to certain types of medication to give treatment to dementia and delirium patients. The thought process is this medication can be given quicker with the hope to lower anxiety, and confusion that can lead to emotional outbursts in some patients.

To test the effectiveness of using BERT, the program was piloted on a medical-surgical unit for five months and later expanded to two additional units for three months (Zicko et al, 2017). A number of comparisons were reviewed pre and post implementation including the number of assaults and injuries, security interventions, and restraint usage. The study found that the BERT responded to 17 behavioral emergencies. The number of assaults decreased from 10 pre-implementation to one post implementation. Security intervention also decreased from 14 pre-implementation to one post implementation. Restraint utilization went down from eight pre implementation to one post implementation.

One study documented how violence is on the rise in Emergency Departments and how mitigation efforts are so important for staff as well as patients. Participants, which included nurses, providers, security staff, and social services, received de-escalation training and restraint application training in the form of computer-based training and simulation. The data were collected and analyzed using Bowker's test of symmetry. The revised tools from the National League of Nursing were utilized, including the Simulation Design Scale and Satisfaction and Self Confident in learning. The results were analyzed by a one-way analysis of variance that showed a significant improvement in knowledge, skills, abilities, confidence, and preparedness. The study also showed that satisfaction among nurses, patient care assistants, and security staff

was significantly greater than among social service staff. Another interesting finding was that participants with less experienced were more satisfied than those who had been in their roles longer (Krull et al, 2019).

Physical Security Measures, CPTED, and Technology

Physical security measures, crime prevention through environmental design (CPTED), and technology are an important part of providing a holistic security program. A study took place at a large metropolitan hospital in Australia in which the study entailed focus groups that were conducted with all the ED nurses (Thomas et al., 2021). The study noted how the ED environment poses significant challenges to prevent and manage violence. Those challenges in the ED are unlike other departments because the patient population is heterogeneous, staff often have no familiar relationships, and those presenting to the ED are in the middle of a stressful situation and dealing with a serious crisis. Overcrowding in the ED is also a global issue that contributes to violence. Several barriers to follow-up on workplace violence incidents were identified including a high tolerance to violence, apathy from police, behavioral type of complicated patients, and an inefficient incident reporting system. Barriers were identified as failure to recognize flags in system or identify patients as higher risk, and patients with bad behavior seem to get rewarded. For example, this study highlighted how patients who are loud with poor behaviors may get to skip long waits and get seen quicker. The incident reporting system was seen as a barrier as it is too difficult to navigate. In addition, a lack of follow-up by the organization made the issue worse as noted in this study because staff did not see the point of reporting. Many participants made a positive mention on how the leadership culture of the hospital had gotten better and leadership seemed genuine in staff wellbeing. The study noted how behavior health patients have to wait long periods of time in the ED to get a mental health

assessment and a bed in the behavioral health unit. Another significant finding in this study is that the participants believe that recorded video footage should be used more in the follow-up process. Participants said reviewing footage of security cameras was actively discouraged by the hospital. Staff want the hospital to fully use the security camera system to follow-up on workplace violence incidents (Thomas et al., 2021).

Richardson et al. (2019) conducted a meta-synthesis on workplace violence specific to management of the aggressive patient in the ED. The study sought to obtain non-pharmacological interventions used to de-escalate in the ED. The study reviewed in detail aggression management programs (AMP) used in healthcare with 13 major content areas being identified. Orientation causes of aggression, types of aggression, risk assessment, communication/defusing, pharmacological management, self-defense/physical restraints, risk of restraints, seclusion, legal/ethical, leadership, debriefing/counseling, and cost of violence were the major areas discussed in these training programs. Communication, physical techniques, along with risk assessment/legal issues, were the most widely covered issues. Multiple research articles in this study discussed environmental considerations. There were physical limitations identified with the ED layout including design, building materials, signage, and space that was available. These physical limitations were noted as contributing to violence and escalation, but also harmed their capacity to manage the issues. The research made a case for increased de-escalation training, better visibility through security cameras, or toughened glass. The research also pointed to providing personal alarms, panic buttons, 24-hour presence of security on-site, appropriately trained staff and/or a presence of the police. This research study also included the consideration of metal detectors and noted how the studies reviewed had a varied effect. Some staff and customers find metal detectors assuring. However, others state that while detectors

allow for the identification and removal of weapons, that overall violence was not reduced and there could be negative effects on the public image. There is evidence that metal detectors increase the rate of weapon confiscation and can increase staff and customer perception. However, there appears to be no real evidence that metal detectors actually reduce violence (Richardson et al., 2019).

The IAHSS guideline 05.06 addresses security in an emergency care setting. The guideline is clear for healthcare facilities providing emergency care to provide a security plan that incorporates additional safety and security enhancements that address special needs. The design of the emergency department is important and should have the input from the security administrator. Several design considerations are in the guidelines and it is important for the security leader to be aware of this important guideline if the facility is planning a redesign or is building an ED. For example, the ED waiting area should be separated from the treatment area and be self-sufficient to include its own restrooms, phones, and vending machines. All furnishings should be fixed to decrease the chance of them being used as a weapon to harm someone. Access control should be in place to limit access in the treatment area of the ED and into the hospital. Consideration should also be given to a room or areas in the ED appropriate for behavioral health. There are many other considerations discussed in the guideline such as duress alarms, video surveillances, training of ED staff, policies, security's role in holds that each security leader should be aware of (IAHSS, 2022).

Physical security measures, along with crime prevention through environmental design (CPTED) and technology, should be utilized as reasonable and appropriate to also help address violence concerns. In recent years it has been a common practice for hospitals to reduce the numbers of entrances. Technology such as badge access control systems have been utilized to

allow staff access but not patients and visitors. Hospitals are using badge access systems that require visitors to be logged in by utilizing an ID such as their driver's license. The hospital will then issue a visitor badge in the form of a sticker that clearly shows they have been approved to visit. An Ohio medical center utilizes body cameras to help deter violence. Representatives for the medical center state that as the situation starts to escalate their security officers will turn their body cameras on and let the person know that their behavior is being recorded. They stated this practice has often been a deterrent against continued aggression. The Medical Center described how like many others they have also expanded their technology such as installing more cameras, installing more panic alarms, giving personal alarms to staff and equipping security officers with Tasers (Chapman, 2018).

Crime prevention through environmental design (CPTED) should be considered as a control to help limit violence. An industrial hygienist at the National Nurses United stated that a violence intervention plan should be based on physical layout, specific staff concerns in the department, and patient population in that area (Boyle, 2022). He articulated how there have been many studies that show units that have been designed specifically for patients experience significantly lower rates of violence than units without any specific plans. An Ohio Medical Center that has seen some success has security specialists sit down with staff members and address a specific risk in their areas (Boyle, 2022). They specifically provide education to address with the sitters means of exit, positioning so the sitter does not get backed into the corner, and they also address panic alarms nearby and code words to use for further assistance.

A trial run in Oxford, England has discovered that the nurses who have a body worn camera as part of their uniform feel safer (Howarth, 2022). However there are privacy concerns about medical information being recorded and then handed over to the police. The trial was

conducted by a hospital NHS Foundation Trust during the "There is No Excuse Campaign" with the goal or reminding patients and visitors to have respect for staff. The campaign's message is that violence is completely unacceptable, and it will not be tolerated.

A common security control utilized in EDs is access control. The IAHSS has published an access control guideline 04.03. The guideline states that the facility's plan for access control should include reasonable and responsible security controls that restrict access where appropriate to protect people, property, systems, equipment, and other assets. The document has multiple intent standards that should be addressed. For example, the guidelines state that there should be a risk-based policy in place that is reviewed periodically. The guidelines state that a multidisciplinary team as appropriate should determine the access control system and devices utilized. According to the guideline, the facility should address access control in cooperation with the desired flow of patients and visitors, while using a multi-faceted and layered approach. The guidelines address how the facility should include consideration for the multiple entry portals including public entries, staff, employee, and contractor portals, as well as emergency entry and exit portals used to offer support to the Life Safety Plan. The guideline describes how the design of the access control system should segregate public and patient accessible areas, as well as other areas including staff only areas, and highly sensitive areas. The guideline list does not limit security sensitive areas only to areas that separate staff, cash handling areas, technology closets/information storage rooms, infant care areas, sterile work areas, or pharmacies. For areas that have a higher risk with valuables, sensitive information, or hazardous materials, then multi-factor authentication, biometric or a combination of controls should be considered. The guideline details specifically what the facility should address with its access control plan including but not limited to planned response to electronic device failures, door schedule for normal operations

and special circumstances, preventative maintenance, and a reporting and correcting of malfunctioning access control. Multiple other intent statements address managing credentials and access, lost card or key, employees role in access control, along with standardization of access control system, and planning systems in accordance with life safety code and regulations. (IAHSS, 2022).

The IAHSS guideline on video surveillance is listed as 04.04 and is comprehensive. The document provides a statement and multiple intent statements that should be addressed. The guidelines state that a video surveillance policy should be developed that provides direction and guidance in regard to application, control, authorization and use of video surveillance. The guideline describes how the security vulnerability assessment should determine what is required of the surveillance system. The guideline states that the surveillance systems are generally used as a tool to investigate after an incident. However, the surveillance system may serve as a deterrent as well when properly installed after proper planning. According to the guidelines the video system should have the ability to view live or recorded images as needed for an investigation. The healthcare facility should maintain a policy that addresses the confidentiality of information and images. The policy needs to address requests for information and video along with approval considerations while keeping in mind privacy, and interactions with law enforcement. Many other intent statements are addressed in the guideline, including but not limited to dummy cameras not being used, utilizing signage at entrances indicating the presence of video surveillance, 10-day minimum retention period or as required by regulatory agency, along with non-traditional use of video surveillance (IAHSS, 2022).

The IAHSS Guideline 04.08 addresses duress and panic alarms and response. The guideline statement discusses how duress and panic alarms can be used as an additional layer of

protection. The alarms should have a defined purpose with the consideration of multiple factors including location, activation, and response, as well as system maintenance and testing. The guideline describes the difference between a duress alarm and a panic alarm. Duress alarms provide silent notification and are covertly placed in areas that handle cash, pharmacy, reception, and administration. However, the guideline describes how a panic alarm is a device that is placed overtly when silent notification is not required in areas such as the ICU, Behavioral Health, ED, and parking areas. However both types of devices provide an alert that requires an appropriate response. Duress and panic alarms should be utilized based on the security vulnerability assessment. The guideline discusses how many environmental/operational factors should be considered such as services offered, crime data, security incidents, isolation of staff, public accessibility, and volume of patient and visitor interactions. The guideline also discusses design and equipment options not limited to integrations of other security systems, type of activation devices such as button, voice, keyboard, placement of devices, and location and type of annunciation. The healthcare facility's policy should define the process to request installation, the appropriate use of the system, when to activate and clear alarms, address response protocols, and describe training on device activation and locations for the user. In addition, preventative maintenance should be addressed along with reporting malfunctions, and establishing interim procedures during downtime as appropriate. The guideline discusses how the facility should review the system on a regular basis along with the security vulnerability assessment. The duress and panic alarms system should be reviewed and modified as needed on a regular basis, as needed, or for the mitigation of an identified risk (IAHSS, 2022).

Emergency Department (ED) Staff

The Emergency Department staff must be included as an integral part of the overall security plan. A 2022 survey by the American College of Emergency Physicians (ACEP) shows that 85% of emergency department doctors believe that the rate of violence has increased in EDs during the last five years . The attacks on those working in the front lines in health care are becoming more frequent. The ACEP has been working together with the Emergency Nurses Association since 2018 on the "No Silence on ED" Violence campaign. The ACEP is also supporting the Safety from Violence for Healthcare Employees (SAVE) Act, that was introduced by US representatives. This bill establishes federal penalties for violence against health care workers and is modeled after existing protections for aircraft and airport workers (ACEP, 2022b).

Emergency nurses are vulnerable as violence in emergency departments has reached epidemic levels. The emergency department is a vulnerable setting within the healthcare industry that leads all other industries in non-fatal workplace violence assaults. Currently it is a felony to assault an emergency department nurse in 31 states. The Emergency Nurses Association (ENA) is working hard to make it a felony in all 50 states. The ENA believes nurses have the right to training and education as it relates to recognition, managing, and limiting workplace violence. They stated a zero-tolerance culture is required and it should be supported by hospital leadership (ENA, 2022).

Lassiter's (2022) qualitative research study describes factors affecting nurse turnover in a rural ED. In this study 30 nurses working in a rural ED and those who had recently left were surveyed by the researcher. The data were gathered and showed common themes for nurse turnover in a rural community ED were staffing issues, a lack of resources, inadequate pay, and

poor management. The staffing issues findings included having increased workload and stress in regard to not having enough nurses. In addition, the study discussed how additional staff who were received would have to sit with psychiatric patients. Other major themes noted in this study were management and how participants did not feel supported by management (Lassiter, 2022).

Kim et al.'s (2021) research study was conducted with a focus on workplace violence and emotional exhaustion of nurses. There was a total of 1,781 nurses who completed the survey. Verbal abuse from the patient scored highest in frequency in regard to what nurses experienced, next was verbal abuse from visitors, and third was physical violence from patients. Nurses who reported more violence from patients also reported lower perceptions of patient safety. Nurses who reported higher levels of emotional exhaustion reported a lower perception of patient safety. The survey also showed verbal abuse is more frequent than in-patient physical violence, with both being underreported. The study points out that workplace violence incidents increase emotional exhaustion which negatively impacts patient safety. This study highlights the importance of addressing emotional exhaustion and burnout with staff. The study argues that a resilient staff may be less impacted by assaults from patients and visitors and staff will likely bounce back quicker. Interventions such as mindfulness, empowerment, and team support should be considered by the organization to combat extensive violence verbally and physically from visitors and patients. Strengthening resilience of staff to protect against emotional exhaustion specifically can be effective in combating workplace violence and lessening its impact (Kim et al., 2021).

One researcher analyzed 19 studies to ascertain barriers to reporting workplace violence in the ED. This study by Gack-Smith et al. (2009) compared ED nurses with frequent physical violence experiences (FPVE) to nurses who had not experienced frequent physical violence. ED

nurses reported that physical as well as verbal violence came with the job and was a barrier to reporting. A qualitative study in Australia (Hogarth et al., 2016.) found that physical and verbal abuse happened so often that ED staff had accepted these behaviors and reported the effort required to report violence was not worth it as it was futile. The ED nurses just accepted that the violence they were experiencing was part of their job. Another study (Verzyridis et al., 2014) reviewed findings from nurses, physicians, and other professions in nine EDs in the Middle East. A significant finding was 74.1% of the participants perceived violence as being typical for those working in an ED. Gillespie et al. (2013) conducted a study of 101 ED participants in a Midwest US hospital that included ED nurses, physicians, and respiratory therapists. The study showed that 44.3% of participants felt workplace violence was part of their job. Lack of injury appears to be another significant reason ED staff often do not report workplace violence. A study of 52 nurses and paramedics in a United States ED showed an important finding that the study participants described how not having physical injuries was a reason for not reporting workplace violence (Renker et al., 2015). A study was also conducted in Jordan of 300 nurses and nurse's aides. In this study participants described how they did not think the incident should be reported if they only received minor injuries (Darawad et al., 2015). Additionally, Gillespie et al. (2013) showed that 75.4% of their participants stated that lack of physical injuries was a barrier to reporting. The research also showed a lack of support is felt by ED nurses from administration and ED leadership. This lack of support serves as a psychological barrier to reporting workplace violence incidents. Gillespie et al. (2013) found that 34.8% of ED nurses believed nothing would happen if they reported workplace violence. ED nurses seem to think nothing will be done with their reports and is therefore a waste of time (Gaston, 2020).

The American Nurses Association (ANA) lists multiple barriers that prevent healthcare workers from reporting workplace violence incidents. A culture that considers violence as part of the job is one barrier. A lack of agreement of what the definition of violence is creates a barrier as well. For example, does workplace violence include verbal harassment? Fear that staff have about the organization thinking they performed inadequately or being blamed is also a barrier. General lack of awareness of a reporting system is another barrier. A belief that the incident will not be taken seriously is also a barrier that keeps staff from making a report. Another barrier is that staff just may not report "unintentional violence" such as from an Alzheimer's patient. The lack of manager support, and lack of training in regard to managing or reporting a violent incident are also barriers that keep staff from reporting. The ANA recommends that OSHA establishes a standard for employees in healthcare to help with the severity of workplace violence.

