Spring 2022

Increasing Awareness of Personal Harm Reduction Interventions in the Clinical Setting: A Quality Improvement Project

Shawn Theberge

Increasing Awareness of Personal Harm Reduction Interventions in the Clinical Setting: A Quality Improvement Project

Shawn B. Theberge, MSN, FNP-C, NREMT-Paramedic

Doctor of Nursing Practice, University of New Hampshire, 2022

Faculty Mentor: Cathleen C. Colleran, DNP, RN

Practice Mentor: Eric Elliot, DMSc, PA-C

Date of Submission: May 2, 2022

Author Note

There are no known conflict of interest to disclose.

Abstract

The ever-rising concern for safety in the healthcare setting has become increasingly prevalent and levels of hostility and violence more publicly visible. Over the last decade both patients and clinicians have been targeted in healthcare facilities at record levels. These incidents have created an environment of not only risk but increased anxiety and feelings of uncertainty for most clinical personnel. The study will initially measure clinician's viewpoint of the clinical setting that they work in; and over the span of the project, track and evaluate the effects of the interventions on clinicians' overall feelings and perceptions. The expected outcome of the study will provide improvements to safety for clinicians, decreased anxiety for team members, and quality improvement to the overall clinical environment.

Keywords: safety, clinical healthcare, urgent care, acute care, primary care, violence, active shooter, safety improvements, violence against clinicians

Table of Contents

Increasing Awareness of Personal Harm Reduction Interventions in the Clinical Setting: A Quality Improvement Project

Introduction

1. Problem Description

Personal safety is of the utmost importance to providers and staff in the clinical setting. Over the past several decades there have been many seminal cases of violence towards healthcare providers ending in a wide range of tragic outcomes. The issue of workplace violence is felt across the nation, touching every state and city where healthcare workers may be employed. Many organizations fail to secure a safe work environment for their employees yet claim to offer a safe care environment for staff and patients (Gerberich et al., 2004). Gerberich et al., (2004) also identified that incidences of workplace violence most of the perpetrators of physical and non-physical violence were the clients/patients the impact was greater for non-physical acts of violence over physical violence. The study also reported there was a greater risk of increased events of both physical and non-physical violence for those employed in facilities such as nursing homes, long term care facilities, psychiatric departments, and emergency departments.

According to Occupational Safety and Health Administration (OSHA) data provided findings that “a hospital is one of the most hazardous places to work” (OSHA, 2019, p. 1). This 2019 report recorded an overwhelming 221,400 work-related injuries and illnesses. This is a rate equal to some 5.5 work-related or injuries per 100 full-time employees which is twice the rate of private industry in the U.S. According to a recent American Nurses Association (ANA) survey of workplace violence that impacted RN’s and nursing students there were substantial incidences of workplace violence that included verbal and/or physical threatening and assaults by patients or family members of a patient. One quarter of the respondents stated they had been assaulted by a

patient or family member while working (ANA & L.C. Williams and Associates (LCWA) Research Group, 2014, p. 4). Findings such as these directly support the need for future projects that address personal harm risk in the clinical setting.

Workplace safety risks include workplace violence, bullying, active shooters, verbal hostility, and unsafe work conditions (Li, et al., 2020). For this specific project, the focus was based on Workplace Violence (WPV) and clinician safety along with the effects and impact on clinical staff related to the safety concerns of physical and psychological harm was also reviewed. This project was conducted in an out-patient clinical site located in Wales, Wisconsin. The authors firsthand witnessed accounts of workplace violence and the risk to clinical staff supported the need for this project. Contributing accounts of workplace violence that had been witnessed by the author include, physical assaults on providers and staff, attempted stabbings, patient to patient and patient to family assaults (verbal/physical), biting, spitting of bodily fluids, and attempted strangulation. These witnessed accounts caused psychological and physical harm to one or more team members and resulted in police involvement, alterations to protocols and procedures of clinical staff operations, and increased physical safety countermeasures.

The definition of WPV per The National Institute of Occupational Safety and Health (NIOSH) has defined workplace violence as “violent acts, including threats of assaults and physical assaults that are directed toward persons at work or on duty” (OSHA, 2015, p. 2). OSHA (2020, p.1) provides a definition of WPV that is slightly expanded and states “workplace violence is any act or threat of physical violence, harassment, intimidation, or other threatening disruptive behavior that occurs at the work site. WPV ranges from threats and verbal abuse to physical assaults and even homicide. It can affect and involve employees, clients, customers and visitors” (OSHA, 2020, p.1).

