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Active Shooter Awareness Education and Training Using Best Practices for Nurses in Acute Care Facilities

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by

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Abstract

The thought of having an active shooter at your place of work is unimaginable. The thought of having an active shooter at a place of healing is terrifying and distressing for patients, families, and nursing staff. An active shooter event, as defined by Hauk (2018), is when at least one person is actively killing or trying to kill people in a confined populated space. If an active shooter event were to take place in an acute care facility, nurses must be educated on best practices of responding to an active shooter, including identifying the situation, notifying the appropriate personnel of the situation, and keeping themselves, patients, and visitors safe. This project focused on increasing education to include in-services with security officers on patient units, training nursing staff on how to use the emergency preparedness flip books that are tailored to their units and participating in active shooter drills and simulations to better understand knowledge and confidence levels with an active shooter emergency.

Keywords: *active shooter, hospital violence, hospital safety, simulation*

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CHAPTER I

Introduction

According to the US Department of Justice Office for Victims of Crime (USDOJ OVC), mass casualty events including mass shootings, bombings, and other crimes with multiple fatalities, are increasing in the United States in number and scope (USDOJ OVC, 2018). Nurses need to be educated on best practices for responding to active shooters in the workplace, how to care for patients, and how to keep themselves safe. Providing initial and ongoing education to nursing personal is essential so nurses are aware of best practices when an active shooter strikes.

Problem Statement

More than half of the US population believe that healthcare personnel have an obligation to protect patients during an active shooter event in a hospital setting (Hauk, 2018). Healthcare personnel also agree there is an obligation to protect patients during these events, with 45% believing healthcare personnel should accept a level of personal risk (Hauk, 2018). The Federal Bureau of Investigation (FBI) has an active shooter plan called *Run, Hide, Fight*. Healthcare personnel are unsure when that model is safe to use or when they need to stay and protect their patients. There is a need for healthcare personnel to identify their role during an active shooter situation, whether fight or flight, and when it is ethically acceptable to protect self over others.

Significance

"Hospital shootings are rare, but health-care personnel are more at risk of violent acts than most of them suspect" (Goralnick & Walls, 2015). "A hospital is a place of healing, sanctuary, and comfort for those who seek it and for those to provide it"

(Goralnick & Walls, 2015). Hospitals are also a place for security and safety. When there is a threat of that being taken away, the nurses must know how to respond and act appropriately to keep themselves and others out of danger. It is important to educate and train nursing staff using best practices of *Run, Hide, Fight* so nurses understand what to do in a time of chaos and crisis.

Purpose

The purpose of this MSN project was to identify gaps in education about active shooter events, create awareness of current educational material available for nursing staff, create additional educational opportunities to learn about active shooter incidents, and to learn how to respond to the incident appropriately so patients, families, visitors, and staff are kept out of harm's way.

Nurses must be properly trained, empowered, and understand what to do when there is an active threat in the workplace. Two hospitals in the Novant Health system have had incidents with gun violence, one with an active shooter, and one murder-suicide. Mandatory on-boarding and continuing education on how to respond to the following overhead codes: "active shooter", "single shot fired", and/or "person with a weapon" is crucial for nurses. Nurses need to be educated on the best practices for *Run, Hide, Fight*, what is best to do in in their current location, and what resources are available for them to use. Education for these types of incidences needs to be in-person, hands-on simulation with security officers and city law enforcement.

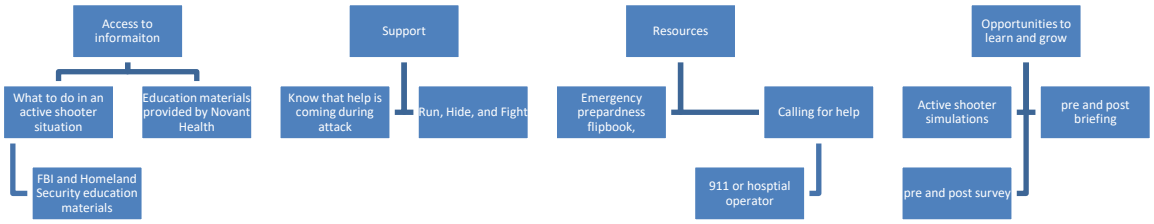
Theoretical or Conceptual Framework

Kanter's Structural Empowerment Theory was used as the theoretical framework for this project. This theory shows how the empowering behaviors, such as enhancing the

meaningfulness of work, fostering participation in decision making, facilitating goal accomplishment, expressing confidence in high performance, and providing autonomy from bureaucratic constraint were associated with greater feeling of empowerment (Fitzpatrick & McCarthy, 2014). Nurses must feel empowered during an active shooter situation, because they must be the ones to make the hard decisions, understand the goal, and have confidence and autonomy. The Structural Empowerment Theory demonstrates four core concepts: access to information, support, resources, and opportunities to learn and grow (Fitzpatrick & McCarthy, 2014).

