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Examining Employee Knowledge of the Jennie Edmundson Hospital Active Shooter Policy

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**Examining Employee Knowledge of the Jennie Edmundson Hospital Active
Shooter Policy**

by

Mallory Darais

A THESIS

Presented to the Faculty of the University of Nebraska Graduate College in Partial Fulfillment of
the Requirements for the Degree of Master of Science

Emergency Preparedness
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Under the Supervision of Professor Sharon Medcalf

University of Nebraska Medical Center
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Assessment of Employee Knowledge at Jennie Edmundson Hospital: Armed

Intruder/Active Shooter Awareness

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University of Nebraska, 2015

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Nationally, there has been a large increase in the number of active shooter events within healthcare facilities such as hospitals. Due to this increase, government organizations have recently released documents to guide healthcare facilities on implementing active shooter policies and updating emergency operation plans. Currently, recommendations from government entities such as the Federal Bureau of Investigation and the Department of Homeland Security suggest the “Run, Hide, Fight” approach during an active shooter incident. Jennie Edmundson Hospital, located in Council Bluffs, Iowa, and affiliated with the Methodist Health System, currently has an active shooter policy in place. Data was collected from hospital employees via a survey to determine employee knowledge and preparedness for an active shooter situation. Results reveal that employees are aware the policy exists, but are unclear as to the information contained within the policy.

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Introduction

Background

On January 20, 2015, 55-year-old Stephen Pasceri, a local accountant, entered the Brigham and Women's Hospital in Boston, Massachusetts armed with a handgun. He went to the second-floor cardiovascular unit, where he proceeded to shoot and kill a cardiac surgeon who had previously performed surgery on his aging mother, before turning the gun on himself (Payne Conlon, & Berlinger, 2015). Although this incident received moderate media attention, it was not isolated. Unfortunately, situations similar to this have continued to rise over the past decade, with fifteen people dying, and many more injured, from active shooter episodes in the hospital setting in the year prior to this event (Adashi, Gao, & Cohen; 2015).

Nationally, there has been a large increase in the number of active shootings at various entities, and hospitals are no exception. While there are many theories as to why these numbers continue to increase, a lone reason cannot be identified. Some researchers hypothesize the hospital setting itself might contribute to hostile or aggressive conditions. As one scholar put it:

“Violence always has been part of the emotionally charged environment of a hospital. Stress levels are high in health care facilities as families grapple with life-and-death issues. A significant proportion of inpatients and outpatients suffer from mental illness. There's a long history of violence from the streets spilling over into hospital emergency departments...The country has experienced a definite uptick in violent episodes in hospitals” (Frangou, 2014; pg. 1).

Historically, health care environments have been largely understudied in regard to violence-related safety policies. It was not until 2014 that there was any comprehensive guidance designed specifically for healthcare facilities to focus on active shooter events (HSCC, 2015). In April of 2015, the Healthcare and Public Health Sector Coordinating Council released a document called Active Shooter Planning and Response in a Healthcare Setting. This document suggested that while general guidelines and recommendations for response to active shooter

situations have been released since 2008, the existing texts focused mainly on businesses, schools, and government, with very little relation to unique healthcare settings (HSCC, 2015). While many hospitals are currently trying to create or amend violence-related policies, the progress has proven to be slow and tedious.

Although having an active shooter situation in a healthcare setting is not a novel idea, having a written policy and procedure for healthcare facilities is a fairly new concept, only drawing attention to the need for them in the past few years. While healthcare facilities tend to have Emergency Operation Plans (EOPs) in place, it seems prudent for a separate document to be in place specifically regarding an active shooter situation that includes preventing, preparing for, and responding to an active shooter. This is important as the number of active shooter incidents has been significantly increasing in the hospital workplace over the last fifteen years, starting at 9 on an annual basis in 2000 and raising to nearly 17 by 2011 (Hartley, 2015).

A lack of preparedness for an active shooter situation can have disastrous consequences for everyone involved, which could include patients, family members, hospital employees, or bystanders. Knowing that responding effectively could be the difference between life and death, these guidelines were put into place to assist employees in appropriate responses in cases of active shooters. With appropriate preparedness methods in place, dire consequences can be avoided, and loss of life has the ability to be minimized (HSCC, 2015).

The topic of active shooters within the healthcare setting has been vastly ignored, only gaining attention within recent years. Prior to the year 2000, hospital shootings were usually sequestered incidents, few and far between. While other institutions, such as schools and government buildings, have put in time and effort to conduct studies, hospitals have only recently become participants within these types of education. Since the healthcare setting is

different than many other high occupancy institutions, preparedness efforts should be made determined on each particular facility and circumstance (HSCC, 2015).

Identifying key factors within hospital active shooter policies can present challenges. Active shooter events within the healthcare setting tend to be different from any other institution due to multiple factors, such as the vulnerability of those at the hospital (patients), hazardous materials within the area, and the ease of access within and around the facilities. The purpose of having policies is to keep employees informed on what steps to take during these situations. These policies should have guidance on what avenues to take to prepare for an active shooter, as well as what to do during and after an active shooter situation. It is important that employees are aware of these policies and their roles and responsibilities.

Currently, Jennie Edmundson Hospital (JEH) in Council Bluffs, Iowa, has an active shooter policy in place, taken from the health system with which they are affiliated, Methodist Health System (MHS) based in Omaha, Nebraska. If an active shooting takes place at a Methodist Health establishment, employees are advised to refer to the active shooter/armed intruder policy, which provides guidance on responding to this type of situation. Hospital employees are advised to remain vigilant, and report any suspicious behavior or events. According to policy, in an event, all non-essential movement should cease. If the opportunity arises, MHS recommends the run, hide, fight method, as endorsed by homeland security (Morris, 2013). In addition to examining baseline knowledge of MHS employees, this study will use descriptive method research to determine the levels of awareness of survey respondents regarding the active shooter policy.

MHS Active Shooter Policy

This policy consists of the definition of an active shooter or armed intruder, as well as background information on typical incidents involving them. The laws for carrying weapons into healthcare facilities in the states of Iowa and Nebraska are discussed, and then personnel readiness is addressed. Steps on how to report an event are outlined with procedures on how to disseminate information if necessary. This policy was never drilled as a full-scale or functional exercise, however tabletop exercises have been conducted relating to an active shooter situation.