Information supported findings of increased violence or hostility towards clinical staff members has become a concern in the clinical healthcare setting. These concerns were described by OSHA (2015), stating WPV risk factors included working with those who have a violent history, patients who are delirious, or under the influence of drugs. Concerns include unrestricted public access, poor lighting in hallways and exterior areas, working alone, environmental design that limits vision and escape, limited emergency communication access, presence of firearms or weapons, placement in neighborhoods that have high crime rates, limited training on WPV, and outdated policies for staff. Lastly, the article recommended the need for a more global political investment regarding WPV and a more delineated stance that WPV is not tolerated (OSHA, 2015, p. 1).

As a result, Li, et al. (2020) found employee perceptions of unsafe work environments have become more prevalent over the last twenty-five years, leading to increased feelings of anxiety, stress, and fear within a medical clinic which can be defined as a type of facility that is focused on outpatient services. Because of these issues, employees may choose to discontinue working within these facilities or may seek counseling or assistance for anxiety or fear or receive medical treatment due to an injury.

2. Available knowledge

A review of the literature was conducted from October 2021 through January 2022. The MeSH terms (Medical Subject Heading-official words or phrases selected to represent biomedical concepts) were incorporated into additional searches within all included databases. Databases that were investigated included Google Scholar, NCBI, CINAHL, Pub Med, The Cochrane Library, and Medline. Research that was published between 1999 and 2022 were considered with keywords "patient aggression" OR "patient violence" OR "workplace violence"

OR "assault" AND "interven*" OR "active*" OR "shooter" OR "violence" AND "policy" OR "procedures" OR "out-patient" OR "educat*" AND hosp* OR "nurs*" OR "emergency department".

In researching available knowledge, the author identified a wealth of information related to WPV and hostility in the clinical setting. The themes of articles were very diverse and included both clinical and non-clinical sectors. After narrowing down the selection to include the search parameters it became clear WPV could be compartmentalized into patterns of ideas to streamline and develop a plan to provide an intervention that could be effective and deployable. Furthermore, it was important to ensure that the results were repeatable and valid.

Initially, directing focus on the perceptions of healthcare workers appeared to be the foundation of how the project should be approached. Delving into perceptions of people and their thoughts related to personal safety and their work environment touches upon the core of every individual. Çıkrıklar, et al. (2016) explored the feelings and perceptions of staff members using questionnaires to establish how clinicians felt about their environment and work setting. The results of the study presented findings of the occurrence of physical violence in the clinical setting and the resulting effects on employees that were both physical and psychological. Furthermore, the study reviewed potential improvements to processes that aided in positive outcomes such an openness, information sharing, security improvements, and legal regulations. This article aided in the development of this project's questionnaires and provided ideas on ways for distribution simply and efficiently to team members to gather information quickly.

One's perceptions and feelings affect their attitudes which in turn cause a ripple effect in their home and work life. Poor perceptions lead to poor attitudes and potentially lead to a buildup of what could become hostility and resentment. Alzahrani, et al., (2019) found that attitudes

towards safety in the hospital emergency departments (ED) revealed the safety attitudes of ED staff were exceptionally low and concerns for the loss of teamwork and safety interventions were lacking. The ED questionnaires further identified that staff perceptions of cohesiveness due to safety concerns were poor and there were minimal expectations that it might improve over the upcoming twelve months. This was an important finding since it reaches back to one's core feelings and perceptions of their work environment. Being able to understand how the ripple effect grows from the epicenter of a microenvironment to a macro level issue provides insight into the importance of this project's direction. The author identified one area of interest that could be a platform from which to base further search ideas. The simple concept of civility and one's presentation of their actions and demeanor to those around them. Clark (2019) stated, "harm from disrespect has been identified as the next frontier in patient safety efforts. Disrespectful and uncivil behaviors in healthcare settings can have detrimental effects on individuals, teams, organizations, and patient safety—including life-threatening mistakes, preventable complications, or harm to a patient" (para. 1).

The article focused on the impacts of incivility in the patient care environment and healthcare setting as well as touching upon the ethical, educational, legal, regulatory, and workplace incivility implications; and provided evidence-based strategies and tactics that may promote a culture of civility and respect. The importance of this article is found in the simple commonalities of civility and expectations of the public and resonates through the need for proper treatment and freedom from harassment and harm. These findings provided further insight into how perceptions affect attitudes and where complications may begin, but what does this mean for the customers that seek treatment and care from the clinicians in healthcare settings?