Figure 1

Conceptual-Theoretical-Empirical Diagram



Definition of Terms

Hauk (2018) defines an active shooter event as when at least one person is actively killing or trying to kill people in a confined located that is populated. This definition will be used for the purpose of this project.

CHAPTER II

Literature Review

This literature review was performed with the Cumulative Index for Nursing and Allied Health Literature's (CINAHL) database using keywords that included "active shooting," "hospitals", "nurses", "hospital-based shooting", "hospital violence", and "active shooter research". A second search was conducted in the database for using simulation as education for adults. Keywords used were "adult", "learning", and "simulation education." The last search was used to find significance in the theoretical framework. Keywords used were "structural empowerment theory" and "emergencies" The key words were crossed referenced to find articles written from 2010 to 2019. A total of 22 relevant articles were found on these topics.

Active Shootings and Shooters

Workplace violence occurs frequently in healthcare settings. Kelen et al. (2012) conducted a review for acute area hospital shooting events in the Unites States from 2000 to 2011. All events with at least one injured victim were analyzed. Of 9,360 "hits," 154 hospital-related shooting were identified. Data was separated by events characteristics either being inside of the hospital or outside on the grounds. The most common victim was the perpetrator (45%), with hospital employees being 20% of victims. Most events (61%) only involved one victim, with 55% of victims being innocent. Of the 106 perpetrators, 59 died by suicide (Kelen et al., 2012).

Chen et al. (2013) conducted a descriptive correlation study based on violence in the nursing workplace. The purpose of the study was to explore the prevalence, types and sources of violence in the nursing workplace, and to assess the factors related to violence.

Questionnaires were used to collect information about workplace violence experienced by nurses in the last year. A total of 880 working nurses in the public hospitals in southern Taiwan were invited to complete the questionnaires. The study was conducted at a 1,266-bed public hospital in southern Taiwan. Nurses invited to complete the questionnaire were those that worked directly with patients. The results concluded that nurses working in outpatient units and emergency rooms experienced more frequent violence than those on surgical and intensive care units. The majority of nurses (81.5%) reported having suffered from workplace violence within the one-year period, 390 from verbal violence, 241 from both verbal and behavioral violence, and 14 from physical violence. The limitations to the study were that it was conducted on only one type of hospital, not comparing with other types or sizes of healthcare facilities, and factors of violence, such as nurse personality, and patient and family characteristics, were not assessed.

Silver et al. (2018) examined the pre-attack behaviors of shooters, looking at "how did the active shooter behave before the attack?" and "why did they attack?" The objective was to examine specific behaviors that may precede an attack, and factors that might be useful in identifying, assessing, and managing those who may be on the pathway to become an active shooter. A comparison was developed by using a protocol of 104 variables, including demographics, planning, stressors, grievance formation, targeting decisions, and mental health. The primary data used was verifiable data from the law enforcement investigative files of the active shooters, including employment records, interviews with family members, neighbors, or friends. Sixty-three cases in the phase of this trial were used to assess the potential difference between the active shooters,

as well as the potential difference in the characteristic of the incidents carried out by the shooter. The sample was mainly male (94%), white (63%), and with the highest level of education unknown (36%). Of the cases reviewed, 44% of the active shooters were employed, 57% were single, 35% had convictions prior to the event, with 62% of the shooters having a history of acting in an abusive, harassing, or oppressive way. The majority of the active shooters (79%) appeared to be acting in accord with a grievance of some kind, with an adverse interpersonal action against the shooter being the highest percentage (33%) of the grievance. Limitations to the study included analyzing only one specific type of shooting event. There was a degree of subjectivity in evaluating which of the original cases had enough data to warrant inclusion to the study. Another limitation was the law enforcement investigative files not being uniform to answer all protocol questions for all subjects.

Landry et al. (2018), studied the need for an active shooter response program in the hospital. The study took place in a community-based acute care hospital in Virginia. A convenience sample was used, including 66 non-managers that had not participated in an active shooter program in the past six months. A self-efficacy, 9-item, 5-point Likert-type scale was used in the self-questionnaire. The results showed that "educating nonmanagers on response in an active shooter event improved perceived preparedness of the health care organization and overall knowledge of appropriate individual responses" (Landry et al., 2018, p. 12). Limitations to the study were that the study was only conducted in one health care system, and the survey questionnaires were self-reported.