Further into the policy discusses appropriate responses employees should adhere to when involved in an active shooter situation. The recovery process is outlined clearly, as well as considerations for incident command operations, with responsibilities outlined for all incident command personnel.

Identifying gaps regarding this policy starts with the fact that the Methodist Health System has over one thousand policies, and any particular policy seems to be hidden among the others. Employees are not specifically directed to this policy, so it is quite possible that the majority of employees are unaware of its existence.

Purpose of this Study

The Methodist Health System (MHS), located in the Omaha, Nebraska metro area and encompassing Council Bluffs, Iowa, strives for excellence in all aspects of patient care, business, and healthcare. Consisting of three hospitals, MHS has implemented policies and procedures regarding employee direction in cases of an active shooter/armed intruder.

The purpose of this study is to assess the baseline knowledge of employees at Jennie Edmundson Hospital (affiliated with the Methodist Health System) on their active shooter/armed intruder policy. This study aims to determine whether or not employees are aware of the active

shooter/armed intruder policy in place for the three hospitals involved with the Methodist Health System, as well as if they know what the policy states they should do in an active shooter situation. The research question being posed is: What is the baseline knowledge of Jennie Edmundson Hospital employees regarding the Methodist Health System's active shooter policy?

Several terms and acronyms will be used throughout this paper that the general public may not be familiar with. In order to better educate in regards to active shooter policies, it is necessary to define a few of these terms beforehand. "Active shooter" will be the term most often used throughout this paper. Although some may interpret the meaning differently, the California Hospital Association defines an active shooter as "...an individual who is actively engaged in killing or attempting to kill people in the hospital or on the hospital campus. In most cases active shooters use a firearm(s) and display no pattern or method for selection of their victims. In some cases active shooters use other weapons and/or improvised explosive devices to cause additional victims and act as an impediment to police and emergency responders" (CHA, 2011; pg. 1). Throughout this paper, the term active shooter will also coincide with the term armed intruder.

In order to help ensure questions are answered truthfully, all participants will be assured that confidentiality will be preserved and that all answers will be anonymous. The main assumption of this thesis includes the idea that institutions with active shooter policies have employees who are better prepared for an active shooter situations than those without policies. Other assumptions comprise the idea that not all Jennie Edmundson Hospital (JEH) employees are aware of the Active Shooter policy, and it is assumed that because of that, the majority of employees do not feel prepared for an active shooter situation.

Limitations

The limitations of this study include a broad-spectrum survey, going to all hospital employees regardless of what area or department they work. While this gives an opportunity for a higher number of responses, it also may not apply to certain employees, such as the transcriptionists who work from home. Looking forward, it might be practical to identify which employees need an altered survey to gain better information on their responses to active shooter policies.

Another limitation is that this study is conducted only at Jennie Edmundson Hospital in the Council Bluffs, Iowa area due to restrictions relating to submitting the survey at other hospitals. Although it will be a good representative sample of the healthcare field, future studies may consider a larger geographical base.

As with any survey, a limitation includes the reliability and validity of answers to the survey questions. Finally, this study is purely hospital-based, and cannot be compared to other institutions, such as academic establishments or government organizations, which makes a comparison to these institutes unreliable.

Delimitations

The delimitations of this study can be generalized to hospital employees who work for Jennie Edmundson Hospital in Council Bluffs, Iowa. This study excludes the participants of healthcare workers outside of the hospital setting, including walk-in clinics, doctor's offices, and community health departments. Furthermore, the survey questions used for this research topic included mainly closed-ended responses in an attempt for people to complete it more willingly. This course of study was chosen due to the lack of knowledge and research of this topic, and the need to improve the standards of knowledge regarding active shooters in the healthcare setting.

The remainder of this thesis will investigate whether or not Jennie Edmundson Hospital employees are both aware of and knowledgeable regarding the current active shooter/armed intruder policy for their workplace. It is understood that a lack of understanding and awareness of this policy could be harmful for an employee during a real active shooter situation. Information retrieved from this study will better help the health system in their active shooter preparedness efforts.

Literature Review

Isolated incidents of violence in high-occupancy settings seem to be a thing of the past. A 2013 study by the Federal Bureau of Investigation (FBI) identified that from 2007 and beyond, over 16 active shooter incidents occurred on an annual basis, roughly averaging to at least one shooting every three weeks (FBI, 2013). Between the years 2000 and 2013, there were over 1,000 casualties as a result of active shooter instances (not including the shooters themselves) with several hundred wounded (FBI, 2013).

In each of the 160 active shooter situations studied, all but two of the incidents involved a single shooter, with 54 of the shooters killing themselves at the scene of the crime (FBI, 2013). With the number of active shooter situations steadily on the rise, businesses, organizations, and all high-occupancy settings need to reinforce their prevention efforts, as well as remain vigilant to the growing threat that active shooter situations present. In this particular study, 69% of the incidents were situations where the duration was identified as over within 5 minutes. Thirty-six percent of the incidents ended within two minutes (FBI, 2013). In at least 25 incidents, the shooter was able to obtain their target and leave the scene prior to the police arriving (FBI, 2013).

Active Shooters in Social Institutions

This large-scale Federal Bureau of Investigation study looked at a variety of highly occupied social institutions, which included commerce, education settings, government organizations, and health care facilities. The study was initiated to identify resources used during active shooter situations, and what should be considered when preparing for, responding to, and recovering from them. It also recognized the steady rise in incidents year by year (FBI, 2013). While there are many studies showing active shooter situations in high occupancy areas,

relatively few have been studied specifically in the hospital setting. Other areas have been extensively studied, with many lessons learned. Educational institutions are an example of this. One study focusing on Institutions of Higher Education (IHEs), found that there are critical vulnerabilities presented that each separate incident seemed to have in common with each other (Ergenbright & Hubbard, 2012).

On educational campuses, 12.5 minutes is the average duration of an active shooter incident, however the average response time of campus security or the local law enforcement of the IHEs studied was 18 minutes (Ergenbright & Hubbard, 2012). In an attempt to lower the rate of casualties, a study was conducted to identify critical vulnerabilities, and what measures to implement in order to assist in mitigating the fatal effects of active shooters.