Houry, et al., (2009) offered a look into the outcomes of poor attitudes and perceptions and how these feelings touched the patient. Through the staff's different perspectives of safety and WPV in the ED alterations to care and treatment began to become evident. But how could feelings cause poor care one might ask? The findings identified once again that the foundation of one's perspective is in perception of how they are treated or taken care of. This is related to their perception of safety and the environment that they are working in. These areas of interest became a principal concept for this project and assisted in developing the process that is proposed. Assessments of the staff's perceptions and feelings would need to be the starting point from which to measure changes in a facility, this concept was evidenced by articles that were identified this would eventually improve not only safety for clinicians but care to patients. Houry, et al., (2009) encouraged interviews and screening tools that were deployed in facilities through handouts. This project will deploy questionnaires in an electronic fashion that will be outlined later in the proposal. Identifying this article was beneficial because it supported the concept and approach for the project while providing additional foundation to the idea that WPV and employee perception could be measured in a questionnaire format and that the clinical setting could be improved through these tools.

The goal of this project was to increase awareness of personal harm reduction interventions in the clinical Setting, which is due to the prevalence of WPV. The global current situation regarding WPV has been increasing for decades now with more and more violent actions happening almost daily (BLS, 2020). The literature that was available had an enormous amount of information on WPV, one article by Pompeii, et al., (2020), described that the prevalence of WPV in the ED and urgent care settings originated from parent/patient or family member violence. Additionally, the study did not specifically consider psychological violence

for employees in the ED but did consider WPV that included acts such as incivility, verbal abuse, bullying, and threatening actions that potentially result in serious consequences for those employed in the clinical setting (Pompeii, et al., 2020, disc. 4). The article began to further explore WPV and the overall impacts that are felt in a healthcare organization directly related to the employees. Simple incivility and verbal actions are sometimes just the starting point, now it is commonplace to see physical violence that sometimes even results in death.

These increasingly violent actions at times even involve firearms, Schwerin, et al. (2020) discussed the current state of WPV and the possibility of an active shooter being present. The outlook of the article focused on WPV in a healthcare setting to include the ED and Primary Care Practice (PCP). Some key information the article presented, indicated that training now includes “run, hide, fight” methodology. The article was beneficial due to the extensive presentation of material that was included. The concepts of this article supported the basis of the project and provided ideas and assisted in directing the delivery of the intervention.

Schwerin et al. (2020) and Houry, et al., (2009) found that people in the clinical setting were at higher risk of both physical and psychological harm. These results identified that because of Workplace Violence (WPV) employees “experience serious emotional consequences of depression, chronic fatigue, poor job satisfaction, and feeling ashamed” (Pompeii et al., 2020, p. 3). Results from Schwerin et al., (2020) showed that among respondents who experienced some degree of physical violence, most perpetrators had either been patients’ or relatives. The noted physical violence in this review occurred in the clinical setting during some point of the care continuum.

A NIOSH report classified:

> "Workplace violence into four basic types. Types II and III are the most common in the healthcare industry.
>
> - **Type I:** Involves "criminal intent." In this type of workplace violence, "individuals with criminal intent have no relationship to the business or its employees."
> - **Type II:** Involves a customer, client, or patient. In this type, an "individual has a relationship with the business and becomes violent while receiving services."
> - **Type III:** Violence involves a "worker-on-worker" relationship and includes "employees who attack or threaten another employee."
> - **Type IV:** Violence involves personal relationships. It includes "individuals who have interpersonal relationships with the intended target but no relationship to the business"
>
> (ANA 2021, p. 1).

The overall importance of these classifications shows not only the impact of WPV but the scale of WPL nationwide. Violence has grown to disastrous proportions where it is common to see lethal means used and multiple fatalities in some instances (ANA, 2014).

Studies have identified some unique cultural considerations that contribute to acceptance or underreporting of workplace violence occurrences. Findings showed that some healthcare professionals may feel an ethical or professional duty to do no harm to patients, including reporting acts of violence directly against the provider. Some healthcare workers feel that accepting acts of violence and uncivil behavior caused by patients may be just another part of the job. Furthermore, in some instances healthcare workers believe that patients may unintentionally cause harm or damage because of being under the influence of drugs or emotional instability and therefore accept them as unavoidable. These increased challenges in healthcare may potentially

be on the rise due to reduced funding for severely ill patients, mental health service reduction, and violent tendencies resulting from narcotics.