Lund et al. (2012) conducted a study where text messaging was used as a strategy to address those in mass-gathering events where there was likely to be high ambient

noise, such as a concert or sporting event. An outcome survey method approach was used to evaluate the performance of the communication device during the events. During a 23-month period, 10 standard commercially available smart phones were deployed at 17 events. Of the healthcare providers that used the phones at the events, 86% “agreed” or “strongly agreed” that text-based communication improved the ability to understand and respond to called when compared to the ratio alone. Limitations to this study were that the study was only conducted in mass gathering events with high levels of ambient noise. Duplicate surveys were an issue as well, as providers could have completed the survey more than once. There was also an incomplete data set because not all questions could have been answered on each survey.

Van Dijl et al. (2018) conducted a study evaluating the effectiveness of the mobile device warning messaging system used by the government, while seeing if people were helped in gaining information about emergencies by integrating social media features into the messaging system. A total of 76 people participated in the study. An online survey was used with an embedded experience that consisted of two conditions: a control condition showing the government alerts as they usually come, and an expanded condition showing the alert with the added function of marking yourself as safe and the newsfeed function tied to social media. Participants that had the option to report themselves as safe had a large, positive effect on the reported information. Limitations to the study were that the survey was self-reported.

Osborne and Capellan (2015) completed a study examining active shooter events using a rational choice perspective and crime script analysis. An emphasis was placed on finding similarities between the motivation for an offense and event-level characteristics

(Osborne & Capellan, 2015). Information from the New York City Police Department's report on active shooter events was used to create the list of cases used in the study. A total of 149 active shooter events between 2000-2012 were used. Online search engines were then used to obtain more information about the events. From the results, using rational choice perspective and crime script analysis, three general themes emerged: motivation was defined as being autogenic, victim-specific, and/or ideological in the active shooter events. Limitations of this study included the use of open source data including media reports. Descriptive information was also used which may not aid in prediction and prevention efforts, and the results may contain limited generalizability (Osborne & Capellan, 2015).

Wexler and Flamm (2017) conducted an exercise utilizing an active-shooter scenario to test and evaluate hospital response and coordination with local law enforcement. A multidisciplinary group including hospital administrator's emergency response, nursing and hospital staff, and local law enforcement formed an active shooter scenario in accordance with the homeland security exercise and evaluation program. The date that the scenario took place was before a new emergency department was set to open with patients. The exercise showed several strengths, but also highlighted areas for improvement, such as staff communicating more effectively with law enforcement and staying in their hiding places. In conclusion, Wexler and Flamm (2017) found that the functional exercise provided unique and valuable insight into areas for improvement in the emergency operations plan.

"Hybrid Targeted Violence (HTV) is an intentional use of force to cause physical injury or death to a specifically identified population uses multifaceted unconventional

weapons and tactics" (Frazzano & Snyder, 2014, p. 1) An active shooter event would fall under HTV. Frazzano and Snyder (2014) examined HTV as a concept to challenge active shooter response strategies and deemed that a collective paradigm shift in first responder perspective and culture is necessary to better address threats and targeted violence. Frazzano and Snyder (2014) suggested that a culture of interdependence and resource sharing must be simulated in a training environment in order to be inculcated in an operational environment.

Jones et al. (2014) looked at how emergency medical service (EMS) providers would feel in responding to an active shooter incident before and after participation in a focused tactical awareness training program. First, a survey was distributed to Boston EMS providers who participated in the scheduled in-service training sessions. The survey was administered prior to and after the completion of the tactical awareness training program. A total of 256 EMS providers participated in the program with a response rate of 88% in the surveys. The majority (87%) felt adequately trained to respond to an active shooter incident after focused training compared to before training (36%). More participants felt better prepared to respond to an active shooter incident after the focused training (89%) compared to before the training (41%). EMS providers felt more comfortable working on rescue operations with law enforcement personnel after training (93%) compared to before training (61%). Limitations to this study included that the pre and post training surveys were not matched to the participants and not all participants completed a pre or post training survey, thus data could only be used in a descriptive manner. The study was also performed in an urban, single EMS agency so the findings could not reflect all EMS providers.

Alathari et al. (2019) produced "Mass Attacks in Public Spaces" research analyzing the mass attacks in 2018. From the research, the threat assessment center observed that perpetrators had the following attributes:

- Most used firearms and half departed the site or committed suicide.
- Half were motivated by a grievance related to a domestic situation, workplace, or other personal issue.
- Two-thirds had histories of mental health symptoms, including depressive, suicidal, and psychotic symptoms.
- Nearly all had at least one significant stressor within the last five years, and over half had indication of financial instability in that timeframe.
- Nearly all made threatening or concerning communications, and more than three-quarters elicited concerns from others prior to carrying out their attacks.

This information can be used for healthcare facilities to educate team members on warning signs of active shooters before the event occurs.