Instances of targeted violence in Institutions of Higher Education in America are not singular, but rather a growing phenomenon, a trend that has increased with the increase of shootings in public arenas throughout the country. Researchers Ergenbright and Hubbard identified 272 different acts of violence over the past decade on 218 different higher educational campuses in the United States (Ergenbright & Hubbard, 2012). Most alarming is the fact that due to the high number of IHEs in the United States, the risk of becoming a victim is ever rising. “A total of over 17.8 million students and 3.6 million staff, faculty, and visitors are at risk of becoming potential Active Shooter victims” (Ergenbright & Hubbard, 2012, pg. 2).

The Healthcare Setting

The healthcare setting, similar to the educational setting, is a unique environment. The healthcare setting has a highly vulnerable population, people who are there for the specific purposes of healing, resting, and recovering from illness and injury. It is also unique because

those who are not healing, resting, and recovering are often there to support family and friends, and may themselves be emotionally vulnerable, mourning, or depressed.

In the few studies that have been conducted on active shooters within the healthcare setting, a standard pattern of approach has been identified. David Millen found that shooters often go to areas of the hospital they are familiar with, and where there are numerous potential victims (Millen, 2012). Most often with active shooter cases, the person is familiar with at least one of their victims, whether it be an employee or former employee, a significant other, or a student (Millen, 2012).

When focusing on sole hospital shootings, more trends are identified. The shooters tend to be overwhelmingly male, with less than ten percent being female since 2000 (Kelen, Catlett, Kubit, & Hsieh, 2012). The emergency department tended to be the most violent and frequent site for shootings at 29 percent, with the parking lot and individual patient rooms both following close behind at 23 percent and 19 percent, respectively (Kelen et al., 2012). Reasons for each shooting varied, with a grudge being the main motive. “Euthanizing” an ill person was also a strong motive, with a prisoner escape, ambient society violence, and mentally unstable patients being the other reasons for hospital shootings identified. Shootings within the emergency department tended to be less fatal (19%) than those in other areas of the hospital (73%) (Kelen et al., 2012).

Policies and Protection Measures

There are several types of protection measures that can take place during an active shooter situation, however, unless mapped out and practiced, it is likely that most people will not be aware of protection measures, will not remember protection measures, and will not be prepared to enact protection measures. Some of these measures include evacuating the building,

sheltering in place, and taking action against the perpetrator (Millen, 2012). In an active shooting scenario each avenue should be carefully and quickly considered and weighed against the others in order to decide which one will result in the best outcome. Unfortunately, the common hospital patient and/or visitor will likely not be in a situation to do this. Because of their inability to make these vital decisions it is necessary that hospitals already have a plan in place, with competent employees prepared to direct and enact the plan should the need arise.

With active shooter events becoming ever more common, the Healthcare and Public Health Sector Coordinating Council (HSCC) released recommendations and guidelines specific to the healthcare setting. This was the first comprehensive guidance that healthcare facilities were provided with in preparing for and preventing an active shooter event, and was released as a draft in January of 2014, with an update document being provided in April of 2015 (HSCC, 2015).

An active shooter within the healthcare setting presents matchless challenges, individual and different within each department of a healthcare facility. Ethical dilemmas may be presented, such as whether or not an employee should leave a patient during this situation; allocating resources fairly amongst employees, patients, and visitors involved; and making the decision to discontinue care for victims who might not be able to get out safely, while turning attention to victims who may be able (HSCC, 2015). Other dilemmas, such as mobility, may be presented with patients or staff members unable to evacuate due to a multitude of reasons, such as injury, age, ailments, or a surgery or procedure that is in the process of being completed.

A healthcare professional is more likely to respond appropriately during an intense situation if they are well trained and educated on what procedures should take place during these types of events (EDM, 2014). On the other side, if a person is untrained they are more likely to

respond inappropriately, and may hinder the efforts to get the situation under control (HSCC, 2015). Ultimately, there is a common goal in every active shooter situation setting: to preserve life and minimize harm to every individual (EDM, 2014).

Understanding that in the United States, a shooting occurs in a hospital on average over once a month, the Department of Health and Human Services (DHHS), as well as the Joint Commission, have advised running routine drills and preparatory exercises (Adashi, et al., 2015). Although there is a federal law in place that may hold hospitals liable in cases of active shooters (in regard to the training and planning for the staff), states are starting to enact laws which will better protect healthcare workers. As Adashi and colleagues explained,

“Some states (Michigan, Missouri, Nebraska, South Carolina, and Texas) as well as some local governments have recognized hospitals and other medical facilities as gun-free zones by prohibiting the carrying of concealed weapons on such premises... These state statutes add both tangible and symbolic dimensions to the recognition that health professionals occupy a uniquely beneficent position in society deserving of such protection” (Adashi et al., 2015; pg. 1209).

While it may be true that those states have implemented gun-free zones at healthcare facilities, other states are taking measures to do the exact opposite. For instance, the National Rifle Association has petitioned Florida to oppose healthcare facilities as gun-free zones under the pretense that there may be a constitutional denial of the right to bear arms (Adashi et al., 2015).

Policy development is one of the most important aspect of preparing a healthcare facility for an active shooter situation. It is important that the organization developing the policy meet with local agencies that will be supportive in enhancing the plans, such as fire, emergency medical services, and local police (Millen, 2012). During this policy development stage, a structure should be developed in regards to the safety and security of all hospital employees, patients, and visitors. The committee writing the policy should meet to discuss things such as identifying the multi-disciplinary team responding to threats, creating an all hazards emergency

response plan that encompasses various situations, holding drills and exercises on a frequent and regular basis, emphasizing education of all employees and volunteers, and deciding what type of communication system will be utilized for a mass notification (Millen, 2012).

According to the Journal of Business Continuity & Emergency Planning, it is important for policies to identify all aspects of the lockdown within the plans. Morris (2013) identified several areas that need to be considered in a successful emergency action plan, such as:

- Notification procedures
 - Activation and demobilization
- Building security
 - Access control, protocols for after hours
- External door locks
 - Card readers versus key locks, etc.
- Building characteristics that may affect the lockdown
- The roles of personnel during the lockdown
- Lockdown variation
 - Do business hours differ from after hours? Will visiting hours affect the policy?
- How to assist law enforcement during a lockdown
- Reunification procedures
- How to continue operations after an incident
- How to identify improvements following a lock-down

Each of these items should be clearly identified in the policy, along with additional protocols, so that each employee knows what steps should be taken to ensure their best

opportunity for safety during an active shooter incident. Currently, a “run, hide, fight” technique is the suggested avenue to take if caught in a situation (Morris, 2013). Researcher Morris acknowledges several events that should take place during an active shooter encounter, and provided recommendation on what to do if one of them occurs in a public setting. Her first recommendation involves fleeing the scene, when possible. If deemed safe, patients and employees should run away to a known safe location, far from the active shooter, and where a phone is available to call emergency services. The second recommendation, if running is not a safe option, is to hide. Hiding should be done in the most barricaded area possible, away from the lockdown area, and secured. Lights should be off, and telephones should be quieted. Finally, if running and hiding are not options, fight. Use anything possible as an improvised weapon, and act aggressively to disarm and take down the shooter (Morris, 2013).