3. Rationale

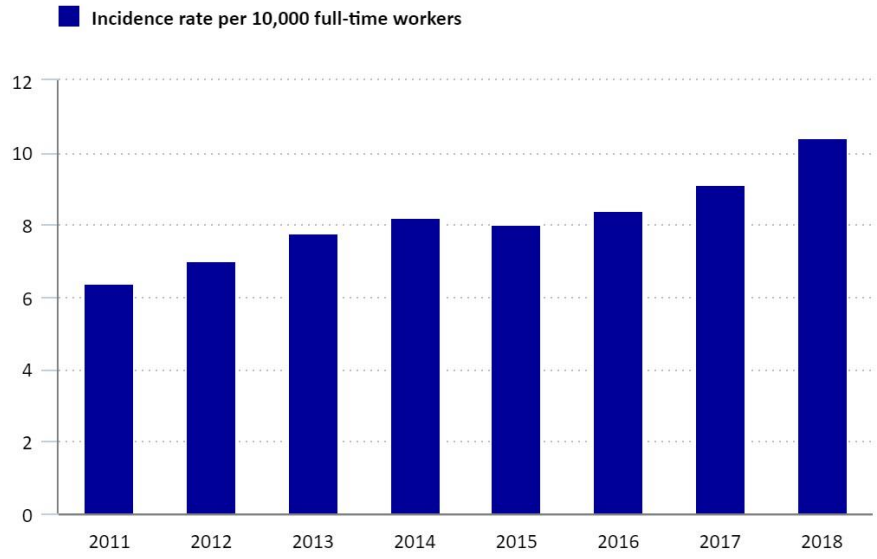
The rationale for this project was based upon current literature which states that as of 2019 there was a "rate of 5.5 work-related injuries and illnesses for every 100 full-time employees in the healthcare setting. This is twice the rate for private industry as a whole" OSHA, (2019). These statistics included WPV and identified an exceptionally high rate compared to non-healthcare setting workers. When considering data findings on a state and national level the following information was available. As of 2019, NIOSH and the Bureau of Labor Statistics (BLS) found that among the United States workforce some 20,870 workers in the private industry had suffered some degree of trauma due to WPV. In some cases, these occurrences required days away from work and hospitalization. Of the victims who experienced trauma from WPV more than half were women, most were between the ages of 25 to 54, 75% worked in healthcare and almost 20% of those injured required 3 to 5 days away from work (CDC, 2022, p. 1).

More specific statistics were found in an article published by the BLS titled "Workplace Violence in Healthcare, April 2020", which stated that "Workplace violence in healthcare is an important public health issue and a growing concern" (BLS, 2020). The article continued to cite the types of violence that had contributed to WPV and described it as intentional injuries that could be either psychological or physical that were caused by another person (BLS, 2020 para. 3).

BLS (2020) published information (see chart 1) describing the prevalence of non-fatal WPV in the healthcare setting between 2011 and 2018. Incidences of WPV are on the rise and have

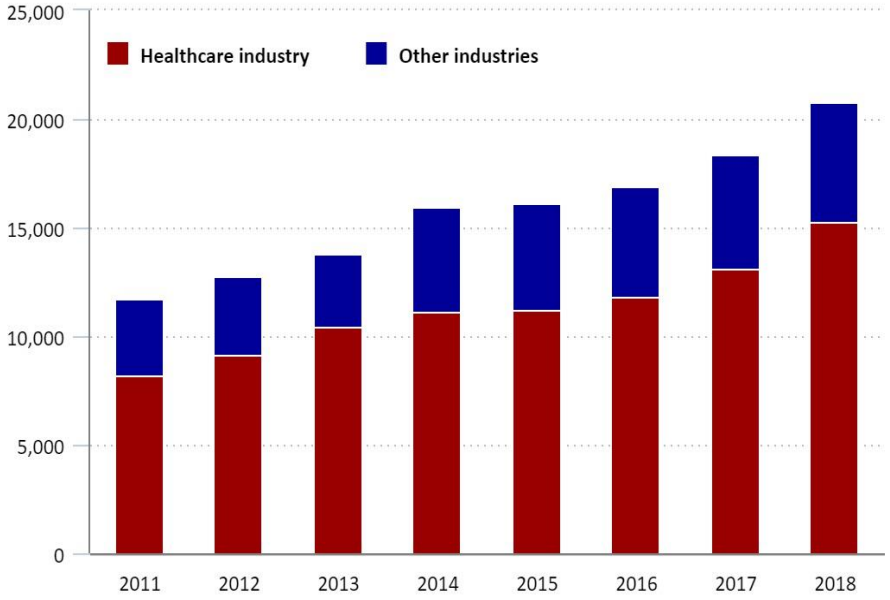
become ever more prevalent. Chart 2 depicts the 2011-2018 differences between healthcare workers and non-healthcare workers' injury rate that involved days away from work.