Brown et al. (2018) used classroom training, active shooter simulation, and hands-on-self-defense techniques during a 4-hour workshop. A simulation scenario assessment tool was used for the assessment of the simulation and the participants' thoughts about the simulation. Response times were measured with each simulation as well. The results showed that students were better prepared after the training and simulation program. "Use of structured debriefing after each simulation augments students' learning experience in what lesson learned from the previous simulation can be applied to the next" (Brown et al., 2018, p. 67-68.). It was unknown if the students retained the

knowledge of the study overtime and the group simulation allowed for the students to follow others behavior.

Kepp (2018) examined active threat awareness and how training for different types of attacks was needed to adapt to the current environment. Kepp (2018) found that assailants not only use guns, but unconventional weapons as a tactic to cause terror. Unconventional weapons also make it difficult for the government to track the attacks. Kepp (2018) emphasized the importance of knowing that *Run, Hide, Fight* is not a linear action, but is dependent on the situation, and it is imperative to know your surroundings. "When reviewing after action report of active threat incidents, there are numerous reports of person describing something 'odd', 'out of place' or 'he just wasn't acting right'" (Kepp, 2018, p. 127).

Jacobs and Burns (2017) nationally surveyed the public about active shooter events in hospitals to determine beliefs about the responsibility of doctors and nurses in protecting patients during the event. There were 10 questions on the survey, with one sub question for the survey. The survey was conducted by phone interviews from March 1-5, and interviews included 1,017 adults over landline and 607 over cell phone. A complementary survey was also conducted on healthcare professionals online with 684 participants. Results showed that the public believed that hospitals were at a lower risk for an active shooter event, compared to a school, shopping center, or airport. The public also believed that hospitals were just as prepared as schools for dealing with an active shooter, believing that hospitals are somewhat or very prepared for an active shooter event, while the public thought it is very or extremely important for hospital to be prepared. The public also believed that doctors and nurses have a special duty to protect

patients like police officer and firefighters. More than half of the public expected doctors and nurses to put themselves at risk to try and protect a patient who was unable to get out of harm's way (Jacobs & Burns, 2017). Limitations of this study included a low response rate for healthcare professionals, with few of these being nurses. There were also differences in the survey methods for each group (phone versus online), which may have influenced the results.

Clark et al. (2019) surveyed medical imaging and radiation therapy educators' preparedness to respond to active shooter incidents and their confidence to control their classroom and protect their students. A cross-sectional, mixed methods research design was used. A total of 366 educators from accredited radiography, magnetic resonance, and medical dosimetry programs were surveyed. Of the 366 educators, 166 educators felt moderately prepared to respond to an active shooter event in their classroom and 154 felt they could protect their students during an event. A total of 135 educators agreed that the possibility of an active shooter event was taken seriously at their institution. Pearson chi-square calculations used in the study revealed significant associations between the educator's level of preparedness to respond appropriately to an active shooter event and having an active shooter policy in the institution that allowed for training and active shooter drills. The open-ended survey revealed three themes: lack of preparedness, lack of policy, and proactive techniques. (Clark et al., 2019). Limitations of the study included small sample size, only sampling accredited members, as not all programs are accredited, and in most incidences, program directors were surveyed, rather than educators in the classroom, and they may have more knowledge of institutional policies. Data in this survey was also self-reported, causing a limitation to honesty, and educators not wanting

to disclose that they really are not prepared for such an incident. Wording within the Likert-scale also posed as a limitation for the word “prepared”. A better explanation of the word meaning “surviving”, “avoiding casualties” and “stopping the shooter” when defining “prepared” could have been helpful.

The Healthcare and Public Health Sector Coordinating Council (2017) released an article with the key message “that hospitals, academic health centers, and other healthcare settings represent a unique set of challenges for active shooter planning” (p. 9). These are guidelines outlining ethical considerations, preventing an active shooter situation, plain language communication, and response plans to an active shooter. The guidelines provide specific details about different response plans, including *Run, Hide, Fight*. Special areas of consideration for responses are detailed, including how to respond to an active shooter if one was in the emergency department, operating room, intensive care, or infectious disease/quarantine areas. This document is crucial in helping prepare an active shooter plan for healthcare facilities.

Myler and Seurynck (2016) conducted a survey with nursing students on the effectiveness of simulations. A total of 160 junior and senior nursing students participated in three experiences at the hospital-based simulation center. After the simulation and debriefing, participants completed the SET (measured learning skills or knowledge from the simulated experience and confidence). Results from the questionnaire strongly agreed to the following statements: “The instructor's questions helped me think critically"; "Debriefing and group discussion were valuable”; "I was challenged in my thinking and decision-making skills” (Myler & Seurynck, 2016). The

only limitation discussed in the study was that attendance varied after the simulation experience.

Thomas and Barker (2018) discussed simulation as an effective learning method and outlined the development and evolution of a simulation elective course over time Advantages of having a simulation is that it is interactive with experiential learning as the primary method, which allows students to be engaged in the learning experience. Challenges of a simulation method include evaluation methods of learning. Another challenge of simulation is that is labor intensive related to the setup and providing resources.