The ANA has proposed the following three levels of prevention to help change the culture in healthcare around violence. The first level is Primary Prevention. In this level the focus is on stopping violence before it ever occurs. In this level education and other strategies are used to identify risk and address them appropriately to prevent violence. The second level is Secondary Prevention. In this level there is a focus on immediate and effective response to violence. Employee strategies are utilized along with employer strategies to help reduce the impact of violence. Tertiary Prevention is the third level and focuses on long term responses to violence. At this level the employees and employer work together to improve the workplace violence program (ANA, 2019).

One study (Ming et al. 2019) examined the impact of training and simulation on workplace violence preparedness. A pretest was given, a three-hour course with simulations was

provided, and then a posttest was administered to staff members in high-risk departments such as the ED. The study showed simulation education on workplace violence training significantly improved the perception and confidence in coping with potentially violent incidents. This study suggests that even a three-hour program that used a video, explanations, demonstrations, and simulations can be effective in making a positive difference in the workplace violence concern (Ming et al. 2019).

The IAHSS addresses the security orientation and education needs of the general staff in guideline 6.01.01. The guideline articulates how the facility should implement a program to provide security orientation and education to all general personnel at the facility. There are several expectations that should be covered to help contribute to a safe and secure environment. How staff can contact security, what information they should report, and procedure for identification displaying and checking should all be addressed in training. Other expectations are listed such as dealing with emergency situations, procedures for infant/child abductions, role in crime prevention, personal safety awareness, along with confidential and patient privacy information. Other intent statements in this guideline addresses security orientation to be given within 30 days, periodic reviews, and updates annually. Security sensitive areas and special training is discussed along with presentation methodology, and expectations of the role of general staff in security being available to them in policies, procedures, and handbooks (IAHSS, 2022).

The IAHSS guideline 07.01 specifically addresses security sensitive areas. The guideline discusses how the facility should identify the security sensitive areas during the vulnerability assessment for security and then develop reasonable measures to mitigate the risk while also minimizing vulnerabilities. The security sensitive areas should be listed in the Security

Management Plan. The guideline lists several areas that may be included as sensitive such as areas with at-risk populations, dangerous or controlled materials, equipment or information that are considered sensitive. In addition, other areas that might be sensitive include those with operations with significant potential for loss, injury, or abduction. The person leading the security sensitive areas should be involved in mitigation efforts and planning along with security, clinicians, and ancillary staff. According to the guideline the facility should have a plan for each security sensitive areas not limited to identification of the risk in the security sensitive area, access control plan for area, security technology utilization, security training, preventative measures, response plan, along with a review and corrective action process for incidents (IAHSS, 2022).

One study measured the impact of active shooter training/simulation on the Emergency Department (Sanchez et al, 2018). There was a total of 204 employees who participated in the simulations and training August and December of 2016. The results showed that 92% of staff felt more prepared to respond to an active shooter event while 70% reported improvement in knowledge and preparation. There were 66% of the participants who reported that fleeing the scene would be their first response, while 15% said their first response would be to protect patients. The education included a didactic portion, and pre and post survey, along with a simulation event. The course focused on statistics of active shooters, threats, and the concept of RUN, HIDE, FIGHT. A person from the critical incident stress management area was present to help ensure the emotional and psychological health of the participants. In addition, a debriefing was a critical part of the training so the employees who participated could express their experiences and concerns (Sanchez et al, 2018).

Sitters

Addressing sitters in the ED and hospital setting is an important component of the security plan. There are approximately 500,000 patients who present to the ED each year for treatment after harming themselves. True et al.'s (2021) study utilized a qualitative method to interview employees from 17 EDs to gather their strategies utilized on patients who were being treated for self-harm. There were several main themes that were presented from the data collection process that are helpful in treatment of patients in the ED for self-harm. First, ED staff described how the patients were treated successfully through collaborations in the health system and with community partners. Second, staff described challenges to having enough trained mental health sitters to observe patients in-person for monitoring. In the study there was a description of how leadership had used analytic software to identify days and times with increased patients with complex mental health issues. These data were utilized to proactively schedule staff with appropriate training during the days and times when they are needed the most. Other themes that were discussed in the study were the importance of addressing post-discharge follow-up, offering support to the ED staff providing care, and creating safe and supporting spaces (True et al., 2021).

Sitters are used to assist the patient to be safe when dealing with mental health, cognitive, or behavioral health issues. Boarding patients in the ED is a serious concern especially for patients at risk for suicide, self-harm, or harming others. This problem occurs for multiple reasons, including a lack of inpatient beds, patients seeking care in the ED because they have no other options, and there are insufficient funds for lower levels of care available in the community. Boarding patients is a stressful experience for everyone concerned, including the patient and the staff for multiple reasons. ED boarding increases stress on patients who may

already be depressed or in a psychotic state. ED boarding also makes ED crowding worse, increases use of other resources such as security officers, increases rates of patients leaving without being seen, as well as other negative impacts on the healthcare environment. Regular training should be provided to the ED staff and security on the management of agitation including verbal de-escalation techniques (The Joint Commission, 2021).

There is often a struggle for the hospital to meet the need to provide close observation to a potentially dangerous patient. A patient watch program for patients that are a safety risk to themselves or others is different than a sitter program in which a person watches over a person who is disabled, elderly, or impaired somehow. Those sitting or watching a dangerous patient who is deemed to be a suicide risk or at risk of harming others must have a higher trained and qualified staff member available to be a one-on-one. Some cases may allow a staff member to watch more than one noncommitted patient when other staff members are available in an emergency. Hospitals use clinical staff members and security to sit with patients on safety watches. A patient watch program can be developed specifically for this, and staff can be specifically trained for this to allow security and clinical staff members to do what they were trained and hired to do. As the program is developed consideration should be given to the data to ascertain when those watching patients have been historically needed to predict future needs. The hospital must be aware of the CMS rule that may place some restriction on using a camera or video monitoring. Even in cases where cameras may be utilized to assist, there still must be someone who can respond to the patient immediately, which could be the person watching the monitor or someone else. It is important that whoever is sitting with the patients is trained, competent, and knows what to do for the program to be successful (Relias Media, 2020).

If security officers are used to monitor high-risk patients, great care must be practiced. CMS, Joint Commission, and other accrediting bodies continue to focus on prevention of suicides. The standards and regulations must be adhered to strictly especially in monitoring high-risk patients. Some hospitals are leaning on their security departments to help watch high risk patients. Security officers may not be best suited to be a sitter with these high-risk patients for multiple reasons. For example, anyone sitting with high-risk patients must be competent on appropriate seclusion, restraint, and must fully understand their job as they perform the one-on-one role. If hospital security officers are utilized administration must invest in training as well as appropriate oversight of those officers. Another concern is that while the security officers are performing one-on-ones in the ED the rest of the hospital security program must still be maintained.

Training for staff to be successful with these watches must also include common risk factors such as being aggressive to others, risk of self-harm, or having suicidal intentions. If the patients' environment cannot be made safe where patients might use elements to harm themselves, hospitals are told to use constant observation. The Joint Commission said the use of video monitoring or an electronic sitter are not acceptable in these situations because the patient is identified as a high risk of suicide and an employee would not be immediately available to act (Joint Commission, 2022). The hospital should think carefully before using security officers to monitor high-risk patients.

There are four significant reasons to implement a sitter program for patients (Hospital Housekeeping Systems - HSS, 2020). First a sitter program will help increase safety. Video monitor systems are argued as being more cost effective but only address patients who are at risk of falling. For suicide prevention, the healthcare facility is required by the Joint Commission to

have a trained sitter in place to help keep patients safe who are at a higher risk. Sitters should be trained on multiple issues including stroke, cardiac arrest, how to recognize mental and physical distress, life saving techniques such as CPR, and how to de-escalate a crisis when it arises. It is also significant to note that while a sitter is in place that is required for at risk patients such as those who are a suicide risk, they also help lower the number of patient falls. The second reason to consider a sitter program is because the patient could receive a better experience. Hospitals that force clinicians to sit with patients are adding even more weight to an already heavy load. Nurses lose time on the floor when they serve as sitters, and it also negatively impacts the patient ratio. With increased workload and challenging nursing to patients' ratios using nurses as sitters makes it much harder for the healthcare facility to give a wonderful patient experience. A patient sitter program that uses well trained sitters will allow clinical staff to regain up to .44 hours of clinical care per each patient day. The impact on the patients and overall patient experience as you run the numbers over a year show large results.

A third reason to consider a patient sitter program is that the nurses will be better satisfied. The patient sitter program gives nurses time back, it also gives patients a better experience while making nurses happier. Finally a fourth reason to consider a sitter program is to save money. The cost, including the overhead cost of using nurses and CNAs to sit with patients is significant. However the healthcare facility that uses a trained sitter program uses hospital resources in a more effective way. Another cost saving measure of the sitter program is that sitters can also be trained to perform other duties for further reduction in overhead labor cost in areas such as environmental services, and patient transport. A properly implemented patient sitter program can offer an increase in patient safety satisfaction of both patients and nurses while at

the same time providing savings to the healthcare facility (Hospital Housekeeping Systems, 2022).

Goal 15 of the 2023 National Patients Safety Goal published by the Joint Commission is "The hospital identified safety risks inherent in its patient population." The hospital must implement and consider several controls to keep patients safe. One of those controls mentioned in the patient safety goal is one-to-one monitoring. Staff should be trained who are actually conducting the one on ones with high-risk patients. There should be training but also a competency assessment completed for staff who are caring for patients at an increased risk of suicide. Information used from the assessment of objects that could be used for self-harm can be used for training staff who monitor high-risk patients. This information can be used to develop a checklist to help the staff remember which equipment should be removed when possible, to create a safer environment. There should also be a written policy and procedure addressing the care of patients who are at an increased suicide risk. Specifically the patient safety goal states the facility should address training and do a competency assessment for staff who care for possibly suicidal patients, have guidelines for reassessment, and monitor patients who are at high risk for suicide (Joint Commission, 2023).

One on one specialling is a type of care which is provided to ensure the safety for those who have cognitive impairment, challenging behavior, or may be at risk of falls or causing harm to self or others (Wood et al, 2018). This type of one-on-one care is often referred to as specialling or sitting and is common in hospitals around the world. However, there exists a lack of evidence regarding the cost effectiveness and quality of care provided. Evans (2016) conducted a scoping review of multiple articles including a five-stage scoping review process. The study reviewed literature related to sitters and specialling in acute care settings. Evans

reviewed 44 articles with the majority being from the USA but others from Australia, the UK, Canada, and New Zealand. There were multiple findings included in this study. For example, a finding was the term "sitter" was more frequently used in the USA and Canada and specialling was used more frequent in the UK, Australia, and New Zealand. Other terms that were used to refer to similar one-on-one care were constant, continuous, close observation, increased observation, special observation, and many others. Not only was there a lack of clarity in the terms utilized, Evans also found variability in what type of care is provided, who provides it, and the needs of the patients who require it. A finding was that there is a high financial cost to sitters and some studies did propose alternatives to sitters. In the research six elements to a patient's sitter program were discovered. The elements key to a patient sitter program are a process to request and discontinue sitters, patient eligibility criteria, a pool of sitters, criteria for sitter qualifications, a sitter job description with expectations, and a training program for sitters. Other elements that were identified to help decrease sitter use were multiple. The research found that designating staff to provide oversight for the facility sitter program, having a process for requesting and stopping sitters, having patient criteria, maintaining a pool of people to be sitters, and having sitter qualifications might also help reduce sitter use (Evans, 2016).

The use of sitters serving on a one-on-one basis in healthcare facilities has become very common to help address falls, patients who are at an increased suicide risk, or are having mental challenges, or other issues. The use of the sitter may be important for the facility to help improve the safety of the patient and to help prevent injury. Sitters are trained to help the patient as appropriate by the healthcare facility. There are two goals of a sitter program. The sitter will help provide a higher level of safety for the patient while also allowing the nurses to take on more challenging duties that require their higher level of expertise. The sitter program is often

provided by staff who are not nursing with lower wages to help the facility manage the expense. The price of providing a sitter can have a significant impact on the hospital's budget. Providing sitters is often unbudgeted and not reimbursed. One 900-bed hospital was shown to spend $3 million each year on patient sitters. Hospitals are using video monitoring systems to help ease the burden on the patient sitter program. A virtual sitting platform can allow a sitter who is virtual to observe multiple rooms, alert appropriate staff of risk, and offer other needed assistance. Healthcare institutions must also be aware of the limits on virtual sitters and even actual sitters when compared to checks performed by nurses and what is required by standards (Deibert, 2019).

The IAHSS has established a guideline 02.03 Security Role in High-Risk Patient Watches. The statement discusses how the facility should have a policy and procedure to address constant patient observations. The policy should provide guidance on the use of security when watching patients. The guideline states that using security as sitters or in watch type of situations long term should be avoided unless security staff has been allocated for this specific purpose. This guideline also provides a definition of a high-risk patient as a patient with one of three risks: assessed as having potential to elope, harm themselves, or harm other people. The patient watch process is also referred to as a security assist or observer. This process assigns security with a focus on safety to help reduce patient harm.

There are multiple intent statements that are addressed in the guideline the healthcare facility should be aware of (IAHSS, 2022). For example, the facility needs to develop criteria for defining high risk patients. The clinical staff is responsible for determining if the patient's watch is needed based on criteria. The criteria should be clear when security personnel shall be utilized for the patient watch function. The guideline discussed how security's primary role

should be to deter aggression, prevent the patient from harming themselves, and help as needed to help obtain patient compliance. The guideline states how security's work with the patient will be overseen by the clinical care employees. Security, however, is allowed under the guideline to act independently when faced with circumstances involving danger, bodily harm to people, or harm to property and there is no time to communicate with clinical staff. The guideline discusses how security should supplement the clinical staff members and not replace them in the patient watch process. Nine training competencies that should be addressed for security staff who are conducting patient watches are listed in the guideline. A few of the competencies are de-escalation, positioning of the security officer, identifying and removing dangerous/hazardous objects, personal protective equipment (PPE), and documentation. There are also six specific items that should be documented by the security officer conducting a patient watch that are listed in the guideline (IAHSS, 2022).

One research study by Ollila (2021) collected qualitative data from eight non-psychiatric registered nurses to help understand what their lived experiences are as they take care of patients experiencing mental illness. There were six themes identified with one overarching theme identified as being related to barriers to care. The other five factors identified were factors confounding adequate treatment, support needs of non-psychiatric nurses, education and training needs, nursing education implications, and COVID-19 experiences. Under the theme of support needs of non-psychiatric nurses, they shared the lack of support they had received from leadership. A finding was that at times patients would become very combative and security was needed even if security did not have adequate training. Nurses shared how even if security did not have extensive training to care for the combative patient, security would still respond and talk to the patient and were amazing at helping. Participants discussed how security officers were

good at talking to patients and would stay as long as they could to offer support. One participant discussed how they only had one security officer to take care of the entire hospital and stayed with the patient. Another participant discussed how on the hospital floors they used sitters but in the ED there were no sitters but only security officers (Ollila, 2021).

A study on sitters was conducted by Evans (2016) at two large health systems in North Carolina and Texas. Each health system had one large medical center and two smaller community hospitals. The health systems combined had approximately11,000 employees who engage with patients and visitors as part of their job functions. The policies at the health systems described sitters as being responsible for maintaining an environment that is safe for patients who required observation that is continuing. These sitters performed required care for the patients within their scope and reported to the provider observations. There were 76% of the respondents who had experienced violence and patient threats in the prior year. There were 61% of the sitters who reported being physically assaulted, 63% threatened, and 73% experienced verbal abuse. There was ambiguity in responses from participants in regard to their job duties. However, there was consistency with study participants in that they felt their overarching role was to protect the patients. The study shows that 94% of violence directed to the sitter was from a patient and the sitter was alone two-thirds of the time. Other findings from this study show that threatening patients were disoriented 66% of the time, had behavioral health issues 45% of the time, patients were reported sundowning 34% of the time, and under the influence of alcohol or drugs 31% of the time. Another concerning finding was that three-fourths of the time sitters reported having an object used against them such as body parts, fists, nails, or bodily fluids. An argument of this study is to clearly define the role of the sitter and recognize how important the sitter is to the patient care unit. Finally hospitals should provide education and training to the

sitters that helps to identify, manage, and even prevent violent incidents, while helping to keep the sitter safe (Evans, 2016).