Knowing that the prevalence of active shooters in hospitals is on the rise in the United States, it can be assumed that more active shooter policies are also being written. Questions then emerge that include, what are the scope of these policies? And do they provide employees, patients, and visitors enough information to feel like they are in a safe and secure environment, with a knowledge of what to do in an active shooter situation?

Research Design

The current study will look specifically at Jennie Edmundson Hospital in Council Bluffs, Iowa. The following research question will be considered: What is the baseline knowledge of Jennie Edmundson Hospital employees regarding the active shooter/armed intruder policy? This research question will be investigated via electronic surveys sent out to selected Jennie Edmundson Hospital employees. Surveys will then be collected and analyzed, and a discussion of findings will be presented.

Methodology

The aim of this research is to conduct a baseline study of employee knowledge of Methodist Health System's active shooter policy. A thorough literature review has determined that little research has been conducted in this arena. This study seeks to begin investigating a gap in the literature, and attempt to provide the hospitals' emergency preparedness coordinators information that will allow them to better prepare their employees for armed intruder situations.

Sample Population

Methodist Health System hospitals were chosen because they encompass a broad area within the greater Council Bluffs/Omaha metropolitan area. The placement of each hospital individually caters to multiple different ethnicities, races, and cultures. Contact was made with the Emergency Managers at each facility to determine which hospitals would be willing to distribute the survey, and which Jennie Edmundson Hospital in Council Bluffs, Iowa was enthusiastic at the opportunity to determine employee preparedness.

The sample population will be a convenience sample of all Jennie Edmundson Hospital employees. These employees include clinical staff (physicians, nurses, mental health associates, etc.), as well as administrators and non-clinical staff (cafeteria employees, custodial workers, etc.). The data will be collected with the help of an authorized survey sent to all Jennie Edmundson Hospital employees via the Emergency Manager for the hospital.

The Emergency Manager has access to a hospital wide e-mail account that can send an e-mail to all hospital employees. By enlisting the help of the Emergency Manager, an individual whose sole position is to ensure the safety, productiveness, and effectiveness of hospital policies, the researcher is hoping that hospital employees will view the survey as important and worthwhile.

Within the Methodist Health System, the job description of an Emergency Manager consists of planning, coordinating, updating, and maintaining policies and procedures related to the emergency operations plan, both internally and externally within the hospitals. They work directly with the administrators of the hospitals to execute emergency preparedness drills each year to test hospital and local responses, and they are closely aligned with outside emergency services. They work with local employees and experts to ensure all necessary supplies and equipment are housed appropriately within each hospital, and coordinates the buying and storage of additional preparedness necessities. In addition, each Emergency Manager supports the implementation of the Hospital Incident Command System (HICS), as well as the committees responsible for the continued preparedness and development of specific needs relating to hospital health care. The Emergency Managers within the Methodist Health System as well as the Director of Safety for the health system helped design the survey in order to obtain the maximum amount of information to better benefit the hospital.

Data Collection

The data for this study will be collected by the hospital Emergency Manager sending an e-mail to all JEH employees. This e-mail will include a brief description of the survey, as well as a hyperlink to a web survey, using the popular survey vehicle Google Forms. The survey description will read as follows:

This survey is based on the Methodist Health System Active Shooter/Armed Intruder Policy. The aim of this study is to understand the preparedness level of hospital employees regarding this policy so that efforts can be made to better prepare hospital staff in cases of active shooter events. Participation in this survey is completely voluntary and anonymous. You may choose to discontinue this survey at any time. The purpose of

this survey is to benefit Jennie Edmundson Hospital in providing clear, effective policies for which employees to refer.

An initial survey will be distributed on November 2nd and a follow-up survey will be distributed four days later on November 6th reminding those who have not already participated in the survey that there is still time. The survey will officially close on November 9th.

Survey

Due to this type of survey and the nature of those responding to the survey, the assessment maintains mainly close-ended questions for JEH employees. The questions were based on literature reviews, personal experiences, and previous active shooter studies. The survey consists of fifteen closed ended questions. It was estimated that the survey would take approximately 8 minutes to complete. Respondents were informed that their participation in the survey was voluntary, and if they decided to participate, they were free to stop participating at any time. Respondents were also informed that while they will get no direct benefit from participating in the survey, the benefit will go to the hospital as a whole, as this information may be used to create better, broader, more effective policies.

Dependent Variables

To determine whether or not JEH employees are aware of where to find the active shooter/armed intruder policy they were simply asked “Where would you expect to find the active shooter/armed intruder policy?” This variable is multiple choice, with the employee given the option of responding out of four answers.

To determine the employee’s baseline knowledge of the policy they were asked a series of questions, (See appendix A: Survey Questions). Again, these variables are multiple choice, or dichotomous “yes” or “no”.

Independent Variables

Independent variables in this study include descriptive statistics, such as gender, age, and level of education (high school graduate/GED or less, some college, undergraduate degree, graduate degree, doctorate or higher). In addition, respondents were asked about their position at the hospital (clinical, non-clinical, or administration). Lastly, respondents were asked about the amount of time they have been employed by Methodist Health systems, and whether they are a full-time or part-time employee.

Data Analysis

Raw data will be obtained from the Google Forms website. A systematic collection of data information will then be recorded and input into an excel spreadsheet, then coded and summarized with a determination of employee knowledge. The results will be obtained from a multiple-choice questionnaire, from which all valid survey entries will be utilized. The analysis of the coding will be quantitative based on the nature of the survey, with some qualitative analysis due to unstructured data. Because this is a baseline study, analysis will include descriptive statistics, including percentages. A discussion of the findings will then be presented, as well as recommendations regarding what actions should be taken to ensure that the active shooter policy being utilized by Jennie Edmundson Hospital is beneficial to the institution, and clear and understandable to the employees.