Sanchez et al. (2018) planned an active shooter simulation for their emergency department (ED). The project was a collaboration between the emergency management team, security, leadership, and simulation staff. The parties involved chose the locations, equipment, needs, and scenarios for the population and actors of the ED. Sanchez et al. (2018) reported that 204 staff members participated in simulations between August and December of 2016. A survey was then given to the staff about the simulation. A 92% positive response rate was conveyed on the survey that participants felt more prepared to respond to an active shooter event, with 70% reporting improvement in knowledge and preparation. Implications for practice from this survey included a “didactic portion, pre- and post-survey, and simulation. The simulation was successful, and leadership provided the training quarterly for new employees in the emergency department.

Theoretical Framework

Ganz et al. (2013) used was a cross-sectional, descriptive, correlational study to determine levels of structural empowerment, moral distress, and the association between them among intensive care nurses in Israel. A total of 291 registered nurses from six different hospitals participated in the study. Participants were asked to complete three questionnaires (demographic characteristics, Moral Distress Scale, and Conditions of Work Effectives Questionnaire-II) between the dates of May-September 2009 (Ganz et al., 2013). Results indicated intensive care nurses had moderate levels of structural empowerment, low levels of moral distress frequency, and moderately high moral distress intensity. The frequency of moral distress was shown to be significantly related to general structural empowerment (Ganz et al., 2013). Nurses were found to have moderate levels of structural empowerment with low levels of moral distress frequency, but moderately high levels of moral distress intensity. It was found that structural empowerment was related to moral distress, but not to personal demographic characteristics. Limitations of the study were that the cross-sectional design did not allow for inferences about the association between structural empowerment and moral distress (Ganz et al., 2013). The sample was a convenience sample and the questionnaires used were translated from English and based on studies conducted outside of Israel. This study was able to find a direct, yet weak, correlation between moral distress and structural empowerment, and indicated nurses' responses to their work environment seemed to be more related to work characteristic and less associated with demographics.

Connolly et al. (2018) examined clinical leadership of registered nurses in an emergency department based on evidence that was important for nurses to feel

psychologically and structurally empowered in order to act as clinical leaders. A mixed method, non-experimental survey design was used to examine the psychological empowerment, structural empowerment, and clinical leadership of registered nurses who provide direct patient care at the Auckland City Hospital's Adult Emergency Department. An online questionnaire was used to conduct the survey, which was comprised of three validated surveys on clinical leadership, psychological empowerment, and structural empowerment. A total of 37 of 112 nurses responded. The respondents were between 20-60 years of age, with the majority being female (95%). The results of the survey showed that there was no statistically significant relationship between psychological empowerment, structural empowerment, and clinical leadership behavior. The main factors identified as supporting the nurse clinical leaders were teamwork, collaboration, and communication. Overall, most of the nurses felt they performed clinical leadership behaviors but their ability to act as clinical leaders was limited by a lack of structural and psychological empowerment. Participants did believe, however, in their ability to do their job, reporting self-assurance in their capabilities (Connolly et al., 2018). Small sample size contributed to a limitation of this study.

Armellino et al. (2010), examined the relationship between structural empowerment and patient safety culture among staff level registered nurses within critical care units. A convenience sample of 257 nurses working in the adult critical care of a tertiary hospital in New York were invited to participate in the survey, with 102 nurses responding. The majority of respondents were female (90.2%), with ages of respondents ranging from 23-58 years. All the survey participants completed all the survey questions and perceived themselves to be moderately empowered (79.2%).

Limitations of this study was the low response rate to the surveys, possibly related to length and trust issues about the survey being confidential.

Strengths and Limitations of Literature

The strengths of the literature review were that many emergency departments in healthcare organizations have planned for active shooter events by training through simulations and active shooter drills. Organizations have adapted the FBI's training recommendation of *Run, Hide, Fight* that other organizations can model. Other works of literature have led to recognizing certain traits in active shooters and have been able to place them and the types of shootings in certain categories. Strengths also included the positive results of simulation training and studies on the emergency alert system using mobile devices.

One limitation to the literatures review was that fortunately there has not been multiple mass casualty active shootings in acute care facilities. Therefore, there were limitations on knowledge for how to safely evacuate operating rooms, intensive care units, and other secluded areas of the hospital. Other limitations included lack of understanding of the escalation of violent individuals to active shooters, ethical implications of nursing staff with leaving their patients, and nursing staff working with first responders during an active shooter event.

CHAPTER III

Needs Assessment

Target Population

The target population for active shooting education was nursing staff of Novant Health. Basic active shooter awareness and training took place during orientation for nursing staff. Orientees received specific hospital and department-based education once they were on their assigned units.