Miscellaneous and Other Controls

There are many other security controls that should be considered to address workplace violence. With workplace violence being such a prevalent issue in the ED a rural hospital in Michigan assessed the impact of Lippincott's Violent and Assaultive Behavior Management Clinical Guideline on the use of restraints in regard to violence (Bailey, 2021). The project was implemented over four weeks and the clinical guideline was the independent variable and the dependent variable was the use of restraints. All ED patients with behavioral issues were included four weeks before and four weeks after implementing the clinical guideline. The findings were significant suggesting that the intervention utilizing the clinical guideline and restraints use were significantly related. There was a significant decrease in the use of patient restraints in the group that implemented the clinical guideline with a *p*-value of .002, indicating the result was not by chance. The guideline taught early detection signs of escalation and taught employes how to de-escalate before the violence actually happens. Staff were also taught how to manage the behaviors of the patient to only use restraints as a last resort (Bailey, 2021).

The IAHSS guideline for De-Escalation Training 02.02.04 describes how a facility should offer training to their employees initially as well as on an ongoing basis. The document describes how recognition and mitigation of disruptive behaviors should both be addressed. In this guideline it is stated that de-escalation skills should be emphasized to mitigate disruptive behaviors but also to help create safer environments. The intent statements of the documents are comprehensive and begin by describing how education and awareness should help the person recognize, intervene, and resolve verbal and nonverbal behaviors that are concerning. Not only

should de-escalation training be provided to security staff but also to other staff whose job duties put them into situations where de-escalation training is needed. The guideline discusses how the departments and areas selected for de-escalation training should be based on the security vulnerability assessment. Multiple areas are mentioned that may be included such as those in reception areas, human resources, behavioral areas, and Emergency Departments as well as several other areas. Other specifics are listed in the guideline including frequency of training, elements to be included in the training, how to report and document incidents, and much more to offer guidance (IAHSS, 2022).

Workplace violence is a serious threat as stated in the IAHSS Guideline for Active Shooter/Hostile Event Response Plan. The plan offers a framework for the facility to prepare for, respond to, and recover from an active shooter or hostile event. The guideline discusses how a qualified multidisciplinary team should develop its Active Shooter and Hostile Event Response (ASHER) plan. The plan develops four phases to address. The guideline also discusses the impact of this risk along with several controls: access control, duress/panic alarms, designated safe room, first responders, and others. The guideline discusses preparedness such as having procedures to address reporting threats, response procedures, as well as other procedures such as recommending exercises with first responders. The guideline details internal and external resources that should be addressed such as incident command positions, hemorrhage control kits, and communications. External resources listed included mutual aid agreements along with several other items that could be part of an emergency response kit are discussed by the guideline. The response section of the guideline addresses how the facility should have procedures, details on what to provide first responders when contacting them, establishment of incident command post, restricting access, and several other response measures to be considered.

Recovery is also addressed in the document and addresses specific details related to immediate recovery, short term recovery, and long-term recovery (IAHSS, 2022).

Methodology

The main objective of this study is to research the prevalence and the effectiveness of controls utilized in Emergency Departments on violence.

Participants

The research population participants came mostly from security leaders in America, but also from Canada, Spain, and Bolivia. The population included Emergency Departments that were diverse in size, locations, and types. Most were listed as community nonprofit EDs. There were 136 healthcare security leaders who completed the quantitative survey, entitled Security Controls Efficacy Survey, in regard to their Emergency Departments. However, only 104 of the participant surveys were complete with the dependent variables of number of thefts, assaults, and staff injuries needed for statistical testing. The other 32 surveys are still included in parts of the findings such as the descriptive section, but not in the statistical analysis involving the main dependent variables. Every state in the US had a security leader complete a survey with some states having multiple participants. There were also five participants from Canada, two from Spain, and one from Bolivia. Further hospital demographics are presented in Table 1.

Table 1

Demographics of Participating Hospitals

Variable	*n*	%
Hospital Description		
Rural	29	21.3
Suburban	40	29.4
Urban	67	49.3
ED Description		
At a community hospital	89	65.4
At an urban trauma center	41	30.1
Freestanding ED	6	4.4
Profit Status		
For profit	14	10.3
Non-profit	104	76.5
State/local government facility	18	13.2
Psychiatric Unit		
Yes	74	54.4
No	62	45.6

To describe their EDs, participants provided hospital bed size, bed size in the ED, number of employees in hospital, and number of employees in the ED. Table 2 shows the average size in each of these areas as well as the variability in the hospitals and EDs represented in this study.

Table 2

Hospital and ED Size

Variable	*M*	*SD*	Minimum	Maximum
Hospital beds	382.68	344.58	25	2,000
Hospital employees	3,583.68	3,940.02	0	22,000
ED beds	40.59	29.02	0	150
ED employees	135.27	128.06	0	650

There were an additional 107 responses from ED staff who completed the Staff Interview on Efficacy of Security Controls Questionnaire to provide qualitative data in regard to their EDs. The participating employee positions included ED manager, security officer, supervisor, privacy officer, Director, RN, paramedic, and nurse. All 50 US states had participants represented with some states having multiple participants. In addition, Canada had four survey participants in this qualitative portion of the study.

Procedures

The researchers gathered both quantitative and qualitative data from the participants. There were two surveys that were sent out by the researchers via Survey Monkey. One survey went to the healthcare security leaders and was quantitative in nature entitled the Security Controls Efficacy Survey. The other survey went to those actually working in the ED and was more qualitative in nature, entitled the Staff Interview on Efficacy of Security Controls Questionnaire.

The quantitative survey provided data for three main dependent variables: number of workplace violence incidents, thefts, and workplace injuries related to violence. There was a variety of independent variables regarding security officers posted in the ED, response teams, and security training. More specifically, researchers gathered data regarding varied security controls in place at the ED such as whether access control was in place, if armed security was utilized, tasers utilized (or other "weapons"), metal detectors, signage, de-escalation training for the security staff, de-escalation training for the ED staff, other types of training, security cameras, certifications for security staff, IAHSS program of distinction, an in-patient psychiatric unit, K-9 program in use, in-house or contracted security utilized, police officers in the ED, panic alarms, signage, and public view monitors in the ED. Additional variables included who sits with

dysregulated, suicidal, or dangerous ED patients such as security, public police, trained sitters, ED staff, contracted company, or others, along with information on what type of training is required for "sitters." Other variables collected were if there is a Certified Healthcare Protection Administrator (CHPA) on staff, a crisis response team that responds to violence, if so, who is on it, and the type of training required, and whether visitors' badges are given to everyone 24/7 or just after hours.

The researcher collected quantitative data from survey participants in August 2022 through January 2023. The Security Efficacy Quantitative Survey was sent to participants via a Survey Monkey link. The data collected were scientifically tested and analyzed. Researchers looked for any significant differences in the dependent variables between groups of each independent variable. All findings, whether deemed statistically significant or not, were documented and noted as an important contribution to the field of healthcare security.

Qualitative data were collected from the employees in the Emergency Department. The ED Staff Interview Survey was sent to those working in the ED and qualitative data were collected from August 2022 through November 2022. There were 107 responses in regard to the qualitative data. The qualitative data were subjected to being analyzed and interpreted based on thematic categories (Gay et al., 2012). The qualitative data gathered from the questionnaire allowed the researchers to probe further and gain a better understanding of how things were in the ED environments and how the research populations perceived the security controls. After the surveys were completed, the researchers helped to identify reoccurring themes and patterns.

Findings of the Study

The purpose of this research study was to help identify effective controls on

Emergency Department violence. This study and the findings uncovered cannot be used to show causation. In this study the dependent variables in regard to thefts, assaults, and injuries were often increased in this study even when more security measures were present. It is apparent that facilities that have increased risk are utilizing more security measures to minimize those risks. The research findings from this study may be utilized by healthcare security leaders and healthcare administrators. This study could help security leaders and administrators be further equipped with data to help them make good security leadership decisions to address workplace violence. This study is helpful to see what security controls are being utilized in EDs. The data gathered in this study also provide information that can be used to help make security decisions to positively impact the violence concerns in the ED. The quantitative and qualitative data, along with the review of literature, can help provide knowledge on how to better utilize security controls to make a positive impact on the violence in the ED. The following question guided the study: What are effective controls on Emergency Department (ED) violence? To answer this question the researchers conducted a literature review, gathered and analyzed the quantitative data from the hospital EDs, and gathered and analyzed the qualitative data from those working in the EDs.

Security Procedures/Characteristics Used in the ED

One of the purposes of this study was to investigate what security measures EDs are using and how common each measure is. Table 3 reports the descriptive statistics for the variables involving security officers and weapons they use in the ED. Survey participants were asked what criteria they use if staffing the ED only part-time. There was a recurring theme in regard to utilization of part-time officers from many participants that an officer was posted overnight only.

Table 3
Security Officers and Weapons in the ED

Variable	*n*	%
Security officer full-time		
Yes	102	77.3
No	30	22.7
More than one security officer		
Yes	50	37.9
No	82	62.1
Officer only part-time		
Yes	28	21.2
No	104	78.8
Security officer has firearm full-time		
Yes	16	12.1
No	116	87.9
Security office has firearm part-time		
Yes	11	8.3
No	121	91.7
Security staff use tasers		
Yes	38	28.8
No	94	71.2
Security staff uses other weapons		
Yes	45	34.1
No	87	65.9

Next the survey asked about the types of security personnel that are used in the ED. As seen in Table 4, the majority of hospitals employ their own security officers.

Table 4
Type of Security Personnel

Variable	*n*	%
In-house security employed by hospital	91	66.9
Contract security through a company	49	36.0
Police officers working for hospital	16	11.8
Contracted police officers	9	6.6
No specific security staff in ED	5	3.7

As seen in Table 5, the majority of security staff are trained in de-escalation techniques but are not certified by the International Association for Healthcare Security and Safety (IAHSS)

and even fewer have a security leader who is a Certified Healthcare Protection Administrator (CHPA) or a program of distinction that is accredited by the IAHSS.

Table 5

Security Staff

Variable	*n*	%
Trained in de-escalation techniques		
Yes	125	94.7
No	7	5.3
Certified IAHSS		
Yes	57	43.2
No	75	56.8
Security leader CHPA		
Yes	44	33.3
No	88	66.7
Program of distinction/accredited by IAHSS		
Yes	30	22.7
No	102	77.3

The next section of the survey inquired about the use of response teams in the ED; if there was a response team, if they had formal training, and what types of training they received. The results are shown in Table 6.

There are a variety of physical security measures commonly used in EDs to enhance safety for staff, patients, and visitors. Table 7 shows the participants' responses for each of the physical measures used in their EDs. Most, but not all, EDs also provide security training for their staff and there are many different types of training that can be used. As shown in Table 8, the most commonly used type of security training for ED staff is de-escalation techniques, followed by active shooter training.

Table 6

Response Teams

Variable	*n*	%
Security response team responds to violent incidents		
Yes	109	82.6
No	23	17.4
Security response team has formal training		
Yes	111	84.1
No	21	15.9
Types of training for response team		
De-escalation	126	92.6
Workplace violence prevention	115	84.6
Restraints/physical techniques	110	80.9
Self-defense	93	68.4
Legal liability/reporting	90	66.2

Table 7

Physical Security Technology

Variable	*n*	%
Access control system		
Yes	118	90.1
No	13	9.9
Access controlled by security officer/personnel		
Yes	77	58.8
No	54	41.2
Visitors badges		
Yes, all the time	50	38.2
Yes, part of the time	19	14.5
No	62	47.3
Visitors badges after hours		
Yes	55	42.0
No	76	58.0
Handheld metal detectors		
Yes	61	46.6
No	70	53.4

Table 7 (cont.)

Physical Security Technology

Variable	*n*	%
Fixed metal detectors		
Yes	19	14.5
No	112	85.5
ED designed with security in mind		
Yes	25	19.1
No	71	54.2
Not applicable	2	1.5
I don't know	33	25.2
Security cameras in key locations		
Yes	124	94.7
No	7	5.3
Panic alarms		
Yes	1117	89.3
No	14	10.7
Panic alarms tested to ensure working		
Yes	106	80.9
No	11	8.4
Not applicable	11	8.4
I don't know	3	2.3
Public view monitors in ED lobby		
Yes	28	21.4
No	103	78.6
Signage used in ED		
No weapons	110	83.3
Security cameras in use/being recorded	68	51.5
Zero tolerance about violence	97	73.5
All of the above	45	34.1

Table 8
ED Staff Training

Variable	*n*	%
ED staff trained in de-escalation techniques		
Yes	110	84.0
No	21	16.0
Types of training for ED staff		
De-escalation	116	85.3
Active shooter training	104	76.5
Use of restraints/physical techniques	100	73.5
Workplace violence prevention	100	73.5
Legal liability/incident reporting	55	40.4
Self-defense	41	30.1

The next section of the survey inquired about the use of sitters in the ED; who their sitters are and what types of training they received. The results are shown in Table 9.

Table 9
Sitters

Variable	*n*	%
Sitters are		
Security	59	43.4
Trained sitters	94	69.1
ED staff	67	49.3
Contracted company employee	8	5.9
Training required for sitters		
De-escalation	95	69.9
Self-defense, physical security techniques	39	28.7
Use of restraints/physical techniques	57	41.9
Workplace violence prevention	71	52.2
Legal liability/incident reporting	37	27.2
Active shooter training	57	41.9
None	20	14.7

The next section of the survey inquired about other security controls utilized in the ED. This section of the survey focused on K-9 units, Workplace Violence Committee, and if they used the IAHSS Industry Guideline and Security Design Guidelines. The results are shown in Table 10.

One-way ANOVAs compared rural, suburban, and urban hospital description groups on multiple variables including hospital beds, ED beds, hospital employees, and ED employees to compare them on their size. In the case of significant results, the researchers utilized a Tukey test to determine which groups were significantly different from each other. As shown in Table 11, all these comparisons were significant. For the number of hospital beds the urban hospitals were significantly larger than the suburban hospitals, which were significantly larger than the rural hospitals, $p < .05$. For each of the other three variables both the urban and suburban hospitals were larger than the rural hospitals, $p < .05$.

Table 10
Other Security Controls

Variable	*n*	%
K-9 Unit		
Yes	11	8.5
No	118	91.5
Workplace Violence Committee		
Yes	110	85.3
No	19	14.7
IAHSS Industry Guidelines & Security Design Guidelines		
Yes, IAHSS Industry Guidelines	21	16.3
Yes, IAHSS Security Design Guide	4	3.1
Both	39	30.2
Have not used them	31	24.0
Do not have them	34	26.4

Table 11

Hospital and ED Size by Hospital Description

	Rural		Suburban		Urban		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*(2, 133)
Hospital beds	139.90	168.08	336.45	323.01	515.37	352.36	15.15***
Hospital employees	1320.41	1980.04	3409.63	3839.42	4667.22	4232.99	8.14***
ED beds	21.55	23.87	42.53	29.90	47.67	27.19	9.36***
ED employees	62.45	65.16	150.78	115.20	157.54	144.65	6.48**

***$p < .001$. **$p < .01$.

One-way ANOVAs were also used to compare the rural, suburban, and urban hospitals on their numbers of thefts, assaults, and staff injuries. These comparisons involved the 105 participants who completed all the information, including for the three dependent variables of thefts, assaults, and staff injuries. The difference in Table 12 in the number of thefts between the urban hospitals and rural hospitals looks large, and the difference was very close to being significant, $p = .053$, because there were only 23 rural hospitals, a slightly lower sample size than we would like. There were not any significant differences for the number of assaults. The urban hospitals reported significantly more staff injuries than the rural hospitals. In each of these comparisons the suburban hospitals were not significantly different from either of the other groups but always had fewer than the urban hospitals and more than the rural hospitals.