Findings

Overall, e-mails were sent out to 725 hospital employees, with 341 surveys returned. These returns yielded a robust 47% response rate. The results of this study generated several interesting findings. These findings will be presented below. A discussion of the findings will follow.

Overall Hospital Employee Characteristics

The hospital surveyed in the study, Jennie Edmundson Hospital, employs 725 people (see Table 1). Of those employees, 5.8% are administrative employees, which contains both senior and lower level administration. Senior level includes the hospital Chief Executive Officer, the Chief Nursing Officer, the Chief Medical Director, and the Vice President of Patient Affairs. Lower level administration includes all unit directors and managers.

Seventy-one percent (n=517) of employees are clinical employees, meaning they participate in direct patient care. These employees include physicians, nurses, aides, and ancillary clinical staff, such as radiology technicians. Non-clinical employees are those who are not directly involved with patient care. They are comprised of maintenance staff, food service positions, and other supplemental roles and positions within the hospital, such as unit clerks. Approximately 22.87% (n=166) of the employees are considered non-clinical (see Table 1).

Table 1. *Overall Hospital Employee Characteristics*

Variable	N	%
Administrative	42	5.8
Clinical	517	71.3
Non-clinical	166	22.87
Male	109	15
Female	616	85
Total	725	

Descriptive Characteristics

The survey respondents were overwhelmingly female (84.5%), with only 15.5% of respondents identifying themselves as male on the survey (see Table 2). The majority of respondents were over 50 years old, with the vast minority being younger than 24.

Approximately 50% of those who participated in the survey asserted they were over 50 years of age, with 32.6% being between 35 and 50 years old, 16.4% being between 25 and 34 years old, and 4.1% being between the ages of 19 and 24.

Employees were asked to report how long they have been employed at Jennie Edmundson Hospital. The vast majority of respondents have been employed at this hospital for greater than ten years (48.8%). 15.4% have been employed for five to ten years, 23.4% have been employed for one to four years, and 12.4% have worked at the hospital for less than one year (see Table 2).

Of those who responded to the survey 58.9% identified themselves as clinical staff, 26.5% as non-clinical staff, 8% as administration, and 6.5% as “Other”. The majority of survey respondents were full time employees (84.1%), meaning that they worked 32 hours or more a week. Approximately 13% considered themselves part time employees, meaning they worked under 32 hours per week, and 3% were less than part-time. Those who work less than part time are traditionally on-call employees or options employees, meaning they are not assigned a minimum number of hours that they are required to work each week. Within that category, a significant amount of those surveyed were full time employees (84.1%), with 12.9% being part time employees, and only 2.9% being less than part-time employees (such as an options employee).

The majority of employees having an undergraduate degree or higher. Only two (0.6%) employees reported having less than a high school diploma, while 15 (4.4%) employees reported having a Doctorate degree of some sort (either a medical doctorate or PhD). Sixty-seven employees (19.6%) held graduate degrees, 131 employees (38.4%) had undergraduate degrees, 89 employees (26.1%) reported having some college experience, and 27 employees (10.9%) were solely high school graduates.

Table 2. *Descriptive Characteristics of Survey Respondents*

Variable	N	%
Gender		
Male	53	15.5
Female	288	84.5
Age		
Over 50	160	46.9
35-50	111	32.6
25-34	56	16.4
19-24	14	4.1
Employment Experience		
0-1 years	42	12.4
1-5 years	79	23.4
5-10 years	52	15.4
Greater than 10 years	165	48.8
Employee Classification		
Administrative	27	8
Clinical	198	58.9
Non-Clinical	89	26.5
Employment Schedule		
Full-time	286	84.1
Part-Time	44	12.9
Less than part time	10	2.9
Education		
Doctorate	15	4.4
Graduate degree	67	19.6
Undergraduate degree	131	38.4
Some college	89	26.1
High school grad	37	10.9
Less than high school	2	0.6

Employee Knowledge of Active Shooter Policy

Following the demographic data, questions were asked in regard to the actual policy for active shooters and armed intruders. The first question was used to identify whether or not employees knew where the policy was located. It specifically asked “Where would you expect to find an active shooter/armed intruder policy?” (see Table 3). Almost 84% of employees answered correctly, knowing that the policy is found on the Methodist Health System intranet. Just over 16% responded that they would expect to find the policy elsewhere, either with administration (1.8%), on the hospital homepage (11%), or “Other” (3.3%). Those who marked “Other” either did not fill in the blank, indicated a previously used healthcare system, or referenced a hard copy of the policy in some area of the hospital.

Per the active shooter/armed intruder policy, when hearing the active shooter/armed intruder alert paged over the hospital’s PA system, a person’s first response should be to either run, hide, or fight, depending on where that person is in relation to the intruder. When asked what should be their initial response when hearing that alert, less than 50% of employees identified run, hide, or fight as the correct option. Thirty-eight percent said to lockdown, 11.7% said to shelter in place, and 0.6% (2 respondents) said they would confront the armed intruder.

The next question asked employees how to report a sighting of an active shooter/armed intruder. When reporting an active shooter/armed intruder, nearly 74% of employees knew to call the emergency code phone, with 15.8% reporting they thought they were supposed to call 9-11, 2.6% reporting they would call hospital security, and 7.6% saying they would call the hospital operator.

When asked who they should *first* report a suspicious person to, the policy states that on-site security or a supervisor would be the way to proceed. By using a “check all that apply”

format, research showed that 38.1% of employees thought they should report to their co-workers, and 21.7% thought they should report to administration. Eighty-nine percent correctly marked they would report to safety and security, while 54.5% indicated they would also report a suspicious person to a supervisor.

When asked where employees should go if they are in an active shooter situation the overwhelming majority (87.4%) of employees accurately stated the best place to hide would be in an enclosed room with a solid door. Over six percent reported they would conceal themselves in an open office under a desk, while 5.3% stated that an occupied patient room would be the best place to hide. Only three respondents (0.9%) stated they would hide in a hallway, around a corner from the active shooter/armed intruder.