Target Setting

Novant Health is a large organization that has acute care facilities located in Winston Salem, Charlotte, and Bolivia, North Carolina. To initiate the project, education was initiated in the Winston-Salem market of Novant Health, at Forsyth Medical Center. The new education plan first started at Forsyth Medical Center, in the Greater Winston market of the Novant Health Organization. The Charlotte market was the next target for the education of best practices, followed by New Brunswick (Bolivia) and the Virginia markets. Security officers, clinical educators, and unit managers were the leaders in this education initiative.

Sponsors and Stakeholders

Sponsors included in the education initiative were Carl Armato, President and CEO of Novant Health. Jim Finn, Vice President of Public Safety, Jessica Hill, Educator of Public Safety, Daria King, director of clinical education, and the nursing directors and managers of the nursing units.

Carl Armato was contacted and given an example about how it was difficult for team members to find ways out of different facilities due to lack of education. Discussion

included team member safety being a “number one priority.” Jessica Hill explained how all units should have emergency preparedness flip books that could be tailored to each unit were easily accessible at each nursing station for all team members to find. The director of Clinical Education, Daria King sponsored training during general nursing orientation. The nursing directors and unit managers were aware of the education initiative and were actively participating.

SWOT Analysis

Strengths

- Novant Health had armed public safety at all inpatient facilities.
- Yearly drills are held for active shooter emergency.
- Education is available from FBI and Homeland Security.

Weaknesses

- The only mandatory education for active shooter event is a computer-based learning module required once a year.
- Team members do not know the difference between a lockdown versus an active shooter.
- Team members do not know which code to call if someone has a gun versus when to call an actual active shooter code.
- Team members do not know *Run, Hide, Fight* sequence
- Ethical dilemmas are not discussed surrounding patients and family members during these codes.

Opportunities

- Active shooter classes are held at all facilities for team members.

- Security makes rounds on all units and can add in-services for team members to ask questions and be prepared.
- Orientation for new team members provides opportunities to teach about emergency preparedness within the organization, what to look for on the units, and how to individually prepare.
- Yearly drills and learning activities to see where the organization needs to focus efforts to keep team members, patients and families safe.

Threats

- Team members do not take drills seriously.
- Education for active shooter events is not mandatory, therefore team members are not prepared in a true emergency.
- Lack of communication during a threat, loss of communication with mobile phones, no phones in rooms, difficult times calling emergency phone with the mobiles phone, and no access to another phone.
- No overhead speakers in parts of the facility. Staff will not know what is going on if they do not hear the overhead announcements, which could potentially lead them into the danger zone.

Available Resources

Training materials provided by Homeland Security, the FBI, and community law enforcement is available for all team members. Security has developed an active shooter class to provide education for team members. Community law enforcement will also come and provide classes to help educate team members. The Emergency Preparedness flip book is a resource that bullet points everything to do during an emergency and is

made to be unit specific. The flipbook describes each emergency code that is called out overhead at Novant Health. For instance, if an active shooter is happening in the facility, one would hear “Active shooter, first floor, evacuate immediately.” The flip book shows this dialogue and what to do. It also has blank spaces for each unit to write specific details. For instance, the units should write what rooms on the unit are considered “safe rooms” (locked rooms where team members meet and hide), what stairwells to use to evacuate the unit to outside safely, and where to meet outside. The flip book allows new and seasoned employees to find information fast. Information can also be reviewed before shifts, throughout the day, in meetings, and in an emergency, if necessary.

Desired and Expected Outcomes

When discussing with Jessica Hill, Security Educator, she noted that team members did not take a previous lockdown seriously. Team members continued to roam the halls, did not stay on the assigned units, and were calling the nursing supervisor constantly to find details during an active code situation. There was a real threat and the staff had no idea what to do.

The desired and expected outcomes for this project were to ensure that team members were fully prepared if there was ever an active shooter, or threat of an active shooter on the grounds of a Novant Health facility. Team members will know how to act, where to look for resources on the unit, know how and what code to call to the operator, what stairwell to take and where to go if evacuation is needed, know where to hide if they are in eminent danger, and know how to defend their life with the resources around them. Team members will know how to communicate with law enforcement and be confident in their decisions.

Team Members

The team members that were directly impacted by this project were the nursing staff of the Novant Health inpatient facilities. Nurses will be the ones that other team members, patients, families and visitors are looking to for direction, therefore nurses must be confident in decisions, education, and training.