Table 12

Thefts, Assaults, and Staff Injuries by Hospital Description

	Rural		Suburban		Urban		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*(2, 102)
Thefts	1.65	2.99	3.77	5.78	8.35	16.23	3.03[a]
Assaults	13.35	20.73	37.97	53.40	64.86	149.58	1.88
Staff injuries	2.91	4.07	7.70	9.97	12.94	19.25	3.92*

*$p < .05$. [a]$p = .053$.

When EDs were compared by their Profit status the only significant difference was in the number of assaults, where EDs run by a state or local government facility reported significantly more assaults than non-profit facilities, and marginal significance compared to for profit facilities, $p = .070$. The comparison for thefts was marginally significant and the Tukey test showed marginal significance between the state and local government run facilities and the non-profit facilities, $p = .078$. The number of staff injuries reported in these EDs was pretty similar. The for profit group was not found to be statistically different from the other groups mainly because there were only 13 who participated in the survey, even though their means were consistently lower than the other two groups, as seen in Table 13.

Table 13
Thefts, Assaults, and Staff Injuries by Profit Status

	For Profit		Non-Profit		State/Local Gov.		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*(2, 102)
Thefts	5.69	13.65	4.21	6.58	11.69	24.39	2.62[a]
Assaults	21.92	43.55	35.83	55.82	111.50	247.35	3.65*
Staff injuries	7.38	21.90	9.45	12.96	9.56	18.66	0.11

*$p < .05$. [a]$p = .078$.

The EDs were also compared based on their location, whether they were located in a community hospital, in an urban trauma center, or a freestanding ED. There were 89 EDs located in a community hospital, 41 in an urban trauma center, and only six were freestanding EDs. Because there were so few freestanding EDs, they were not included in the statistical comparisons, although their descriptive statistics are included in Table 14, which shows the independent samples *t* test comparisons for hospital and ED beds and employees. All four comparisons were significantly different with the urban trauma center EDs being larger than the EDs at community hospitals. Table 15 shows the full comparisons by ED location and hospital

beds, hospital employees, ED beds, and ED employees. There were significant findings in all areas.

Table 14

Hospital and ED Size by ED Description

	Community Hospital		Urban Trauma Center		Freestanding ED		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*t*(128)
Hospital beds	296.31	321.22	560.98	297.09	445.50	534.37	4.47***
Hospital employees	2691.31	3936.73	5456.20	3349.54	4025.00	3669.30	3.89***
ED beds	33.10	25.76	58.51	28.66	29.17	26.26	5.02***
ED employees	105.97	100.13	206.27	157.34	84.83	92.87	4.39***

Note: Independent samples *t* tests were run to compare only the EDs at a community hospital or at an urban trauma center because there were only 6 freestanding EDs.

***$p < .001$.

Table 15

Thefts, Assaults, and Staff Injuries by ED Description

	Community Hospital		Urban Trauma Center		Freestanding ED		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*t*(99)
Thefts	4.31	12.25	9.21	11.81	1.00	2.00	1.84*
Assaults	28.42	52.01	93.76	186.27	6.75	9.00	1.86*
Staff injuries	6.66	10.86	15.59	21.67	8.25	11.79	2.11*

Note: Independent samples *t* tests were run to compare only the EDs at a community hospital or at an urban trauma center because there were only 4 freestanding EDs that reported these data.

*$p < .05$.

Security Staff

Quantitative Results

One-way ANOVA tests were completed comparing EDs with a security officer 24/7 in their ED and those without one on each of the hospital and ED size variables. For every measure of hospital and ED size the tests revealed that EDs with a security guard 24/7 were significantly

larger than EDs without a security guard 24/7. EDs that are larger with more employees and more beds are significantly more likely to have a security officer 24/7 than the EDs that are smaller. Table 16 shows the full results for these comparisons.

Table 16
Hospital and ED Size by Security Guard 24/7

	Security Guard 24/7		No Security Guard 24/7		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 130)
Hospital beds	461.54	354.16	140.83	160.17	23.11***
Hospital employees	4279.52	4125.28	1192.33	2198.74	15.4***
ED beds	48.78	28.58	15.57	10.58	38.91***
ED employees	164.86	133.39	43.83	33.96	24.12***

***$p < .001$.

Another set of one-way ANOVA tests was used to compare EDs with a security officer in their ED 24/7 and those without one on each of the main dependent variables of thefts, assaults, and staff injuries. The only significant difference between the two sets of EDs was for staff injuries, where those with a security guard 24/7 reported more staff injuries than EDs that do not have a security officer full-time. The other two comparisons were very close to reaching statistical significance and showed more thefts and assaults in EDs with a full-time security officer. Table 17 displays those results. As stated above, the quantitative survey demonstrated that security officers are more likely to be posted 24/7 if the bed size of the hospital is bigger, bed size of ED is larger, there are more employees in the hospital, there are more employees in the ED, and there are more injuries.

Table 17
Thefts, Assaults, and Staff Injuries by Security Guard 24/7

	Security Guard 24/7		No Security Guard 24/7		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.87	13.77	1.86	2.85	3.63[a]
Assaults	56.90	125.80	14.68	26.48	3.09[b]
Staff injuries	11.58	16.87	2.79	4.41	7.38**

**$p < .01$. [a]$p = .059$. [b]$p = .082$.

There were several other one-way ANOVA tests that compared EDs based on their security guard status on each of the dependent variables. In each of the comparisons there was a significant difference identified between the EDs, but some of the results were influenced by the small number of EDs reporting using no officer ($n = 13$) for security, which kept the no officer group from showing statistical significance with the other groups. The significant difference for thefts, $F(3, 101) = 2.85$, $p < .05$, was followed up with a Tukey test that showed marginal significance between EDs with a part-time officer and EDs with more than one officer 24/7, $p = .105$. The significant difference for assaults, $F(3, 101) = 3.26$, $p < .05$, was followed up with a Tukey test that showed marginal significance between EDs with more than one officer 24/7 and both those with a part-time officer, $p = .059$, and those with than one officer 24/7, $p = .083$. The significant difference for staff injuries, $F(3, 100) = 3.21$, $p < .05$, was followed up with a Tukey test that showed statistical significance between EDs with more than one officer 24/7 and those with a part-time officer, $p < .05$. These descriptive statistics for these comparisons are displayed in Table 18.

Table 18

Thefts, Assaults, and Staff Injuries by Security Guard Status

	Thefts		Assaults		Staff Injuries	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
No officers	1.92	3.01	17.62	33.71	3.46	5.85
Part-time officer	2.83	3.57	17.38	21.96	3.04	3.20
One officer 24/7	3.59	6.74	24.93	28.72	11.24	14.73
More than one officer 24/7	9.85	17.98	87.77	170.10	13.26	19.66

Next researchers ran independent samples *t* tests comparing smaller EDs that were 33 beds or less (48.5% of the sample) with a security officer and those without one on dependent variables of theft, assaults, and staff injuries. This comparison was not conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED because there were only two large EDs that do not have a security officer. Smaller EDs and larger EDs with more than one security officer were also compared to those that did not have more than one. There was only one significant difference observed in the small EDs in regard to thefts, $p < .05$. Small EDs with more than one security officer had significantly more thefts ($M = 14.20$, $SD = 30.41$) than those that did not ($M = 1.70$, $SD = 2.83$). Additionally, there were significantly more assaults in large EDs with more than one officer ($M = 110.69$, $SD = 192.28$) than in large EDs without more than one officer ($M = 34.05$, $SD = 31.04$). In every case for both large and small EDs, the means for thefts, assaults, and staff injuries were all higher in with a security officer than without a security officer. While there were no significant findings, both larger EDs and smaller EDs with more than one security officer had higher means for thefts, assaults, and staff injuries than those EDs that did not.

Researchers also ran independent samples *t* tests comparing rural EDs with a security officer and those without on the dependent variables of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There were no significant

findings. While not significant, it is interesting to note that the means were higher in the urban category for thefts, assaults, and staff injuries for EDs with a security officer present.

The independent samples *t* tests comparing EDs with more than one security officer to those without more than one security officer showed no significant findings for rural EDs, urban EDs, or suburban EDs. Although no significant differences were found, there was one marginally significant finding in regard to urban hospitals with more than one security officer having more assaults ($M = 102.22$, $SD = 198.28$) than those that did not ($M = 22.8$, $SD = 26.70$). It is also interesting to note that the means were higher in the suburban and urban categories for thefts, assaults, and staff injuries for EDs with more than one security officer present.

Qualitative Results

Regarding security staff in the ED, 79.44% of the staff participants stated they had security posted in the ED. The participants were asked the following question: What is the impact of having or not having a security officer in the ED on violence? There were some common themes that developed from the content analysis. Forty-five of the participants referred to the security officer's presence being especially important to deter and prevent violence, while 27 gave responses relating to how having security posted in the ED is important for a quick response and makes them "feel safer."

Firearms

Quantitative Results

Only 12.1% of the hospitals participating in the study reported that their security officers carry a firearm 24/7 in the ED. There were 8.3% who reported they carry a firearm part-time in the ED. Of those who have a security officer with a firearm 24/7, only 13 of those reported the number of thefts, assaults, and staff injuries in the ED, so only 13 could be included in the one-

way ANOVAs comparing EDs with a security officers armed with a firearm 24/7 and those without on thefts, assaults, and staff injuries. There were no significant differences observed in the testing in regard to thefts, assaults, or staff injuries, which, in the case of assaults and staff injuries, is due to the small number of EDs that use an armed security officer 24/7. If the sample had included more EDs in this category the differences seen in Table 19 would be significant. While findings were not significant, the means were higher in regard to assaults and staff injuries in the EDs with an armed officer 24/7.

Table 19
Thefts, Assaults, and Staff Injuries by Security Officer Armed with Firearm 24/7

	Armed		Not Armed		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	5.46	9.31	5.54	12.45	0.00
Assaults	62.77	95.07	43.22	112.20	0.36
Staff injuries	15.08	19.23	8.37	14.34	2.27

Researchers also ran independent samples *t* tests comparing smaller EDs that were 33 beds or less (48.5% of the sample) with a security officer with a firearm and those without one on the variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences.

Independent samples *t* tests were also used to compare rural EDs with a security officer with a firearm and those without on the dependent variables of thefts, assaults, and staff injuries. The same comparison was conducted with suburban and urban EDs, but there were no significant findings for any type of ED.

Qualitative Results

There were 36.45% of the participants who stated they had armed officers in the ED. When the participants were asked about the impact of armed officers on violence in the ED, 34 participants stated that having the firearm made a positive impact on violence. These participants had common comments such as the weapon provides a deterrent factor, their Level 1 trauma center in large metro setting faces threats every day, and it helps staff feel safe. There were 10 participants who felt weapons would not positively impact violence. Their common comments were accidents can happen, weapons are not a good choice with behavioral health patients, and the concern of patients taking a weapon from the officer. They also discussed concerns over litigation, training, and how weapons were not needed in their environment.

Tasers

Quantitative Results

Of the survey participants, 27.9% stated their security staff carry a taser. The researchers ran one-way ANOVAs comparing EDs with security officers with tasers and those without tasers on thefts, assaults, staff injuries. Researchers only found a significant difference when comparing security officers on staff injuries. EDs with a security officer having a taser had more staff injuries than EDs that did not have an officer armed with a taser. There were no other significant findings in regard to thefts and assaults. See Table 20 for the full results for these comparisons.

Table 20
Thefts, Assaults, and Staff Injuries by Security Guard Armed with Taser

	Taser		No Taser		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.77	11.04	5.01	12.51	0.46
Assaults	50.81	54.19	43.47	126.55	0.10
Staff injuries	13.81	20.50	7.26	11.74	4.22*

*$p < .05$.

Researchers also ran independent samples *t* tests comparing smaller EDs that were 33 beds or less (48.5% of the sample) with tasers and those without one on dependent variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences found.

The next set of independent samples *t* tests compared rural EDs with tasers and those without them on the numbers of thefts, assaults, and staff injuries. The same comparisons were also conducted with suburban and urban EDs. There were no significant findings. There were two marginally significant findings; one was in regard to rural EDs with a taser having more injuries ($M = 5.33$, $SD = 6.43$) than those that did not ($M = 2.06$, $SD = 2.60$). The second marginally significant finding was urban EDs with a taser had a higher mean in staff injuries ($M = 21.15$, $SD = 28.04$) than those that did not have a taser ($M = 10.13$, $SD = 14.63$).

Qualitative Results

Of the survey participants, 31.78% stated their security staff carried Tasers. They were asked the following question: what is the impact of having a Taser or not having one on ED violence? There were 32 participants who stated that the Taser has a positive impact on violence in the ED and reduces violence. The participants' common comments were that Tasers have been very effective, they provide a great deterrent, and there are less employees getting injured. There were seven participants who stated Tasers had no impact on violence, nor tended to de-escalate the situation.

Other Weapons

Quantitative Results

There were 33.1% of the research participants who stated their security staff carry other weapons. Batons were mentioned the most (27 times), pepper spray was second (24 times), and

handcuffs (5 times) were third. The researchers ran one-way ANOVAs comparing EDs with security officers with other weapons and those without other weapons on thefts, assaults, and staff injuries. Researchers found a significant difference when comparing security officers with other weapons and those without on the number of staff injuries and a marginal difference, $p = .051$, for assaults. In both cases there were higher numbers of incidents in EDs where the security officers had other weapons. The descriptions for these comparisons are in Table 21.

Table 21

Thefts, Assaults, and Staff Injuries by Security Guard Armed with Other Weapons

	Other Weapons		No Other Weapons		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	7.00	10.05	4.86	12.90	0.71
Assaults	76.55	182.31	31.47	45.78	3.91[a]
Staff injuries	15.24	21.24	6.41	10.19	8.26*

*$p < .05$. [a]$p = .051$.

Qualitative Results

Of the qualitative survey participants, 31.13% stated their ED staff carried other weapons. There were several other types of weapons that were listed as carried by the security staff. Fourteen participants stated they carry a baton, or ASP, while 13 participants listed pepper spray or gel. There were five participants who stated they carry handcuffs.

Security Officers Trained on De-Escalation

Quantitative Results

About 95% of research participants stated that they had de-escalation training. One-way ANOVAs compared EDs with security officers trained in de-escalation techniques and those without on thefts, assaults, staff injuries. There were no significant findings, however it is notable that the means for thefts and injuries were higher for EDs that have not trained security

officers on de-escalation techniques, but assaults were much higher in EDs that have done de-escalation training. See Table 22.

Table 22
Thefts, Assaults, and Staff Injuries by De-Escalation Training

	Yes		No		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	5.30	11.58	8.86	18.51	0.57
Assaults	48.02	113.30	12.29	28.22	0.69
Staff injuries	9.02	13.69	11.86	30.06	0.23

Researchers also ran independent samples *t* tests comparing smaller EDs that were 33 beds or less (48.5% of the sample) with security officers trained on de-escalation techniques and those without training on the dependent variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences found in the smaller or larger EDs.

A second set of independent samples *t* tests comparing rural EDs that have security officers with de-escalation training and those without on the numbers of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There were no significant findings.

Qualitative Results

There were 94.3% of the ED staff interview participants who stated their security officers were trained on de-escalation. The participants were asked the following question: What is the impact of having security staff trained on de-escalation? There were 44 participants who stated de-escalation training helps reduce violent incidents. Common responses were that it helps to calm people down and de-escalate the situation, helps keep everyone safe, reduces physical interventions, and equips security to be better capable of helping. There were five participants

who stated something negative about de-escalation training for security. The negative comments were in regard to de-escalation training not being effective on certain patients and there is a lack of follow-through by security to utilize the skill learned.

Security staff certified by IAHSS

Quantitative Results

Less than half (n = 57, 41.9%) of the participants reported their staff was certified by IAHSS. Of those, 45 reported their numbers of thefts, assaults, and staff injuries and they were compared to the 60 with the same information that reported not having IAHSS certified security staff. Researchers noted significant differences between the EDs with IAHSS certified security staff and those that did not have IAHSS certified staff when compared on thefts, assaults, and staff injuries. In each of these variables the EDs that have IAHSS certified security staff had higher numbers of incidents than those that do not have certified security staff. See Table 23 for more information.

Table 23

Thefts, Assaults, and Staff Injuries by Security Guard Certified by IAHSS

	Certified		Not Certified		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	8.98	16.73	2.95	5.66	6.77*
Assaults	70.89	152.90	26.70	55.16	4.28*
Staff injuries	12.78	17.70	6.46	12.22	4.58*

*$p < .05$.