In order to identify whether or not employee feel a moral or ethical obligation to stay with a patient during an active shooter/armed intruder situation, a dichotomous yes/no question was asked. Almost 85% stated that they did feel an obligation, while 15.3% stated they did not feel a moral or ethical obligation to remain with their patients.

When employees were asked whether or not they feel they are prepared for an active shooter/armed intruder situation, a fairly even split was identified between those who feel they have been adequately trained (47.9%), versus those who do not feel they have been adequately trained for this type of circumstance (52.1%).

To better identify how to rectify the gap for those who do not feel prepared, the survey asked respondents what modes of education they would find most effective for active shooter/armed intruder training. A list of several responses were given, instructing employees to “check all that apply”. Fifty-two percent stated they would find virtual/computer training to be the most helpful, 47.8% suggested full scale exercises and live training, 46% selected

classroom/verbal training, 30.5% advised written training, 11.7% said tabletop exercises, and 1.2% stated “other”. Approximately half of those who stated “other” indicated it should be completed as mandatory training, or that each mode mentioned should be utilized.

Lastly, employees were asked how prepared they felt for the possibility of an active shooter/armed intruder at Jennie Edmundson Hospital. Responses were given on a 4 point Likert Scale, instructing the employee to choose the best answer. Only 5% reported feeling very prepared. The majority (54%) stated they felt prepared, while 37% reported feeling unprepared, and 4.1% stated they felt very unprepared (see Table 3).

Table 3. *Employee Knowledge of Active Shooter/Armed Intruder Policy*

Variable	N	%
Where would you expect to find an active shooter/armed intruder policy?		
System Intranet	282	83.9
Hospital Homepage	37	11
With administration	6	1.8
Other	11	3.3
What should be your initial response when hearing Active Shooter/Armed Intruder overhead?		
Run, hide, or fight	168	49.3
Lockdown	131	38.4
Shelter in place	40	11.7
Confront intruder	2	0.6
To the best of your knowledge, to whom should you FIRST report a suspicious person?		
Supervisor	186	54.5
Safety & Security	306	89.7
Co-workers	130	38.1
Administration	74	21.7
To the best of your knowledge, what number should be called to report an active shooter/armed intruder?		
9-11	54	15.8
6-911	252	73.9
Security Cell Phone	9	2.6
“0” (Operator)	26	7.6
To the best of your knowledge, where would be the best place to hide in case of an active shooter/armed intruder in your location?		
Open office under desk	22	6.5
Enclosed room/solid door	297	87.4
Occupied patient room	18	5.3
Hallway corner	3	0.9

Do you feel you have been adequately trained for an active shooter/armed intruder incident?

Yes	163	47.9
No	177	52.1

What modes of education would you find most effective for active shooter/armed intruder training?

Written	104	30.5
Classroom/Verbal	157	46
Tabletop Exercise	40	11.7
Virtual/Computer Training	179	52.5
Full-Scale Exercise	163	47.8
Other	4	1.2

How prepared do you feel for the possibility of an active shooter/armed intruder at the hospital?

Very Prepared	17	5
Prepared	184	54
Unprepared	126	37
Very Unprepared	14	4.1

Do you feel a moral/ethical obligation to stay with a patient in cases of an active shooter?

Yes	287	84.7
No	52	15.3

Discussion

Unfortunately, active shooter situations in the United States are on the rise (Kelen et al., 2012) and hospital settings are not exempt. The results from this research show that the majority of Jennie Edmundson Hospital employees are aware of the active shooter/armed intruder policy and where to find it, however many are not aware of its contents. This lack of employee knowledge poses a significant risk to the hospital, the patients, and the employees. The questions in the survey answered by employees were designed to assess employee baseline knowledge of the hospital's active shooter/armed intruder policy. The following section will provide a discussion related to the interesting findings this survey yielded, as well as provide suggestions for future research and how hospital training may be improved. Limitations of this research will also be addressed.

Active Shooter/Armed Intruder Policy

Upon analysis of the data, it was revealed that the response rate in regard to gender was representative of the hospital. Currently, the hospital employs 85 females to every 15 males. Approximately 84% of survey respondents identified themselves as female, and 15.5% identified themselves as male. Consequently, although the response rate was overwhelmingly female, it is on par with the overall hospital gender breakdown ratio.

Survey analysis determined that the overwhelming majority of employees (84%) knew where to find the active shooter/armed intruder policy, which is placed on the Methodist Health Systems intranet under the "Policies" tab. While the majority of staff knew where to locate the policy, it should be acknowledged that this particular policy is located in the same place as thousands of other hospital and health system policies. It is unknown whether employees who are familiar with the policy investigated the location of it on their own prior to the survey

administration, or whether they were simply aware that all policies are located in this place. Nonetheless, it appears that employees are aware that an active shooter/armed intruder policy exists, and they know where the policy is located among hospital documents, but they are less acquainted with the contents contained in the policy.

Part of the reason why employees might be aware of the policy's existence, but not cognizant of what the policy entails is due to the lack of training associated with the policy. Essentially, employees are given instruction on how to find all hospital policies during employee orientation, but no further action is taken by the hospital to ensure that policies are read, understood, practiced, or enacted, unless individual unit managers take it upon themselves to do so. The idea that the policy explicitly states that it is the duty of the employees to know the policy in order to be knowledgeable in the event of an active shooter/armed intruder seems ambitious without further training.

Shockingly, less than half of employees who responded to the survey were able to identify the appropriate response when the active shooter/armed intruder alert is paged over the hospital's PA system. The second largest percentage asserted that "lockdown" is the appropriate response when paged, with "shelter-in-place" being the minority answer for employees. Interestingly, the highest percentage of the employees who chose "shelter-in-place" as their initial response upon hearing the overhead page were employees who had been staffed at Jennie Edmundson hospital for greater than ten years. While there are several reasons respondents may have chosen these answers, it is reasonable to think that confusion may have occurred, as lockdown is a subsection of the "hide" portion in the recommended run-hide-fight. In addition, "Lockdown" is used in various other emergency situations referred to by separate policies for the

Methodist Health System organization, thus possibly leading to some misunderstanding on the part of the employee.