Chart 1. Incidence rate of nonfatal workplace violence to healthcare workers, 2011-18



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Chart 2. Number of nonfatal workplace violence injuries and illnesses with days away from work, 2011-18



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Information provided in reports by the BLS and NIOSH support the need for improvements and increases to safety in the clinical setting. Regarding the practice that was used as the setting for the project; Allegiance Medical Group specifically, several occurrences had been noted such as patients presenting with intimidation tactics, internet stalking and threats, physical intimidation, and threats of retribution. These acts of workplace violence had notably been identified in several clinics over the past 36 months. Over the last twelve months there had been no occurrences involving physical harm, only intimidation and verbal assaults. In each case it was noted that the veterans visiting the clinic had made several phone calls questioning appointment times and location, being agitated to some degree due to poor directions and instructions that had been provided. In each instance the subjects created a verbal disturbance that led to the individual being asked to leave the premises and law enforcement called. To date no physical assaults have been incurred on staff or visiting patients. Over the last twelve months there had

been no staff members that have participated in de-escalation, active shooter, or workplace violence training because it was not implemented in the facility.

***QI Model/Evidence Based Practice Model**

Implementing and identifying information in a project related to the potential for change was the foundation of Evidence Based Practice (EBP). Li (2019 p.1) stated that EBP includes using the most reliable evidence in the decision-making process. The article identified that a systematic implementation has the potential to enhance healthcare safety while improving patient outcomes. Therefore, EBP is the process of adapting information and knowledge in a way that enhances decisions while driving implementation of change based on the best available research gathered. At times, change implementation may be met with resistance from anyone involved in the evaluation. When working to overcome opposition, it is beneficial to include those affected by the process. After reviewing evidence-based research and previous outcomes of similar issues it proved to be helpful in establishing the need for this project.

The evidence-based practice model that was used is the Iowa Model of Evidence-Based Practice. The IOWA Model was developed by the University of Iowa Hospitals during the 1990s to guide nurses towards research findings to improve healthcare (Cabarrus College of Health Science, 2021). This multi-direction model (see Diagram 1) assists in decision making and problem resolution in day-to-day practices and processes through a chain of steps used to resolve systematic issues. The Iowa EBP model has provided healthcare practices and other organizations ways to address, translate and implement changes using feedback loops (Haulesi, et al., 2021 para. 3). The steps involved in the Iowa model include problem identification, selection of required evidence, implementation of intervention, integration, and dissemination of updated information (Haulesi, et al., 2021 para 5).

This model was utilized by a team consisting of the author and two Allegiance Medical Group (AMG) management individuals that evaluated, integrated, implemented, and disseminated information related to the process of the project and interventions. If positive outcomes resulted from the project the same team members would deploy this process to the remaining clinics maintained by AMG.