Researchers also ran independent samples t tests comparing rural EDs with certified security staff and those without on the numbers of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There was one significant finding and several marginally significant findings. The significant finding showed suburban EDs with certified staff had more assaults than those that did not have certified staff, as seen in Table 24,

which also shows marginally significant differences between the two groups on thefts and staff injuries where those with certified staff showed higher numbers. A marginally significant finding urban EDs showed certified staff having more thefts (M = 13.50, SD = 22.48) than those that did not (M = 4.45, SD = 7.38), p = .082. The final marginally significant result showed rural hospitals with certified staff (M = 26.11, SD = 28.57) have more assaults than EDs without certified staff (M = 5.14, SD = 6.31), p = .060.

Qualitative Results

Of the qualitative participants, 43.40% stated they have security staff certified by the IAHSS. The participants were asked about the impact of the training on violence, garnering 30

Table 24
Thefts, Assaults, and Staff Injuries by Certified IAHS Security Staff for Suburban EDs

	Yes		No		
Variable	*M*	*SD*	*M*	*SD*	*t*(29)
Thefts	5.86	6.99	2.06	3.42	1.86[a]
Assaults	63.71	68.77	16.76	20.97	2.46*
Staff injuries	11.43	11.71	4.44	7.00	2.01[b]

*$p < .05$. [a]$p = .080$. [b]$p = .054$.

responses that discussed how the training has a positive impact. Specific comments include staff are more professional and recognized as professionals more by other staff, security officers take more pride in what they do, and that the training is excellent.

Security Leader who is a CHPA

There were only 33.3% of participants (n = 44) who stated they have a security leader who is a Certified Healthcare Protection Administrator (CHPA). Of those, 35 reported complete information and were included in ANOVAs that compared the EDs with a CHPA security leader and those without a CHPA leader. Of the three main dependent variables, there was only a

significant difference identified between the groups for staff injuries, with more injuries reported in EDs with a CHPA security leader. The full results are reported in Table 25.

Table 25
Thefts, Assaults, and Staff Injuries by CHPA Security Leader

	CHPA		Not CHPA		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.46	9.80	5.07	13.10	0.31
Assaults	62.31	169.56	37.30	62.12	1.21
Staff injuries	14.06	18.79	6.86	12.41	5.44*

*$p < .05$.

Researchers ran a set of independent samples *t* tests to compare rural EDs with a CHPA on staff and those without one on the dependent variables of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There were two significant findings. One significant finding showed that rural EDs with a CHPA have more thefts ($M = 4.20$, $SD = 3.96$) than those that did not have a CHPA on staff ($M = 0.94$, $SD = 2.33$). The second significant finding showed urban EDs with a CHPA on staff had a higher mean in staff injuries ($M = 21.39$, $SD = 23.01$) than those that did not have a CHPA ($M = 8.33$, $SD = 15.34$). One marginally significant finding was in regard to suburban EDs with a CHPA having less thefts ($M = 2.92$, $SD = 4.33$) than those that did not have a CHPA ($M = 4.32$, $SD = 6.29$).

Types of Security Personnel

Quantitative Results

Participants were asked to describe the security personnel working in the ED. The majority of participants reported having in-house security staff (66.9%). There were 36% that utilized contract security, 11.8% that used police officers, 6.6% that used contracted police officers, and 3.7% that had no specific security staff.

There were several sets of ANOVAs that compared groups who said they had in-house security, contracted security, police officers, and contracted police officers on the dependent variables. The in-house security group comparison showed the EDs that employed their own security personnel reported significantly more staff injuries than EDs that did not employ their own security personnel. Conversely, EDs that use contracted security reported significantly fewer staff injuries than those that do not use contracted security. There were no significant differences for thefts or assaults or for any comparisons regarding EDs that use police officers that work for the hospital and EDs that contract police officers to do their security. Tables 26, 27, 28, and 29 display these full results.

Table 26

Thefts, Assaults, and Staff Injuries by Security Personnel In-House

	In-House		Not In-House		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	4.93	8.10	6.65	17.22	0.49
Assaults	54.57	130.60	29.41	52.84	1.25
Staff injuries	11.46	17.45	5.14	8.19	4.33*

*$p < .05$.

Table 27

Thefts, Assaults, and Staff Injuries by Security Personnel Contract Security

	Contract Security		Not Contract Security		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.35	16.04	4.97	8.38	0.33
Assaults	37.63	69.43	51.19	131.27	0.38
Staff injuries	4.90	7.81	12.13	17.95	6.02*

*$p < .05$.

Table 28

Thefts, Assaults, and Staff Injuries by Security Personnel Police Officers Working for Hospital

	Police Officers		Not Police Officers		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	3.50	4.88	5.75	12.58	0.31
Assaults	54.00	54.74	44.76	114.28	0.06
Staff injuries	15.10	18.45	8.59	14.67	1.70

Table 29

Thefts, Assaults, and Staff Injuries by Security Personnel Contracted Police Officers

	Contracted Police Officers		Not Contracted Police Officers		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	3.38	4.21	5.71	12.49	0.28
Assaults	69.63	57.63	43.66	113.20	0.41
Staff injuries	4.38	5.01	9.61	15.59	0.89

Independent samples *t* tests were also run to compare rural EDs by type of security staff utilized on the variables of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. The one significant finding demonstrated that urban EDs with in-house security have more staff injuries ($M = 19.70$, $SD = 22.81$) than those that did not have in-house security ($M = 7.39$, $SD = 13.82$). The one marginally significant finding showed rural EDs with in-house security have more injuries ($M = 4.67$, $SD = 5.74$) than those that did not have in-house security ($M = 1.79$, $SD = 2.04$).

Qualitative Results

There were 24.3% of the participants who stated that their ED utilized a contracted security company to provide security staff. There were 31 positive comments about having in-house security, with the majority discussing them having a sense of ownership, consistency, rapport and support of hospital staff, and quality of service. There were seven positive comments

in regard to contracted security staff. These positive comments focused on contract security as offering further assistance at an entrance or metal detector, supplementing in-house security staff, or that they are professional with proper leadership and care.

In addition, the ED staff was asked if they utilize police officers in the ED. There were 33.64% of the participants in the ED staff interview who stated they utilized police officers in the ED. The participants were also asked what the impact of having police officers in the ED was on violence. There were 15 responses from participants that stated police officers help decrease workplace violence, provides a deterrent, and their presence helps defuse a situation. Two participants stated they could tell no difference in having highly trained and uniformed security versus police.

IAHSS Program of Distinction

There were 22.7% of participants (n = 30) that had been recognized as an IAHSS Program of Distinction. Of these, 23 reported their numbers of thefts, assaults, and staff injuries in the ED. One-way ANOVAs showed no significant differences in these variables between EDs with a security program that has been recognized as security program of distinction/accredited by the IAHSS and those that have not been certified. While the comparisons were not significant it is interesting to note that EDs with an IAHSS Security Program of Distinction did have a lower rate of assaults compared to EDs without an IAHSS Security Program of Distinction, as seen in Table 30. If a larger number of Programs of Distinction had participated that result could have reached significance.

Table 30
Thefts, Assaults, and Staff Injuries by IAHSS Program of Distinction

	Program of Distinction		Not a Program of Distinction		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	8.48	20.58	4.71	8.29	1.77
Assaults	31.26	33.02	49.67	123.14	0.50
Staff injuries	9.30	12.72	9.19	15.77	0.00

Researchers also ran independent samples *t* tests comparing rural EDs with Security Programs of Distinction on the dependent variables of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There were no significant findings, however in suburban EDs those hospitals with Programs of Distinction had lower means in assaults, and staff injuries. Also not significant, however in the urban EDs with a Program of Distinction the means were also lower for assaults than in EDs that do not have a Program of Distinction.

Response Teams

Quantitative Results

There were 81.6% of the participants who stated they utilized response teams. When the EDs with response teams were compared to those without response teams a significant difference was found in staff injuries and a marginally significant difference was found for assaults. For both of these variables the EDs that utilize security response teams reported a higher number of incidents, as seen in Table 31.

Table 31

Thefts, Assaults, and Staff Injuries by Security Response Teams

	Response Team		No Response Team		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.23	13.11	2.37	4.10	1.61
Assaults	54.29	119.83	6.47	11.03	3.00[a]
Staff injuries	10.88	16.19	1.74	2.86	5.98*

*$p < .05$. [a]$p = .086$.

When asked if they train their teams on de-escalation, 92.6% stated they did. There were 68.4% that stated they train their staff on self-defense, 80% that train on restraints/physical techniques, 84.6% that train on workplace violence prevention, and 66.2% that train on legal liability and reporting. Other types of training mentioned by the participants multiple times were first aid, CPR, mental health training/recognition of behavioral patterns, use of force, active shooter, human shield, and firearms.

Only 21 participants responded that their security response team does not receive formal training. Of those, 13 reported complete information that allows comparisons through one-way ANOVAs for EDs with security response teams with formal training and those teams with no formal training. Researchers noted a significant difference for staff injuries; the EDs that report more staff injuries do formal training with their security response teams. Table 32 also shows a large difference between the two groups in assaults, but with the small number of EDs reporting no training for response teams and the large amount of variability in the training group (*SD* = 118.17), this difference did not reach statistical significance.

Table 32
Thefts, Assaults, and Staff Injuries by Security Response Teams Training

	Training		No Training		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.09	12.91	2.44	4.38	1.25
Assaults	52.49	118.17	7.50	11.66	2.30
Staff injuries	10.51	16.03	2.06	2.96	4.38*

*$p < .05$.

The comparisons between EDs that do self-defense training with their security response teams and those that do not do self-defense training showed that EDs with the higher numbers of thefts, assaults, and staff injuries provide this type of training. Only the difference for staff injuries reached significance, although the differences in thefts and assaults were both marginally significant. The variability in the responses was also very high, especially for the self-defense group in the areas of thefts ($SD = 13.99$) and assaults ($SD = 128.20$), with both of those being more than double the mean, as seen in Table 33.

Researchers noted there were not significant differences when comparing response teams with restraint and physical techniques training and those that are not trained on restraints and physical techniques on numbers of thefts, assaults, and staff injuries in the ED. While not statistically significant, thefts, assaults, and staff injuries all had higher means in ED response

Table 33
Thefts, Assaults, and Staff Injuries by Security Response Teams Self-Defense Training

	Training		No Training		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.92	13.99	2.23	3.51	3..38[a]
Assaults	57.30	128.20	17.81	28.57	2.87[b]
Staff injuries	11.27	17.27	4.35	5.62	4.74*

*$p < .05$. [a]$p = .069$. [b]$p = .093$.

teams that had restraint and physical technique training when compared to those ED response team without restraints and physical technique training, as reported in Table 34.

Table 34

Thefts, Assaults, and Staff Injuries by Security Response Teams Restraints/Physical Tech. Training

	Training		No Training		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.34	13.08	2.10	5.07	2.02
Assaults	53.08	120.43	14.00	28.29	2.07
Staff injuries	10.32	16.32	4.55	6.53	2.39

When asked about workplace violence prevention training for the security response teams, only 17 participants responded in the affirmative. Of those, only 15 reported complete information to be used to compare the EDs that do workplace violence training and those that do not. Table 35 shows differences between the two groups, but because of the small number of EDs in one of the groups and the large variability, no comparisons reached significance.

Forty-two participants responded that they do training in legal liability reporting with their security response teams. Of those, 36 reported complete information, allowing for one-way ANOVAs to make comparisons based on this type of training. Table 36 shows the two groups were pretty similar in thefts, assaults, and staff injuries and no significant differences were found.

Table 35

Thefts, Assaults, and Staff Injuries by Security Response Teams Workplace Violence Training

	Training		No Training		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.12	12.88	2.00	3.44	1.51
Assaults	47.02	113.13	37.33	91.87	0.10
Staff injuries	9.94	15.95	4.87	7.33	1.46

Table 36

Thefts, Assaults, and Staff Injuries by Security Response Teams Legal Liability Training

	Training		No Training		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.14	14.23	4.36	6.07	0.52
Assaults	47.09	125.59	42.86	72.76	0.04
Staff injuries	9.78	16.12	8.14	13.09	0.28

A set of independent samples *t* tests was run to compare smaller EDs that had 33 beds or less (48.5% of the sample) with a response team and those without one on the dependent variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There was a significant difference observed in the small EDs in regard to assaults and staff injuries, $p < .05$. Small EDs with a security response team had significantly more assaults ($M = 19.68$, $SD = 25.30$) than those that did not ($M = 3.29$, $SD = 3.68$). Small EDs with a security response team also had significantly more staff injuries ($M = 4.58$, $SD = 4.95$) than those that did not ($M = 1.21$, $SD = 1.96$). Independent samples *t* tests were also run on large hospitals with no significant findings. However, the means of thefts, assaults, and staff injuries were all higher in large EDs with a security response team than those without one.

Independent samples *t* tests comparing rural EDs that have response teams and those that do not did not show any significant differences. The same comparison was also conducted with suburban and urban EDs with no significant findings. While not significant it is interesting to note that urban EDs with security response teams have higher means in thefts, assaults, and staff injuries.

Qualitative Results

There were 66.36% of the qualitative participants who stated they use response teams to respond to violent incidents. Participants were asked about the impact of having/not having a response team serving their ED on violence. A content analysis of the data showed several themes. There were 20 participants who stated they have a complete response team described as Behavioral Emergency Response Team (BERT), Aggressive Prevention Team, Crisis Response Team, or something similar that is made up of clinical, administrative, and security employees. There were 13 participants who stated the response team helps de-escalate incidents and reduce both violent assaults and injuries. There were 13 participants who stated they feel safer with the team and the team makes things easier. There were 12 participants who described how people like doctors, nurses, behavioral health, social workers, and security who responded were highly trained and very helpful.

The participants were also asked what departments or job descriptions respond to the ED as part of the response team when there is a potentially violent response. Content analysis showed a wide variety of responses in regard to who makes up the response team. There were 70 participants who listed security, 30 who listed nurse, 18 listed Behavioral Health or Psychiatry, 15 listed the nursing supervisor, 12 listed physicians, 10 listed Social Work, 8 listed pastoral/spiritual care or clergy, and six participants said anyone.

Next the participants were asked if they believed their response team was adequately trained. There were 68.22% who felt their team was adequately trained. Regarding the type of training the response team has, de-escalation training was mentioned by 71 participants (with CPI being specifically mentioned 29 times, MOAB seven times, AVADE six times, Aegis six times, and Vistelar five times), restraint training mentioned seven times, and four participants

mentioned behavioral training. There were four participants who mentioned there was no training for their team.

Psychiatric Unit

Quantitative Results

One-way ANOVAs were utilized to compare hospitals with a psychiatric unit and those that do not have psychiatric units on their hospital and ED size as well as thefts, assaults, and staff injuries. As seen in Table 37, the EDs with psychiatric units were significantly larger in all four areas than EDs without psychiatric units. Table 38 shows there were no significant differences identified by researchers in regard to assaults or staff injuries, even though the numbers of assaults is different by 24. This can be explained by the high variability in the numbers of assaults reported, as seen in the high standard deviations. The number of assaults reported in EDs without psychiatric units ranged from 0 to 350 whereas the number of reported assaults in EDs with psychiatric units ranged from 0 to 1,017. There was a significant finding for the number of reported thefts. Thefts were significantly lower in hospitals that did not have a psychiatric unit than in hospitals that did have a psychiatric unit. Assaults and staff injuries were not significant however they also went down in number in those EDs with no psychiatric unit when compared with those that did have a psychiatric unit.

Table 37
Hospital and ED Size by Psychiatric Unit

	Psychiatric Unit		No Psychiatric Unit		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 134)
Hospital beds	477.35	369.59	269.69	274.69	13.38***
Hospital employees	4319.72	4224.21	2705.19	3400.00	
ED beds	46.05	28.79	34.06	28.14	
ED employees	156.27	142.64	110.21	103.80	4.48*

*$p < .05$. ***$p < .001$.