Cost/Benefit Analysis

The cost of providing more education to the nursing staff from this project was minimal compared to the catastrophic costs of an active shooter event. Officers added in-services in their rounding, which did not add to the budget. More active shooter classes need to be offered, adding to the cost of education hours to managers and officers on nights and weekends. If the load was too much for their own officers, law enforcement officers from the Winston-Salem Police Department could teach the classes for free. According to Marshall (2018), "active shooter incidents are among the most significant financial exposures an organization can face (para. 24). Marshall (2018) also reported that in the 2007 Virginia Tech shooting, there were $48.2 million in litigation and recovery costs alone and that it took Sandy Hook elementary school $50 million to rebuild after its 2012 attack. The Healthcare and Public Health Sector Coordinating Council (2017) resonated the importance of training:

> Training provides the means to regain your composure, recall at least some of what you have learned, and commit to action. We know a trained individual will more likely respond according to the training received and will not descend into denial, while the untrained will more likely not respond appropriately, descend into denial and helplessness, and will usually become part of the problem. (p.14)

Being prepared mentally and physically during an active shooter event will help to maximize the protection of life, with the benefits far exceeding the costs.

CHAPTER IV

Project Design

Goal

The goal of the project was to prepare, educate, and make team members aware of the resources available in the case of an active shooter event by using best practices provided by the Emergency Nurses Association, the FBI, Homeland Security, and The Healthcare and Public Health Sector Coordinating Council.

Objectives

1. Certify that all nursing units have a plan in place for active shooter situations available in the unit's emergency preparedness flip book.
2. Confirm that nursing staff understand action plans for home units, including which stairwells to use, how to take care of patients during the emergency, and how to correctly call and respond to codes.
3. Provide more active shooter educational opportunities with active shooter simulation trainings, unit in-services, and security officers speaking at monthly staff meetings to provide additional unit-specific education.

Plan and Material Development

Nursing units first need to be assessed to determine if the emergency preparedness flip book for the unit is in place. If a unit needs a book, these can be ordered and brought to the unit the same day.

Next, all managers and team leaders of the unit need to be enrolled in the active shooter class. This will allow leaders to take information back to the units and plan with nursing staff the appropriate actions to take during an emergency. Ideally, all team

members will take this class, but until that happens, nurse mangers, charge nurses, and shared governance leaders will serve as change agents on starting the conversation on the units about what to do in case of an active shooter event.

Security officers will make rounds to talk to team members about roles and responsibilities during active shooter and lock down situations. Theoretically, the more it is talked about, the more comfortable team members will be in responding to the threat and will know what to do.

Active shooter drills will be carried out in each acute care facility. Before an active shooter drill, a briefing will occur where team members are provided with previous active shooter statistics. During this time, team members will be informed that preparedness improves the ability to be able to save lives. Next, team members will complete a pre-screening tool to help identify level of comfort with responsibilities in the active shooter event. The key for this exercise was self-awareness and improved self-confidence. After the drill, team members will participate in debriefing to discuss feelings, what went right, what went wrong, and to complete a post-screening tool about the event to determine if level of comfort with responsibilities in the active shooter event improved.

Timeline

September 2019

- Discuss objectives with the Novant Health Emergency Response Security Team.

October 2019

- Meet with Director of Nursing for Emergency Services for Forsyth Medical Center to discuss objectives and to increase awareness about active shooter education.
- Take Active Shooter class offered at Forsyth Medical Center. Discuss improvements that need to be addressed to help each unit proactively prepare for an active shooter event. Discuss steps to help nurses better prepare based on objectives and best practices.
- Consult Carl Armato, President and CEO of Novant Health about sponsoring plan. Discuss plan with Jim Finn, VP of Security.
- Consult Daria King about Education plan for new employees during orientation.

October 2019-December 2019

- Assess each nursing unit. Determine if they have an emergency response flip book. If not, a flip book will be ordered for the unit.
- If the units have a flip-book, check if it is in an appropriate location on the unit.

December 2019

- Email managers and leaders about the emergency response flip books and why it is important that team members know about the books and how to fill out the books appropriately for the unit. Give the managers and leaders a goal to have their flip book filled out appropriately by February 1, 2020.

January 2020

- Present project to leaders about in-service rounding, more training classes, and helping units proactively write action plans to know what to do in an emergency and know that a plan is in place.
- Start in-service rounding with security officers. Security officers round on nursing units throughout the day and have discussions with the nursing staff about best practices for active shooter events. This can include the difference between a lockdown and active shooter, the *Run, Hide, Fight* sequence, what to do when you see a person with a gun, and other topics of interest. This part of the project is more of a teaching in-service for the nursing staff.
- Provide more active shooter classes for managers/team members. Classes will be provided in the evening hours, during lunch times for a lunch and learn, on weekends, and in the early mornings to accommodate difference schedules.
- Provide a one-hour active shooter class during general nursing orientation. This will occur every other week for new hire nurses. Collaborate with the Winston-Salem Police Department's Community outreach sector as needed.
- Start engaging nursing units to write active plans in their emergency preparedness flip-books during staff meetings, shared governance meetings, and in-service rounding.