Nearly three quarters of employees were able to appropriately identify how to report the sighting of an active shooter/armed intruder. Per MHS policy, 74% of employees correctly marked that they should call the emergency code phone, which is a separate emergency phone utilized only by the hospital staff responsible for checking in and registering patients where the opportunity of using the overhead PA system is utilized. This is also the method of connecting to emergency dispatch for the county to direct emergency services, such as law enforcement to the hospital. Having a quarter of employees unaware of how to appropriately report an active shooter/armed intruder poses a significant threat to the hospital, since time is vital in these situations. In one study of 51 active shooter incidents, each event ended prior to law enforcement arriving (DHHS et al., 2014). Reporting the sighting of an active shooter/armed intruder incorrectly has the potential to prevent the opportunity of isolating the violence to one area of the hospital, possibly allowing the shooter to freely move throughout other vulnerable areas.

Eighty-nine percent of respondents correctly marked they would *first* report a suspicious person to safety and security, while slightly over half indicated they would also report it to a supervisor. According to policy, both avenues would be acceptable when proceeding to report a suspicious person. A problem arises when nearly 40% of employees feel they need to first report a suspicious person to their co-workers, which can easily cause panic and misguided or unnecessary fear when not investigated in the appropriate manner. It may also be a time constraint, when earlier identification by appropriate personnel (such as security) could be a

benefit. Reporting a suspicious person to a co-worker first could decrease the survival of self and others during an incident, as it is out of step with recommendations (DHHS et al., 2014).

The researchers' data indicates that the overwhelming majority of employees understand the best place to hide (if unable to run) during an active shooter/armed intruder situation would be in an enclosed room with a solid door. A small number of employees reported that an occupied patient room would be the best place to hide, possibly due to an ethical or moral feeling of obligation to protect their patient, or due to a section of the policy that states, "Protect the patients and visitors as much as possible" (MHS, pg. 5, 2013). However, in a different section of the employee policy it *also* says that employees need to "Understand that you may not be able to help the injured as you flee to safety" (MHS, pg. 4, 2013). Furthermore, the policy explicitly states, "Attempts to rescue anyone outside the shelter should only be attempted if the attempt can be made without endangering anyone inside the secure area" (MHS, pg. 5, 2013). It is the researcher's opinion that the policy is unclear in specifying the importance of ensuring a persons' own safety prior to ensuring others' safety. Six percent of respondents incorrectly reported they would conceal themselves in an open office under a desk, while less than 1% stated hiding in a hallway around a corner from the active shooter would be appropriate.

The previous question coincides with the survey inquiry asking employees whether or not they feel they have an ethical or moral obligation to stay with a patient during an active shooter/armed intruder situation. While the vast majority agreed that they do feel the need to stay with a patient based on principle, hospital guidelines state that protection of one's self should be the first priority. While this is not made clear in the policy, it is made extremely clear in the guidelines given per the Healthcare and Public Health Sector Coordinating Council that healthcare professionals "may not be able to meet the needs of all [persons] involved" and that

they should “Prepare to decide to discontinue care to those who may not be able to be brought to safety in consideration of those who can” (HSCC, pg. 9, 2015).

It was the goal of the researcher to determine the level of preparedness that employees felt in the case of an active shooter/armed intruder situation. When employees were asked whether or not they felt prepared for this kind of situation, less than 50% asserted they felt they have been adequately trained. As it is stated, “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 (HSCC, pg. 9, 2015). If less than half of the employees at Jennie Edmundson Hospital feel adequately trained, it is more likely than not they would become part of the problem during an active shooter/armed intruder situation. People feel varying degrees of urgency when confronted with emergency situations. It is not uncommon for those unprepared to have a delayed response to an incident, or even go into denial. When staff are trained to recognize danger, they are able to more quickly overcome denial and respond in a more immediate fashion (DHHS et al., 2014). Since active shooter/armed intruder situations tend to evolve quickly, it is vital that staff are well prepared to urgently make the appropriate response.

To better identify how to rectify the knowledge gaps for those who do not feel prepared, respondents were asked what modes of education they believe would be most effective to train for these situations. Over half identified virtual/computer training as being the most helpful. This could be due to the fact that virtual training usually does not require a significant time commitment, can be done from home or on a break at work if necessary, and the employee is able to self-pace, therefore not being forced to move forward quickly without thoroughly understanding the material. Just over 30% of employees suggested written training, which has

some of the same benefits, such as self-pacing and the ability to complete the readings at home, but without the benefit of visual and audio effects that often help individuals better understand material. Just under half of respondents stated they would also find live training and full-scale exercises related to an armed intruder situation most effective. This is a highly advised activity to determine what preparedness and response gaps can be identified within the hospital during certain situations. By employees recognizing this mode of education, they understand that a full-scale exercise would put them in a pseudo active shooter situation, and they would be able to identify what methods and modes of survival need to be utilized, as well as ascertain what gaps need to be rectified to become better prepared.

When asked how prepared employees felt for the possibility of an active shooter/armed intruder situation at Jennie Edmundson Hospital, just under 60% of employees stated they felt either very prepared or prepared. Over 40% stated unprepared or very unprepared. Surprisingly, those who have been employed for over ten years have the highest percentage of feeling unprepared or very unprepared, which is unusual because a longer employment usually means more training opportunities. If those who have been employed a shorter amount of time feel more prepared, it could be that any active shooter training is completed during orientation or at the beginning of employment, without further follow-up for addressing these situations. Simple follow-up and guidance could assist in making employees feel better prepared and aware of their roles in active shooter/armed intruder situations. Feeling unprepared for this type of situation can have detrimental effects should the tragic scenario actually occur.

Lastly, to determine what moral or ethical obligations employees felt towards patients, the large majority identified they did feel an obligation to stay with their patients during an active shooter/armed intruder situation. Interestingly, a higher percentage of males reported feeling

obligated by nearly ten percent over females. This was not expected, however, it may be due to the higher percentage of males being found in physician and administration roles, as opposed to clinical roles such as nurses and nursing assistants. Perhaps physicians, who are required to take the Hippocratic Oath portray that oath to mean taking responsibility for their patients even during dangerous and traumatic unforeseen episodes.

It was also surprising to find that a higher percentage of clinical staff asserted they did not feel a moral or ethical obligation to stay with their patients, versus non-clinical staff, who strongly asserted they did feel the obligation. Since non-clinical staff normally tends to work business and other operations within the hospital, and would unlikely be in a situation where they had a patient, it is unclear why a higher percentage of them feel an obligation towards patients compared to the clinical staff who routinely have patients and would likely be in a situation where they did need to make that decision. It was also unexpected to find that over 90% of administration determined they felt an ethical or moral obligation to stay with a patient, when they are more aware of the policy than non-management staff.