Table 38

Thefts, Assaults, and Staff Injuries by Psychiatric Unit

	Psychiatric Unit		No Psychiatric Unit		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 134)
Thefts	7.62	15.43	2.96	4.68	3.99*
Assaults	56.40	135.40	32.36	65.67	1.24
Staff injuries	11.28	17.22	6.70	11.73	2.40

*$p < .05$.

Researchers also ran independent samples *t* tests comparing just the smaller EDs that were 33 beds or less (48.5% of the sample) with a psychiatric unit and those without one on the dependent variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There was a significant difference observed in the small EDs in regard to assaults and staff injuries, $p < .05$. Small EDs with a psychiatric unit had significantly more assaults ($M = 21.81$, $SD = 26.76$) than those that did not ($M = 9.50$, $SD = 17.18$) and small EDs with a psychiatric unit had significantly more staff injuries ($M = 5.96$, $SD = 5.60$) than those that did not ($M = 1.61$, $SD = 1.77$). Independent samples *t* tests were also run for large hospitals with no significant findings. However, theft, assaults, and staff injuries were all higher in large EDs with a psychiatric unit than those without one.

Next researchers ran independent samples *t* tests comparing rural EDs with a psychiatric unit and those without a psychiatric unit on the dependent variables of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There was a significant finding in regard to rural hospitals with a psychiatric unit having more staff injuries ($M = 5.50$, $SD = 5.83$) than those that did not ($M = 1.53$, $SD = 1.76$) $p <. 05$. There was another

significant finding in regard to rural hospitals with psychiatric units having more staff injuries (M = 5.50, SD = 5.83) than those that did not (M = 1.53, SD = 1.76) $p < .05$. While not significant in urban EDs, those that have a psychiatric unit have higher means in theft, assaults, and staff injuries.

Qualitative Results

The staff who completed the ED staff interview were asked if their hospital had an in-patient psychiatric unit. They were also asked the impact of having an in-patient psychiatric unit on violence. There were 65.09% of the participants who stated they had an in-patient psychiatric unit and there were 27 specific comments on how having an in-house psychiatric unit helps to minimize violence. The majority of these comments discussed how having the units in-house allows for quicker facilitation to a safer unit and patients do not wait as long to get transferred from the ED. There were four comments from participants who stated having an in-house psychiatric unit makes no positive or negative impact on violence.

Access Control

Quantitative Results

Approximately 87% of participants reported controlling access in the ED with an access control system. There 56.6% of participants stated access to the ED is strictly controlled and limited by a security officer or other person. One-way ANOVAs compared EDs that controlled the access with an access control and those that did not on thefts, assaults, and staff injuries. There were no statistically significant findings, however the mean number of assaults was higher in the EDs that controlled access compared to those that did not control access. These results are displayed in Table 39.

Table 39
Thefts, Assaults, and Staff Injuries by Access Control System

	Access Controlled		Access Not Controlled		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	5.24	12.44	7.62	9.15	0.44
Assaults	48.97	116.77	22.08	27.87	0.68
Staff injuries	9.29	15.34	8.58	13.60	0.02

Likewise, there were no significant differences between the EDs when they were compared by having a security officer or other person control access to the ED and those who did not use this method. These results are displayed in Table 40.

Table 40
Thefts, Assaults, and Staff Injuries by Access Controlled by Security Officer or Other Person

	Access Controlled		Access Not Controlled		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	4.52	8.07	6.89	15.93	0.99
Assaults	58.18	140.19	28.91	41.76	1.84
Staff injuries	10.73	17.22	7.22	11.63	1.38

Researchers also ran independent samples *t* tests comparing smaller EDs that had 33 beds or less (48.5% of the sample) with access control in place in the EDs and those without access control on the dependent variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences found.

Next a set of independent samples *t* tests was run to compare rural EDs that have access control in the EDs and those that do not on numbers of thefts, assaults, and staff injuries. The

same comparison was also conducted with suburban and urban EDs. There were no significant findings.

Qualitative Results

There were 90.65% of the survey participants who stated their ED access was restricted and controlled. The participants were asked the following question about the impact of having access controlled on violence in the ED and a content analysis was conducted on the responses. There were 63 participants who stated controlling access to the ED had a positive impact on violence and that it allows them to control who goes in ED, which is especially helpful in incidents such as a receiving a gun shot victim. There were 10 participants who stated the impact on violence is minimal because violence is perpetuated by patients, "tailgating" is a problem, visitors slip in through so many access points because of ED design, or there has not been support or funding to properly address access control from management.

Visitor Badges

Quantitative Results

There were 45.6% of the participants who stated their ED does not give out badges, 36.8% of the participants that reported they give visitors badges to ED visitors all the time, and 14% stated they give them part of the time. This resulted in 51, 37, and 17 participating EDs with complete study data in each category, respectively. One-way ANOVAs were run to compare EDs based on those categories, showing a significant difference only for assaults. EDs with the highest number of assaults used visitor badges all the time and were significantly higher than the EDs that did not use visitor badges. The difference between the group that uses visitor badges all the time and those that use them part of the time has a large difference in means, but it was not statistically significant. The full results for these comparisons are in Table 41.

Table 41

Thefts, Assaults, and Staff Injuries by Visitors' Badges

	All the Time		Part of the Time		No		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*(2, 102)
Thefts	6.49	9.97	4.29	6.76	5.25	14.67	0.22
Assaults	81.76	175.3	34.12	36.35	23.27	33.12	3.28*
Staff injuries	13.36	19.82	7.53	8.80	6.84	12.23	2.14

*$p < .05$.

Researchers also ran independent samples *t* tests comparing smaller EDs that were 33 beds or less (48.5% of the sample) doing visitors badges in the EDs and those not doing visitor badges in the ED on the number of thefts, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences found.

A second set of independent samples *t* tests compared rural EDs that issue visitors badges and those that do not on the dependent variables of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There was a significant difference in suburban EDs that issue visitors' badges; suburban EDs that issue visitor badges all the time have a higher number of assaults ($M = 56.00$, $SD = 67.26$) than those that do not ($M = 8.33$, $SD = 10.78$). There was a marginal difference in urban EDs that issue visitors' badges; urban EDs that issue visitors badge all the time have a higher number of assaults ($M = 117.39$, $SD = 241.00$) than those that do not ($M = 34.64$, $SD = 39.90$).

Qualitative Results

There were 47.66% of the staff who completed the ED staff interview who stated they give visitors badges out at the ED. There were 23 participants who stated specifically that giving out ID badges in the ED was helpful to maintain security. There were five participants who

stated that visitors' badges being given out has no impact on security. There were five participants who stated they are working on implementing a visitor control system now.

Metal Detectors

Quantitative Results

Sixty-one (44.9%) of the participants reported they use a handheld metal detector in the ED. There were only 14% (n = 19) who reported they have a fixed metal detector installed in their ED. One-way ANOVAs were run to compare the EDs that utilize handheld metal detectors and those that do not use them on thefts, assaults, and staff injuries. As seen in Table 42, there were not any significant differences in these variables, which is notable because the EDs with handheld metal detectors (employees: M = 163.23, SD = 115.09; beds: M = 48.79, SD = 27.60) were significantly larger than those without handheld metal detectors as measured by the number of employees in the ED (employees: M = 109.63, SD = 129.05; beds: M = 34.41, SD = 29.08), $F(1, 129) = 6.22$, $p < .05$, and beds in the ED, $F(1, 129) = 8.32$, $p < .01$.

Table 42

Thefts, Assaults, and Staff Injuries by Handheld Metal Detector

	Metal Detector		No Metal Detector		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	4.81	8.85	6.12	14.20	0.31
Assaults	53.23	68.25	39.48	135.02	0.40
Staff injuries	10.52	16.24	8.17	14.17	0.62

Independent samples t tests compared smaller EDs that had 33 beds or less (48.5% of the sample) with handheld metal detectors and smaller EDs without them on the variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There was a significant difference observed in the small EDs in regard to assaults and staff injuries, $p < .05$. Small EDs with handheld metal

detectors had significantly more assaults (M = 24.71, SD = 31.30) than those that did not (M = 11.16, SD = 16.76). Those small EDs with handheld metal detectors also had significantly more staff injuries (M = 6.65, SD = 5.86) than those that did not (M = 1.21, SD = 1.96). No significant differences were found for the large hospitals.

Researchers also ran independent samples t tests comparing rural EDs that have handheld metal detectors and those that do not on the number of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. Rural EDs with handheld metal detectors had significantly higher means on staff injuries (M = 5.50, SD = 5.68) than those that did not (M = 1.53, SD = 1.99).

The next set of one-way ANOVAs compared the EDs based on use of a fixed metal detector. Although only 14 of the 19 EDs that used fixed metal detectors in the study reported complete information to be included in these comparisons, a significant difference was still found in the number of assaults; those with fixed metal detectors reported more than 60 more assaults in the year measured in this study than EDs without fixed metal detectors. The EDs with metal detectors ranged in size from 0-125 beds and 70-300 employees with a mean of 54.89 beds (SD = 23.43) and a mean of 189.89 employees (SD = 83.41). The full results for these comparisons are reported in Table 43.

Table 43
Thefts, Assaults, and Staff Injuries by Fixed Metal Detector

	Metal Detector		No Metal Detector		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	5.36	7.00	5.56	12.70	0.00
Assaults	101.71	96.16	37.01	109.91	4.33*
Staff injuries	13.00	19.34	8.62	14.37	1.02

*$p < .05$.

Next researchers ran independent samples *t* tests comparing smaller EDs with 33 beds or less (48.5% of the sample) with fixed metal detectors and those without them on the number of thefts, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences. Likewise, independent samples *t* tests did not show any significant differences when EDs were compared based on their location (urban, suburban, and rural) in regard to use of fixed metal detectors.

Qualitative Results

There were 71.03% of qualitative participants who stated they have handheld metal detectors in the ED. There were 38 participants in the ED interview who stated the handheld metal detectors make a positive impact on violence. The common responses on the handheld metal detectors were that they are very helpful for behavioral health patients and they allow for help detecting weapons or other dangerous objects. There were eight participants who stated there was no impact on violence or the devices are not used very often.

There were 21.50% of participants that stated they utilized fixed metal detectors in their EDs. There were 34 participants that stated metal detectors have a positive impact on violence. The common responses were they are highly impactful, they prevent a large number of weapons and unwanted items from going into treatment areas, wish we had them, or getting ready to install them. There were five participants who stated something negative about fixed metal detectors, such as they would make us “look bad”, no staff to operate, or very expensive to operate.

Security Design

Quantitative Results

Only 18.4% (n = 25) of the participants stated the ED had been designed with security in mind from the beginning while 54.2% (n = 71) said it was not, whereas 25.2% (n = 33) said they did not know. The one-way ANOVAs run based on this variable showed no significant differences between the groups. It is interesting to note that while not significant those EDs that designed their EDs with security in mind had less thefts, assaults, and staff injuries than those who did not. See Table 44 for these results.

Table 44
Thefts, Assaults, and Staff Injuries by ED Design

	Yes		No		I Don't Know		
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*(2, 100)
Thefts	3.80	4.34	4.61	7.31	9.42	22.07	1.61
Assaults	41.30	80.18	55.68	137.63	27.25	30.08	0.58
Staff injuries	7.10	10.91	11.14	15.99	6.88	16.29	0.94

Researchers also ran independent samples t tests comparing smaller EDs with 33 beds or less (48.5% of the sample) that designed their EDs with security in mind and those who did not on dependent variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences. However, it is interesting to note the larger EDs that designed their EDs with security in mind all had lower means in thefts, assaults, and staff injuries.

The next set of independent samples t tests compared rural EDs that designed their EDs with security in mind and those that did not on the number of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There were no

significant findings. While not significant, rural EDs that designed their ED with security in mind had lower means in thefts, assaults, and staff injuries than rural EDs that did not.

Qualitative Results

Of the qualitative participants, 45.19% of the staff who stated their ED has a good design from a security standpoint. The ED staff was asked why they think the design is good or bad. There were 15 participants who stated the ED is still too open or has too many entrances to control effectively. There were 13 participants who stated they felt it was a good design because they felt secure, public and treatment areas are separate, access is controlled, patients enter room from hall side while clinicians enter from lockable inside. There were four participants who stated they need more rooms specifically designed for behavioral health patients. There were four participants who stated the ED was designed between 15 and 30 years earlier when security was not the focus it is now.

Security Cameras

Quantitative Results

There were 94.7% of the participants who stated security cameras were located in key locations of the Emergency Department, leaving only seven who said they did not use security cameras. Of those, only four reported complete information for thefts, assaults, and staff injuries, so one-way ANOVAs would not be valid for this comparison. As can be seen in Table 45, the average numbers of reported incidents in EDs without security cameras were low. The ranges for these incidents in EDs without cameras were 0-2 for thefts, 0-18 for assaults, and 0-7 for staff injuries.

Table 45
Thefts, Assaults, and Staff Injuries by Security Cameras

	Cameras		No Cameras	
Variable	*M*	*SD*	*M*	*SD*
Thefts	5.73	12.26	0.50	1.00
Assaults	47.11	111.91	8.50	7.55
Staff injuries	9.42	15.35	4.00	2.94

Qualitative Results

One hundred percent of the ED staff interview participants stated they utilized security cameras in the ED. There were 49 positive comments about having security cameras in use in the ED, mostly relating to deterring crime or violence, helpful investigations to be able to pull video recordings, or help to create a positive security culture. There were six specific comments that stated they would like to see cameras expanded in the ED.

Panic Alarms

Quantitative Results

When asked about a panic alarm in the ED 89.3% of the participants stated they have one, and 80.9% of the participants stated the panic alarms are tested as appropriate and on a preventative maintenance program to ensure they are always working. There were not any differences in thefts, assaults, and staff injuries when the EDs were compared by whether or not they have a panic alarm, although the comparison for staff injuries was marginally significant with EDs that use a panic alarm having more incidents. It was also found that EDs with panic alarms were significantly larger than those who do not use panic alarms. All these results are shown in Tables 46 and 47.

Table 46

Thefts, Assaults, and Staff Injuries by Panic Alarm

	Panic Alarm		No Panic Alarm		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	5.75	12.70	3.83	4.99	0.27
Assaults	50.00	116.07	11.83	17.55	1.28
Staff injuries	10.11	15.81	2.33	2.35	2.87[a]

[a]$p = .093$.

Table 47

Hospital and ED Size by Panic Alarm

	Panic Alarm		No Panic Alarm		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 129)
Hospital beds	411.54	352.73	201.14	249.32	4.69*
Hospital employees	3837.92	4117.63	1303.14	1539.38	5.19*
ED beds	43.10	28.62	24.43	29.58	5.29*
ED employees	139.20	123.02	96.07	141.04	1.5

*$p < .05$.

Qualitative Results

There were 93.40% of the participants who stated they utilize panic alarms in the ED. Regarding the impact on violence due to having panic alarms, there were 21 specific responses about being helpful because of a quick response by security. There were 17 specific responses about how panic alarms make them feel safer/increases staff perception of safety.

Public View Monitors

Quantitative Results

There were 21.4% ($n = 28$) of the EDs that stated they utilized public view monitors in the ED lobby to display camera views from the ED entrance/lobby for the public to see. Of those, 23 reported complete data and were compared to the 82 who do not use public view monitors using one-way ANOVAs. No significant differences were found between the groups

for thefts, assaults, or staff injuries, although those that use public view monitors tend to have lower numbers of incidents than those that do not use the monitors, as seen in Table 48.

Table 48
Thefts, Assaults, and Staff Injuries by Public View Monitors

	Monitors		No Monitors		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	3.00	4.35	6.24	13.40	1.30
Assaults	33.96	57.28	48.91	120.81	0.33
Staff injuries	8.41	12.45	9.43	15.79	0.08

Researchers also ran independent samples *t* tests comparing smaller EDs that were 33 beds or less (48.5% of the sample) that utilize public view monitors in their EDs and those who did not on the dependent variables of theft, assaults, and staff injuries. This same comparison was conducted with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences. However it is interesting to note that in the larger EDs that utilized public view monitors all had lower means in thefts, assaults, and staff injuries.

Researchers also ran independent samples *t* tests comparing rural EDs that utilized public view monitors and those that did not on the variables of thefts, assaults, and staff injuries. The same comparison was also conducted with suburban and urban EDs. There were no significant findings. While not significant, rural EDs and urban EDs that utilize public view monitors had lower means in thefts, assaults, and staff injuries.