March 2020

- Continue in-service rounding and add questions (e.g., What do you do if...).
- Continue classes for team members.
- Evaluate active unit plans by assessing the units' emergency preparedness books.

April 2020

- Begin project in Charlotte market.

Ongoing

- Offer education for new hire employees.
- Continue to remind nursing units that active shooter preparedness should be reviewed consistently, in staff meetings, morning and evening huddles, with new hires, and with any best practice changes.
- If a manager feels that their unit needs direct training and education, they can request an officer to come to a staff meeting. This can be arranged by contacting the project leader or the security office and a Novant Health security officer or Winston Salem Police Community officer will come out to train staff.

Budget

Labor costs were the direct cost of the budget for this project. All materials were already available. Each nursing unit was given a budget for education for their nurses. For a one-hour class, the nursing budget covered the cost of educating nurses. Security officer's salary covered the budget of in-services when doing their rounds on each unit. If additional manpower was needed for education, Winston-Salem Police Department would come to the organization and provide education free of charge.

Evaluation Plan

Once the project had taken place, the outcomes were evaluated by surveying the nurses. Security officers kept track of units they visited by placing a check mark next to the unit on a designated note pad for the assigned day. This showed what units had in-services about actives shooter events. Units were assessed once again on their emergency

preparedness flip books, the location of the flip book, and if the flip books were tailored to their unit. An active shooter simulation was carried out in the facilities to demonstrate how the nursing staff responded to the emergency and where improvements could be made. Evaluations took place by comparing the pre-brief survey to de-brief survey, having nursing leaders stationed around the facility to observe nursing staff responses, and security officers observing reactions as they participated during the drill. From nursing staff responses and observations, a remediation plan was made to guarantee everyone was prepared for this type of emergency.

CHAPTER V

Dissemination

Dissemination Activity

Each week, a “nurses notes” newsletter was emailed to all nursing staff of Novant health. Other team members could opt-in to receive this newsletter if desired. The newsletter told about new practices, guidelines, what was going on within the organization, and other announcements. The project leader provided a brief synopsis about this project in the nurse’s notes starting the last week of November to engage the nursing staff in the project, and to let the rest of the organization know the plans to better equip nurses to be ready for an active shooter situation. Novant Health’s Intranet page was a great way to get information across the organization and included pictures and a synopsis of this project to notify nurses that new education was coming soon.

Limitations

The limitations of this project included:

- Units not engaging in writing their active shooter plan. The nursing staff may not take the project seriously.
- Not enough security officers to round on units and perform in-services to nursing staff. This caused delays in letting the nursing ask questions, some units may get more rounding than others, and it may be difficult to educate staff members that work part-time or on an as-needed basis.
- Team members that work in the operating room had to have a special time for training, as they had special considerations and were not able to participate in in-

service rounding. It was difficult to set up a time to include nursing staff in an education class.

- Expanding the training to other parts of Novant Health was difficult without sponsors for the project in the other parts of the organization. There needs to be teamwork with members of the other facilities to help organize and facilitate the awareness of best practices and education efforts.

Implications for Nursing

Nurses must be fully educated on active shooter events and it is important for active shooter training to be available for the nursing population. Glasofer and Laskowsi-Jones (2019) reported that more efforts were being driven by the American Academy of Nursing, including a request for the creation of a bipartisan National Commission on Mass Shootings. The goals included for the commission were to create a universal system for background checks designed to highlight an applicant's history, strengthening gun laws, and banning the sale of assault weapons (Sullivan-Marx, 2018). Additionally, the goal included ensuring that healthcare professionals were unencumbered and fully permitted to fulfill their role in preventing firearm injuries by screenings, counseling, and mental health referrals, and to conduct research for causes and solutions of firearm violence (Sullivan-Marx, 2018).

Recommendations

From the reading on active shooter awareness, education, and how to act, it was recommended that each healthcare facility have an active shooter policy and procedure specific for their institution. The plan should include detailed active shooter procedure instructions for employees, including immediate actions for staff, security and law

enforcement response, decision makers, subsequent procedures/information, and references needed (Healthcare and Public Health Sector Coordinating Council, 2017).

Conclusion

From examining best practices from the American Hospital Association, FBI and Homeland Security, and other periodicals, the number one way to prepare for the worst-case scenario of an active shooter situation is to educate, train, and communicate to team members. If this is not being accomplished on a regular basis, nursing staff may not know how to respond to an emergency situation. Training nurses where they work, allowing them to envision the stairwells, the ways out of the units, and hiding places can help nurses to remember the plan if an event occurred. Continued education, trainings, and simulation exercises will help staff be prepared for unexpected situations that may happen in the workplace.

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