Limitations

This study was originally intended to be a larger scale study, however due to restrictions related to submitting the survey at two Methodist Health System hospitals, only one hospital was studied. Therefore, no assumptions can be generalized. Furthermore, additional limitations include the sample size of the population, which equaled 725 employees. Although not all employees participated in the survey, a 47% response rate is a robust sample.

Other limitations include, as mentioned prior, that a broad-spectrum survey was utilized, going to all hospital employees regardless of what area or department they work in. This was

done to give an opportunity for a higher number of responses; however it may not have applied to certain employees, such as those who work from home.

Additionally, there may have been some confusion associated with a survey question. When asked about what role they play for the hospital, 22 reported that they were in the “other” grouping. It is unknown why an employee might have considered himself or herself in the “other” category when surveyed on what role they play for the hospital, but it is possible an employee who does both paperwork and direct patient care may have felt conflicted or unsure of their job classification. It is also possible that lower level management did not consider themselves administration, nor clinical or non-clinical. Finally, there is also the potential that an employee simply did not understand the classification system and was unsure of which category to check.

As with any survey, reliability and validity of survey answers is a limitation. Due to a time constraint, the survey that was submitted to Jennie Edmundson Hospital was open for only one week. While more responses may have been obtained if the survey was kept open for a longer period of time, survey results showed a large decline in the number of response rates as each day passed, indicating that it is unlikely a large increase of survey responses would have been obtained. Finally, this study cannot be generalized or compared to other institutions such as educational facilities, government establishments, or business organizations because it was purely hospital-based. This makes any comparison to those institutions inappropriate.

Recommendations

To help increase the preparedness of hospital employees, the research has prepared some recommendations. The following recommendations are designed to provide insight into how the

active shooter/armed intruder policy can better be disseminated and reach and infiltrate a broader number of employees.

In regards to active shooter/armed intruder policy awareness, it is administration that creates and mandates that employees are aware and knowledgeable regarding this policy. Therefore, it should be the administrations responsibility to disseminate the information within the policy to all employees, rather than assume employees will take initiative to first find the policy hidden among thousands of other policies, and second to read and review it either during work hours, or on their own time. This can be accomplished by using guidelines set forth by the Healthcare and Public Health Sector Coordinating Council, as well as the document *Incorporating Active Shooter Incident Planning into Health Care Facility Emergency Operations Plans* by a collection of federal organizations.

It is also the recommendation of the researcher that Methodist Health System allow the Emergency Managers and Director of Safety to determine what training and preparedness methods should be put forth for employees, rather than left to the decision of human resource employees or others without the appropriate education and training in the preparedness field.

Looking forward, it may be practical to identify which employees need an altered survey to gain better information on their responses to active shooter policies. Roles and positions in the hospital should be better clarified so that each employee is aware of whether they are considered clinical, non-clinical, or administration.

It is also suggested that the Jennie Edmundson Hospital implement annual training on active shooter situations. These trainings should include virtual and computer training as well as comprehensive, large-scale exercises. The active shooter/armed intruder policy should be

prominently displayed in each unit's breakroom to be reviewed when possible, as well as to be utilized as a visual reminder that employees should remain prepared and vigilant.

Lastly, it is the recommendation of the researcher that Jennie Edmundson Hospital hold annual tabletop exercises and full-scale exercises with administration and management, in conjunction with city and county law enforcement, the county emergency management agency, and all other responding officials, such as emergency medical services. Doing so will enable each person and entity that would be involved in an active shooter situation to make resolutions on what avenues they will take should they be faced with this situation, and therefore better prepare themselves and their staff.

Final Thoughts

It was the goal of the researcher to ascertain whether or not employees feel they are prepared for an active shooter/armed intruder situation. As President Barack Obama famously indicated after one mass casualty shooting during his second term as President, "It is in our power to do something about it" (Brady, 2015). As identified, it is important for each individual to be prepared by understanding the written policy provided by Methodist Health System. By having prepared employees, it is within their power to minimize loss of life.

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Appendix A

Survey Questions

(1) What gender do you identify with?

- Male
- Female

(2) What is your age?

- Under 19 years
- 19-24 years
- 24-35 years
- 35-50 years
- Over 50 years

(3) What best describes your education?

- Less than a high school diploma
- High school graduate
- Some college
- Undergraduate degree
- Graduate degree
- Doctorate degree

(4) What role do you play for the hospital?

- Clinical Staff
- Non-Clinical Staff
- Administration
- Other (Please specify) _____

(5) How long have you been employed at the hospital?

- 0-1 years
- 1-5 years

- 5-10 years
- Greater than 10 years

(6) Describe your work schedule

- Full time
- Part time
- Less than part time (i.e. PRN)

(7) Where would you expect to find an active shooter/armed intruder policy?

- With administration
- MHS intranet
- Bestcare homepage
- Other _____ -

(8) What should be your initial response when hearing active shooter/armed intruder overhead?

- Run, Hide, or Fight
- Shelter in place
- Lockdown
- Confront the armed intruder

(9) To the best of your knowledge, to whom should you FIRST report suspicious person? (Check all that apply)

- Supervisor
- Safety & Security
- Co-workers
- Administration

(10) To the best of your knowledge, what number should be called to report an active shooter/armed intruder?

- 9-11
- 6-911 (emergency code phone)
- Security's cell phone
- "0" (Operator)

(11) To the best of your knowledge, where would be the best place to hide in case of an active shooter/armed intruder in your location?

- An open office under a desk
- An enclosed room with a solid door
- An occupied patient room
- In the hallway, around a corner

(12) Do you feel you have been adequately trained for an active shooter/armed intruder incident?

- Yes
- No

(13) What modes of education would you find most effective for active shooter/armed intruder training? (Check all that apply)

- Written
- Classroom/verbal
- Tabletop exercises
- Virtual/computer training
- Full-scale exercise/live training
- Other (Please Specify) _____

(14) How prepared do you feel for the possibility of an active shooter/armed intruder at the hospital?

- Very prepared
- Prepared
- Unprepared

- Very unprepared

(15) Do you feel a moral/ethical obligation to stay with a patient in cases of an active shooter?

- Yes
- No