Qualitative Results

A fourth (25.4%) of the qualitative participants stated they use public view monitors in the ED lobby area/entrance. The participants were also asked about the impact of the public view monitors on violence. There were 13 participants who stated that the public view monitors utilized as appropriate in the ED lobby area/entrance provides a deterrent effect on violence and

helps create a strong security culture. There were eight specific responses about how these monitors do not have an impact on violence, or staff showed concern about displaying where cameras are and where they are not.

Signage

Quantitative Results

Participants stated that they utilized signs as follows in the ED: No Weapon Signs 66.2%, zero tolerance signage 56.6%, security cameras being recorded/in use signs 35.3%, all of the above 33.1%. Participants were also asked to list any other signs that were posted in their EDs. Common themes mentioned more than once were no use of recording devices, no pictures or videos, K9 signage, and masks requirements. One-way ANOVAs showed no significant findings in regard to no weapon signs (Table 49), security camera signs (Table 50), zero tolerance signs (Table 51), and all of the above (Table 52). There were, however, two marginally significant differences. The first result that was close to reaching significance showed fewer reported thefts in EDs with no weapons signage. The second showed higher reported assaults in EDs that use zero tolerance signage.

Table 49

Thefts, Assaults, and Staff Injuries by No Weapons Signage

	Signage		No Signage		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	3.96	7.90	8.82	17.61	3.81[a]
Assaults	38.69	59.03	60.15	174.41	0.87
Staff injuries	8.62	15.47	10.47	14.39	0.34

[a]$p = .053$.

Table 50

Thefts, Assaults, and Staff Injuries by Security Camera Signage

	Signage		No Signage		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	5.88	15.68	5.30	9.03	0.06
Assaults	61.83	162.44	34.84	50.49	1.53
Staff injuries	7.07	11.63	10.66	16.98	1.42

Table 51

Thefts, Assaults, and Staff Injuries by Zero Tolerance Signage

	Signage		No Signage		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	6.35	13.93	4.35	8.74	0.70
Assaults	60.82	137.76	23.74	39.60	2.94[a]
Staff injuries	10.39	15.66	7.48	14.22	0.93

[a]*p* = .089.

Table 52

Thefts, Assaults, and Staff Injuries by All of the Above Signage

	Signage		No Signage		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	3.35	4.76	6.72	14.48	1.88
Assaults	48.95	69.99	43.84	127.04	0.05
Staff injuries	8.11	10.53	9.79	17.07	0.29

Qualitative Results

The participants completing the ED staff interview stated that 76.42% had signs up stating their zero-tolerance policy toward violence or something similar. The staff was asked about the impact of having this signage up in the ED on violence, with 26 participants stating that having the signs made a positive impact on violence. The common responses were nurses and staff feel safer with signs in place, makes staff feel more supported, and how it is important

to articulate the policy. There were 17 comments that stated these signs make no difference on violence. Common comments were there are too many signs, signs do not help, and signs are not much of a deterrent.

Emergency Department Staff

Quantitative Results

When asked if the ED staff were formally trained in de-escalation techniques 80.9% (n = 110) of the participants stated they were, with only 21 respondents saying no. There were 76.5% of the participants who stated their ED staff had received active shooter training and 73.5% of the participants who stated their ED staff received restraint and physical technique training. Almost a fourth of the participants (73.5%) stated their ED staff had received workplace violence prevention training, 40.4% of the participants stated their ED staff received training on legal liability and incident , and 30.1% of the participants stated that their ED staff received self-defense training. Participants were also asked what type of other training their ED staff receives. Participants mentioned more than once emergency preparedness, mass casualty, and specific patient population training such as for prisoners, or visually, or hearing impaired.

The one-way ANOVAs that compared EDs with specific training for their ED staff and those that do not on multiple variables showed no significant findings in regard to de-escalation, self-defense training, workplace violence prevention training, and legal liability/incident reporting training. However, there was a significant difference when comparing EDs with training on restraint/physical techniques and those that do not with number of thefts, $F(, 1, 103) = 6.45$, $p < .05$. The mean number for thefts was smaller for EDs that have restraint/physical technique training for their ED staff ($M = 3.86$, $SD = 5.69$) than those that do not ($M = 10.62$, $SD = 21.66$). There was also a significant difference when comparing EDs with training on active

shooter and those that do not with number of thefts, $F(, 1, 103) = 6.63$, $p < .05$. The mean number for thefts was smaller for EDs that have active shooter training for their ED staff ($M = 3.93$, $SD = 6.16$) than those that do not ($M = 10.96$, $SD = 22.06$).

Qualitative Results

Those working in the ED were asked if de-escalation training was offered and 86.92% stated they were trained on de-escalation. Staff were also asked how effective de-escalation training is on violence with 73 participants stating that the de-escalation training is highly effective. There were 24 participants who stated it was somewhat effective and 7 participants who said it is not effective, citing two hours once a year is not enough, drugs, alcohol, or mental state keeps it from being effective, or de-escalation is tried too late in the process.

Sitters

Approximately 93% ($n = 126$) of the participants stated they use a sitter to sit with patients who are dysregulated, suicidal, or dangerous. Only 7.4% ($n = 10$) reported not using sitters. Most EDs use trained sitters (69.1%), some use ED staff (49.3%) or security staff as sitters (43.4%), and a few use employees from a contracted company (5.9%). When asked who else serves as a sitter, peace officers and police officers were each mentioned more than once. When each of these options were compared on their number of reported thefts, assaults, and staff injuries based on whether or not they used the type of sitter, only one significant result was found. EDs that use ED staff as sitters reported significantly fewer thefts than EDs that do not use ED staff as sitters. Each set of comparisons is reported in Tables 53, 54, 55, and 56.

Table 53

Thefts, Assaults, and Staff Injuries by Trained Sitters

	Trained Sitters		Not Trained Sitters		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	4.45	7.71	8.67	13.82	2.49
Assaults	41.77	58.46	56.81	195.20	0.37
Staff injuries	9.43	14.91	8.59	15.89	0.06

Table 54

Thefts, Assaults, and Staff Injuries by ED Staff Sitters

	ED Staff		Not ED Staff		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	3.26	5.10	7.85	16.11	3.89*
Assaults	43.77	141.42	47.54	65.38	0.03
Staff injuries	8.55	14.89	9.90	15.42	0.21

*$p < .05$.

Table 55

Thefts, Assaults, and Staff Injuries by Security Staff Sitters

	Security Staff		Not Security Staff		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	4.17	5.23	6.64	15.50	1.09
Assaults	48.40	149.74	43.40	63.01	0.05
Staff injuries	8.24	11.95	9.98	17.25	0.34

Table 56

Thefts, Assaults, and Staff Injuries by Contracted Sitters

	Contracted Employee		Not Contracted Employee		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	5.14	8.24	5.56	12.33	0.01
Assaults	48.14	65.34	45.46	112.73	0.00
Staff injuries	8.86	10.56	9.24	15.41	0.00

There were 69.9% of the participants who stated they trained their sitters on de-escalation, while 52.2% of the participants stated they trained their sitters on workplace violence prevention training. In regard to restraints and physical techniques, 41.9% stated their sitters received this type of training. There were also 41.9% who stated their sitters received training in active shooter. There were 28.7% of the participants stated they trained their sitters on self-defense, 27.2% of the participants received training on legal liability and incident reporting, and 14.7% of the participants stated that their sitters did not received any type of training. The only other type of training mentioned more than once was suicide prevention training.

One-way ANOVA were used to compare EDs that use security to sit with patients and those that do not on multiple variables. There were no significant findings. Another set of one-way ANOVAs compared EDs that use trained sitters to sit with patients and those that do not on multiple variables. There were no significant findings. One-way ANOVAs run to compare EDs that use their own ED staff to sit with patients and those that do not showed one significant finding on number of beds in the ED. The ED group that do not use their ED staff to sit with patients had a larger ED bed size mean (M = 46.04) versus EDs that do use their ED staff to sit with patients (M = 34.97). The next set of one-way ANOVA comparing ED staff using contracted employees to sit with patients and those that do not showed no significant results.

There were also one-way ANOVAs run comparing sitter groups that had training on de-escalation, self-defense, workplace violence prevention, restraints/physical techniques, legal liability/incident reporting, active shooter and those that did not on multiple variables. There were no significant findings for any of those groupings. In addition, one-way ANOVAs were run comparing sitter groups with training and those who had received no training to multiple variables. There were no significant findings.

Qualitative Results

The participants completing the ED staff interview were asked the following question if they believe the sitters need more training, resulting in 65.3% of the participants stating they do need more training. The participants were also asked what type of training do they believe the sitter needs. Twenty-one participants stated they needed more de-escalation training and eight participants stated that there needed to be more training specific to mental health.

Miscellaneous Security Controls

Quantitative Results

One type of security measure used by some EDs is K-9 units, although only 11 (8.5%) of the respondents reported having one in their EDs. Even with the low sample size of seven of those reporting complete study data, the one-way ANOVA for staff injuries demonstrated a marginally significant difference between the groups. As seen in Table 57, hospitals with more staff injuries were the ones who employed K-9 units.

Table 57
Thefts, Assaults, and Staff Injuries by K-9 Unit

	K-9 Unit		No K-9 Unit		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	11.14	17.63	5.13	11.60	1.63
Assaults	40.14	43.15	46.03	113.38	0.02
Staff injuries	19.86	29.75	8.44	13.42	3.84[a]

[a]$p = .053$.

Researchers also ran independent samples *t* tests comparing smaller EDs that had 33 beds or less (48.5% of the sample) that utilize K-9s in their EDs and those who did not on the dependent variables of theft, assaults, and staff injuries. This same comparison was conducted

with larger EDs (51.5% of the sample) with 35 or more beds in their ED. There were no significant differences.

Another type of security measure used by some EDs is having a workplace violence committee that proactively addresses violence. One hundred ten (85.3%) of the participants stated they have a workplace violence committee, whereas only 19 reported not having the committee. One-way ANOVAs did not show any significant differences between these groups because of the low sample size included in the comparison (16 for no committee). Table 58 shows that EDs with a workplace violence committee had a very high mean number of assaults, and the standard deviation shows high variability in the data, which ranged from 0 – 1,017 assaults in those 89 EDs.

In regard to the IAHSS Industry Guidelines and IAHSS Design Guidelines, 30.2% stated they had used both of the IAHSS guidelines. Twenty-four percent of the participants stated they have not used the guidelines and 26.4% stated they do not have the guidelines. Only 3.1% of the participants have used the IAHSS Security Design Guidelines to help address violence in the ED,

Table 58
Thefts, Assaults, and Staff Injuries by Workplace Violence Committee

	Committee		No Committee		
Variable	*M*	*SD*	*M*	*SD*	*F*(1, 103)
Thefts	4.91	8.16	9.00	24.58	1.57
Assaults	52.09	118.28	9.75	13.85	2.03
Staff injuries	9.93	15.50	5.25	12.28	1.31

whereas 16.3% have used the IAHSS Industry Guidelines to help with violence in the ED. Because there were so few participants who reported using only the IAHSS Security Design Guidelines, this group was omitted from the one-way ANOVAs comparing these groups on thefts, assaults, and staff injuries. Both thefts, $F(3, 98) = 2.34$, $p = .078$, and staff injuries, $F(3,$

98) = 2.53, p = .062, showed marginally significant differences, while assaults showed no significant difference, $F(3, 98) = 1.44$. A Tukey test used to follow up these results showed that for thefts the statistical difference was between those who do not have them and those who do not use them, p = .064. For staff injuries the difference was between those who do not have them and those who use the IAHSS Industry Guidelines, p = .076. The descriptive statistics for the numbers of thefts, assaults, and staff injuries are shown in Table 59.

Table 59

Thefts, Assaults, & Injuries by IAHSS Industry Guidelines & Security Design Guidelines

	Thefts		Assaults		Staff Injuries	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*
IAHSS Industry Guidelines	7.53	12.17	41.59	46.24	**14.38**	23.47
IAHSS Sec. Design Guidelines	10.67	8.08	55.00	56.35	18.33	23.12
I use both	4.68	5.55	75.32	182.48	11.61	14.78
I have not used them	**9.35**	20.49	44.00	73.71	8.54	12.98
I do not have them	**1.18**	2.29	15.75	33.32	**3.25**	7.44

Participants were asked for additional thoughts that might help determine the most effective controls on ED violence. The most common responses that were mentioned multiple times were better communication among nurses and staff, a professional security presence, and design of the ED from a security perspective. One specific response that stood out to the researchers is "The Workplace Violence Committee is brand new. Until now, the hospital has not done a good job of documenting violence that has occurred. I cannot give accurate accounts on the last three questions. This will be much improved in the next year."

Qualitative Results

There were 9.43% of the participants who completed the ED staff interview and stated they use K-9s in their ED. Eight participants stated the K-9 has a positive impact on violence, de-

escalated violent behavior, or provides a deterrent. Five participants stated the K-9 program had minimal or no impact on violence and another five participants were actively considering adding a K-9 program.

Staff completing the ED staff interview were asked to name one security control they would like to see added to the ED to make security better and safer from a violence standpoint. There were 24 specific responses about wanting to see metal detectors installed in the ED. There were 21 specific responses that they wanted to see more of a security presence, more security officers. There were nine participants who would like to see arming of security or a police presence. There were eight participants who stated they wanted to see security better equipped with things like Tasers, more security cameras, locating capabilities on panic alarms, and body worn cameras. Four participants mentioned specifically how they would like body worn panic alarms and three participants mentioned better support from management.

When asked if they had ever been a victim of violence, 72.89% of the ED staff stated they have been a victim of verbal or physical violence and 59.81% stated they had been a victim of both verbal and physical violence. The staff who had been a victim sometime in the past were asked who was the instigator of the violence, with 47 participants stating it was the patient. There were 11 participants who mentioned a family member was the instigator of violence and six participants who mentioned it was a visitor.

The staff completing the ED staff interview were also asked if they had been a victim of violence in the last 12 months. There were 40.5% of the participants who had been the victim of verbal or physical violence in the past 12 months and 28.3% of the participants who stated they had experienced both physical and verbal violence in the last 12 months. The staff who had been a victim of violence the past 12 months were asked who the instigator of violence was. There

were 24 staff members who stated the patient was the instigator of violence, 8 staff members stated the family member was the instigator, and 4 staff members stated it was a visitor.

ED staff were also asked what they believe to be the main factor that causes people to perpetrate violence in the ED. Altered mental state due as a behavioral medicine patient or being under the influence of drugs or alcohol is the main factor named by 49 participants. Twenty-five participants stated the main factor is poor customer service relating to wait times, lack of empathy, and unmet needs and 15 participants stated the main factor for people to perpetuate violence is stress, frustration, confusion, or overcrowding. Five participants specifically mentioned there are no consequences to the perpetrator of violence.

Discussion

The question that helped to guide this study is: What are effective controls on Emergency Department (ED) violence? To summarize the findings researchers reviewed the analysis of the quantitative, qualitative, as well as the findings from the literature review. Based on a sample of 136 participants for the quantitative survey and 107 participants for the qualitative survey, the researchers determined the frequency of the security controls utilized. There were also multiple significant findings in the study in regard to security controls and their frequency of violence. In analyzing the qualitative data researchers were able to determine how the security controls are perceived by those working in the ED environment.

One thing that is important to note, and is easy to see in the standard deviations in every table, is that there is great variability in the use of each type of security control among EDs. In this study EDs were grouped for each analysis by whether or not they used the specific security control, but in almost every case the variability in the dependent variables (thefts, assaults, and staff injuries) was very high, resulting in high standard deviations, and showing that although

they were similar in regard to a specific security measure, they were not necessarily similar in thefts, assaults, and staff injuries. This variability makes it more difficult to find statistical significance, which makes the descriptive statistics extremely informative.

Types of EDs

The majority of EDs in this study have non-profit status (76.5%) and are at a community hospital (65.4%). Most have a psychiatric unit (54.4%) almost half (49.3%) are urban hospitals. The average hospital in the study had 382 beds, 3,583 hospital employees, 40 ED beds, and 135 ED employees. Urban hospitals were significantly larger than the suburban hospitals, which were significantly larger than the rural hospitals. The urban hospitals also reported significantly more staff injuries than the rural hospitals. Urban trauma centers reported significantly more thefts, assaults, and staff injuries than EDs at a community hospital. By profit status the only significant difference was in the number of assaults, where EDs run by a state or local government facility reported significantly more assaults than non-profit facilities. Thefts were significantly lower in hospitals that did not have a psychiatric unit than in hospitals that did have a psychiatric unit. Assaults and staff injuries were not significant, however they were lower in EDs with no psychiatric unit.

Security Staff

A significant finding in the study was that larger hospitals with more beds and employees in the hospital and in the ED are significantly more likely to have a security officer 24/7 than EDs that are smaller. Another significant finding was that hospitals with security 24/7 reported more staff injuries than hospitals that did not have a security officer 24/7. They also reported more thefts and assaults, although those two were not statistically significant. EDs with more than one officer 24/7 in the ED showed statistically higher means for staff injuries than

those with only a part-time officer and smaller EDs with more than one security officer had significantly more thefts that those that did not have more than one security officer. In fact, both larger and smaller EDs with more than one security officer had higher means for thefts, assaults, and staff injuries than ED that did not, though not significant because of the smaller sample size when they were broken into two groups. Also, both suburban and urban EDs with more than one security officer had higher means for thefts, assaults, and staff injuries

It is important to note the security officer's presence is not causing incidents to go up; the presence of the officer is capturing the incidents. Incidents often go unreported for multiple reasons (Ford, 2012 & Hill 2017). In addition, EDs with more risk are more inclined to utilize security 24/7 to address security concerns. Leaders should understand that based on this study, both larger and smaller EDs with more than one security officer can expect higher means of thefts, assaults, and staff injuries. The largest theme about security officers from the ED team was how they feel the officer's presence is so important to deter and prevent violence. The second theme was how they felt the officer had to be posted in the ED for a quick response and how it makes them feel safer. These themes are also consistent with previous research that clearly indicates ED staff value the importance of having highly trained security officers in place at the ED for a quick and effective response and they want more security in place (Hill 2017 & Kuhn 2014) . The leader can use this information to help make decisions on how best to deploy security staff.

Firearms and Weapons

The numbers of firearms and other weapons in the ED were relatively small, with only 12.1% of the hospitals having a firearm full-time, 27.9% with tasers, and 33.1% utilizing other weapons. Although not significant, hospitals that have armed security in place in the ED 24/7

reported higher assaults and staff injuries than EDs with no armed officer present. There were only two significant differences for staff injuries when compared by weapon use. EDs with a security officer having a taser had more staff injuries than EDs that did not have an officer armed with a taser and EDs with an officer having other weapons reported more staff injuries than those who do not have other weapons. Assaults were also much higher in EDs where security officers have other weapons, though it did not rise to the point of statistical significance.

The comparisons between rural, suburban, and urban EDs did not reach statistical significance because of the smaller groups involved, but there were two marginally significant findings. Rural EDs with a taser had higher means of injuries rural EDs without a taser and urban EDs with a taser had a higher number of staff injuries than those that did not have a taser.

There was one major theme that emerged from the qualitative findings in regard to firearms. Participants felt that having firearms made a positive impact on violence because of the deterrent factor. Participants stated they were very effective, provided a great deterrent, reduced violence, and helped lessen employee injuries. As the leader makes decisions on weapons it is helpful to know that the "other weapons" used by security in the ED were batons first, pepper spray/gel second, followed by handcuffs.

It cannot be concluded from these data and analyses that use of firearms or other weapons causes these higher numbers of staff injuries or assaults. Rather, it appears that EDs with higher numbers of violent incidents feel the need for such measures for protection and to attempt to deter further violence.

Security training

De-escalation was the type of training used by the most EDs (94.7%). EDs that provide de-escalation training for their ED staff have higher numbers of thefts, assaults, and staff

injuries. Since only seven EDs do not use de-escalation training, it can be concluded that those seven EDs do not feel the need because they have few violent incidents. This is also substantiated by the fact that EDs with security officers trained in de-escalation were larger (i.e., had more ED beds and employees) than EDs where security officers were not trained.

One major theme observed in the qualitative portion of the study is how de-escalation helps reduce violence. Participants pointed out how training helps calm people down, de-escalates a situation, helps keep everyone safe, reduces physical interventions, and better equips security to help.

The literature is overwhelming in support of de-escalation training being offered to security officers as well as other staff (Stone, 2021 & IAHSS, 2022). According to this study and previous studies, officers not trained on de-escalation are below the industry standard. It is helpful to know that based on the study it is the smaller EDs generally that have security officers who have not received de-escalation training.

Regarding EDs with IAHSS certified security staff, EDs that have IAHSS certified security staff had higher numbers of thefts, assaults, and staff injuries than those that do not have certified security staff. Comparisons made by location of the ED showed that for rural and suburban EDs, with certified security staff had a higher numbers of assaults than those that did not have a certified security staff. Second, urban EDs with certified staff had a higher number of thefts than those that did not have certified security staff. The ED participants showed frequent support for IAHSS certification training for the officers, stating many different benefits, along with complementing the training.

It is important to note that this study shows that hospitals with more risk or higher incidents are more inclined to utilize security controls such as IAHSS certified staff. The IAHSS

certified staff or other controls in this study are not the cause of higher incidents, these higher risk EDs are just more likely to use more controls. When making training decisions, leadership should understand that ED participants showed frequent support for the IAHSS certification for the officers.

The Certified Healthcare Protection Administrator (CHPA) is a certification program through the IAHSS. When EDs with a CHPA security leader were compared to those without a CHPA security leader, only staff injuries showed a significant difference, with more injuries reported in EDs with a CHPA security leader. When the EDs were compared according to location, rural EDs with a CHPA had a higher means of thefts than rural EDs without one. Urban EDs with a CHPA had a higher number of staff injuries than urban EDs without a CHPA. One marginally significant finding was in regard to suburban EDs with a CHPA having fewer thefts than those that did not have a CHPA.

It is reasonable to conclude that hospitals with a higher risk of incidents are taking more measures, such as being supportive of their security leaders obtaining their CHPA. Security leaders with their CHPA will be better informed and better equipped to make improvements to the healthcare security program. Security leaders wanting to become a better healthcare security professional should consider obtaining their CHPA.

The in-house security group comparison showed EDs that employed their own security personnel reported significantly more staff injuries than EDs that did not employ their own security personnel. Conversely, EDs that use contracted security reported significantly fewer staff injuries than those that do not use contracted security. When comparisons were made only within rural, suburban and urban EDs, it was found that urban EDs with in-house security have more staff injuries than urban EDs that do not use in-house security. Qualitatively, data collected

from the ED staff were mostly positive comments about in-house security, but there were also several positive comments about contracted security staff. Security and healthcare leadership should understand that EDs with significantly more injuries are employing their own security personnel in-house. Conversely EDs that contract security out have fewer staff injuries. The leader should be aware that in this study there were positive comments about both in-house and contract security.

Response Teams

The majority of participants (81.6%) stated they utilized response teams. While training varied, the vast majority trained their teams on de-escalation, restraints/physical techniques, and workplace violence prevention. The researchers found that EDs with more staff injuries do formal training with their security response teams. Also, the small EDs with a security response team had significantly more assaults and staff injuries than small EDs that did not have a response team. The qualitative data obtained from the ED participants show support for a response team to be formed, described as Behavioral Emergency Response Team (BERT). The participants described the highly trained BERT team or something like it that is made up of a multidisciplinary group. This group was described as helping reduce violent assaults and injuries, while also making staff feel safer. There is also evidence in the literature review that supports the efficacy of properly trained response teams to be more proactive in nature. The research literature offers evidence to support the efficacy of a properly trained response team to be more proactive (AAMC, 2022 & Parker et al., 2020).

Physical Security Measures, CPTED, and Technology

Multiple physical security measures were reviewed by the researchers. There were no statistically significant findings in regard to the access controls system when compared as a

whole or when broken down by ED size or location. The qualitative data received from the ED participants overwhelmingly offered support on controlling access to the ED. Participants stated how controlling access to the ED has a positive impact on violence prevention.

EDs with the highest number of assaults used visitor badges all the time and were significantly higher than the EDs that did not use visitor badges. Also, suburban EDs that issue visitor badges all the time have a higher means of assaults than suburban EDs that do not. As a leader one should be aware the study showed EDs with the highest number of assaults used visitor badges all the time and were significantly higher than the EDs that did not use visitor badges. As stated before this finding does not point to causation but rather EDs are using more measures like visitor badges to combat workplace violence. The majority of the ED staff participants stated their support for issuing ID badges and stated it was helpful to maintain security.

When looking at fixed metal detectors, those who use them reported more than 60 more assaults in the year measured in this study than EDs without fixed metal detectors. Smaller EDs with handheld metal detectors had significantly more assaults and staff injuries than smaller EDs without handheld metal detectors; the same was found for rural EDs with handheld metal detectors. The qualitative data collected from the ED participants shows strong support for both the handheld and fixed metal detectors and many believe they have a positive impact on violence. As stated before, this finding does not point to causation but rather EDs are using more measures like metal detectors to combat workplace violence. Leadership should also be aware that the ED participants show strong support for handheld and fixed metal detectors.

Security and other leaders should be aware of Crime Prevention Though Environmental Design (CPTED). While there were no significant findings, security leaders should be aware that

the study showed larger EDs that designed their EDs with security in mind had lower thefts, assaults, and staff injuries. Likewise, the larger EDs (i.e., 35 beds or more) that designed their EDs with security in mind had fewer thefts, assaults, and staff injuries. Rural EDs that designed their EDs with security in mind had lower numbers of thefts, assaults, and staff injuries. ED participants taking part in the qualitative survey believed the EDs to be too open or to have too many entrances to control effectively. Many explained why they believe they have a good design, such as feeling secure, having separate areas, or controlling access. The published literature also offers evidence to consider Crime Prevention Through Environmental Design principles (IAHSS, 2022).

There were no significant findings in regard to testing related to security cameras. The data shows cameras are heavily utilized in EDs (94.7%). In addition, there were many ED staff members who shared in the qualitative survey that cameras help deter crime or violence. Many stated that cameras are helpful in investigation and help create a good security culture.

There were no statistically significant results when comparing EDs that use panic alarms and those that do not on thefts, assaults, or staff injuries. However, EDs that that use panic alarms have marginally significant more staff injuries than those EDs that do not use panic alarms. EDs with panic alarms were also significantly larger than those who do not use panic alarms, which is certainly a factor in their decision to use panic alarms. As with many of the other findings, security leaders should understand that EDs with higher incident rates are implementing more security controls.

Regarding public view monitors in the ED lobby, there were no significant differences in thefts, assaults, and staff injuries when size was not taken into consideration. In general, however, EDs that use public view monitors tend to have lower numbers of thefts, assaults, and

staff injuries. When larger EDs were compared by whether or not they have public view monitors, those with public view monitors had lower numbers of thefts, assaults, and staff injuries. Also, rural and urban EDs that utilize public view monitors had lower means in thefts, assaults, and staff injuries. The participants from the ED staff interview stated the public view monitors utilized in ED lobby area/entrance appropriately provide a deterrent to violence and help create a stronger security culture.

There were no significant findings in regard to using signs, but there were two marginally significant differences. EDs using "no weapons" signs have fewer reported thefts and EDs with "zero tolerance" signage showed higher numbers of assaults in the ED. During the ED staff interview many participants stated that signs made a positive impact on violence and it makes them feel more supported to have the policy posted. However, several staff members stated signs make no difference and are not a good deterrent.

Emergency Department Staff

The majority of ED staff are trained on de-escalation, active shooter, restraint/physical techniques, and workplace violence training. When comparing EDs by training on restraint/physical techniques, it was found that the mean number for thefts was smaller for EDs that have the training than in EDs that do not have restraint/physical technique training for their ED staff. Also, the mean number for thefts was significantly smaller for EDs that have active shooter training for their ED staff. The ED staff who participated in the qualitative portion of the study stated overwhelmingly that de-escalation training is highly effective. There were a few staff members who stated there needs to be more time spent on training or that de-escalation is often tried too late.

Again, this type of study does not allow us to assume causation, but it should be considered as training options are reviewed. Additionally, as the leader considers training, keep in mind the ED staff that stated overwhelmingly that de-escalation training is highly effective. The literature makes a strong case for training for the ED staff in regard to security (ENA, 2022, & Ming et al., 2019).

Sitters

Most EDs use a sitter to sit with a patient who is dysregulated, suicidal, or dangerous. EDs use trained sitters the most, followed by ED staff, then security, followed by a contracted company. Larger EDs are more likely not to use ED staff to sit with patients, but EDs that use ED staff as sitters reported significantly fewer thefts than EDs that do not use ED staff as sitters. The majority of sitters are trained in de-escalation, followed by violence prevention training, then restraints/physical techniques, and active shooter. Fewer sitters are trained in self-defense, legal liability, and incident reporting. Only 14.7% of the participants stated their sitters did not receive any type of training. The participants completing the ED staff interview stated most of the participants sitting with patients needed more training. When asked what type of additional training is needed, de-escalation and training specific to mental health was most common. The literature heavily supports sitters who are trained and given specific directions on job duties (Relias Media, 2020 & The Joint Commission, 2023).

Miscellaneous and other controls

The only noteworthy finding for K-9 units was a marginally significant difference where EDs with K-9 units reported more staff injuries. There were no significant findings when comparison was made with those EDs that have a workplace violence committee and those that do not.

Only 30.2% stated they had used both the IAHSS Industry Guidelines and IAHSS Design Guidelines. Sixteen percent have used the IAHSS industry guidelines to help with violence in the ED and only 3.1% of the participants have used the IAHSS Security Design Guidelines to help address violence in the ED. There were two marginally significant differences in regard to IAHSS industry guidelines, and security design guidelines. Thefts were higher in the group that stated, "I have not used them, as compared to the group that said, "I do not have them," and staff injuries were lower for those who stated, "I do not have them" than for those who stated they use the IAHSS Industry Guidelines.

Participants were asked to give additional thoughts on what might be the most effective controls of violence. The survey participants listed three items repeatedly. The three most common controls mentioned by participants were better communication among nurses and staff, a professional security presence, and design of the ED from a security perspective. When asked what they would like to see added to the ED to make security better and safer, 24 staff members said they would to see metal detectors installed in the ED. There were 21 participants who stated they wanted to see more of a security presence or more security officers. A staggering 72.89% of the ED staff stated they have been a victim of verbal or physical violence in the ED and 59.81% stated they had been a victim of both verbal and physical violence. In those situations, the patient is most commonly the instigator of the violence. Mental state as a behavioral health patient or being under the influence of drugs or alcohol was given as the main factor causing people to perpetrate violence. The second most common factor given for violence was poor customer service relating to wait times, lack of empathy, and unmet needs. Stress, frustration, confusion, and overcrowding were also named as triggers for violence. These findings should encourage

continued diligence by the security leader while also allowing them to be better informed as they make decisions.

The quantitative data in this study showed multiple significant findings that the security leader should be aware of. The qualitative data displayed multiple themes that the security leader should also be informed about. Security leaders can utilize these data to better understand what security controls are being utilized, what types of EDs are using each type of security control, and the perceptions of their use in the ED. The healthcare leader can use this information to help make better decisions to improve the security of their EDs and healthcare facilities. This study helps the leader understand how the ED employees perceive security controls. This study helps to understand security and workplace violence prevention from a leadership perspective but also from those working on the frontlines in the ED. Gaining a better understanding of the ED employee's perspectives can help the manager make informed decision that can make a difference to the employee.

As stated previously this study and the findings uncovered cannot be used to show causation. As noted the dependent variables in regards to thefts, assaults, and injuries were often increased in this study even when more security measures were present. It is apparent that facilities that have increased risk are utilizing more security measures to minimize those risks. It is recommended that this study be utilized in the future to help conduct an experimental study in regard to efficacy of controls, and the impact that security controls may have. Although challenging to implement an experimental design would help measure more specifically the impact of independent variables on dependent variables. A future research study may focus in on a certain independent variable such as body worn cameras as the security measure and test the impact of the selected security measure and its impact on the treatment group and control group

in regard to the selected dependent variables. This type of experiment will help determine causal relationships such as determining that the selected security measure caused violent incidents to go down.

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