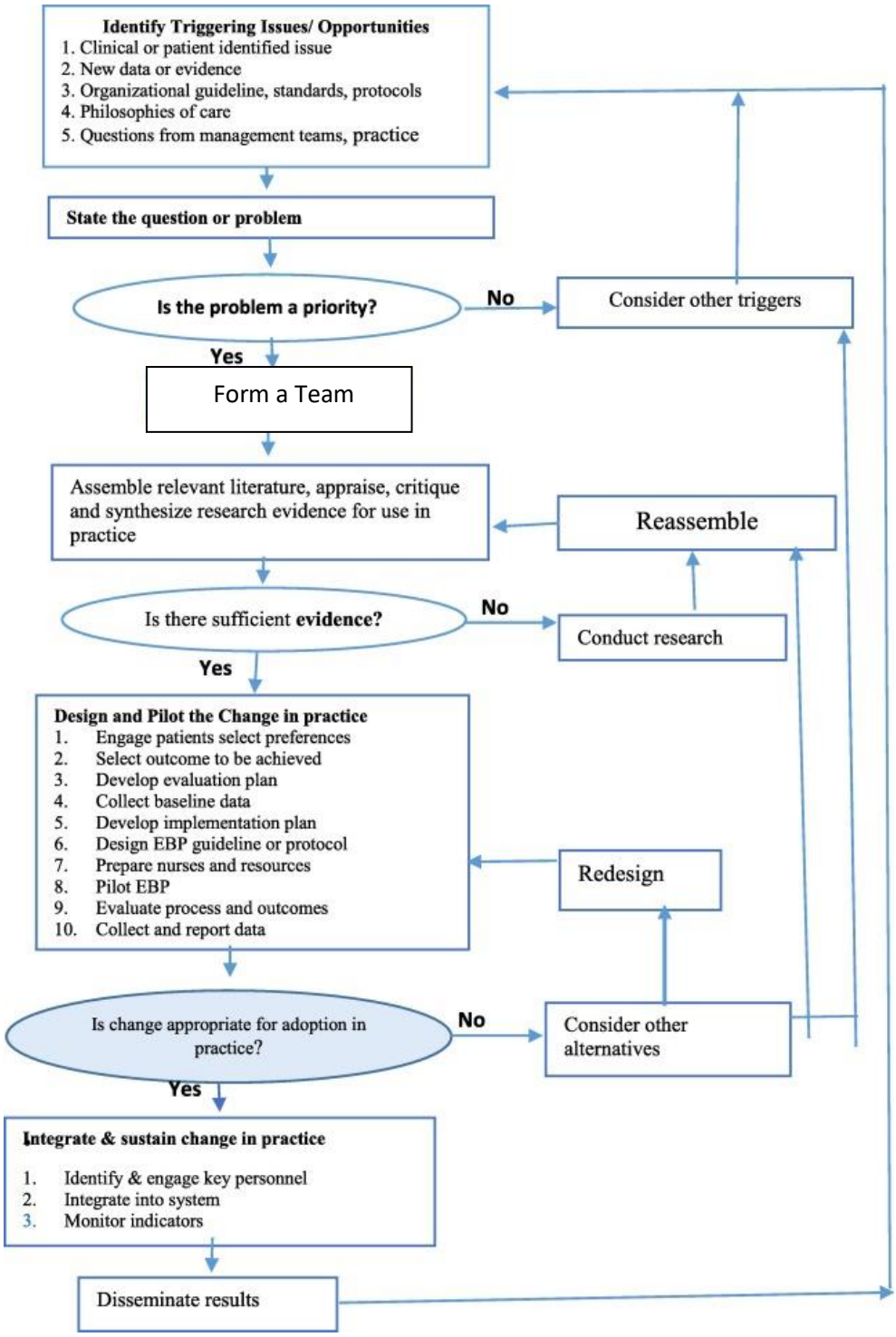


Diagram 1

(Haulesi, et al., 2021)

4. Specific Aims

The specific aim of the project was to provide Health Care Workers (HCW) with tools to increase awareness of personal harm reduction interventions that assisted them in assuring their personal well-being while in the workplace. This quality improvement project addressed WPV among clinicians at a specific facility. This QI project included: pre and post questionnaires of staff knowledge of WPV risks and Active Shooter preparedness to gain an understanding of baseline knowledge in the facility. A clinical microsystem assessment of the Wales clinic was conducted at the onset of the project to evaluate safety risks identifying potential hazards related to WPV. After the initial assessment, safety recommendations were made to the clinical lead team at AMG.

Some possible considerations that potentially could have been identified while preparing for the project included concerns such as: lighting, seating locations for staff and patients in exam rooms, potential weapons identified in exam rooms, communications concerns, egress identification and access points, and parking access and safety. While preparing for the project several training tools were identified and included as the staff intervention component. The intervention tools include educational computer-based training (CBT) for staff on active shooter, Run/Hide/Fight, and WPV response and awareness as well as a pocket guide and facility handouts that were posted. These CBT's were available through FEMA and provided the trainees with a post CBT quiz, Continuing Education Units (CEU), and a certificate of completion. The training consisted of YouTube training videos (found at https://www.youtube.com/watch?v=5VcSwejU2D0) titled "Run, Hide, Fight, Surviving an Active Shooter Event" (YouTube, 2012) and two computer-based training courses provided free

of charge by the Federal Emergency Management Agency (FEMA) titled “IS-906 Workplace Security Awareness” (https://training.fema.gov/is/courseoverview.aspx?code=is-906) and “IS-907, What you can do? (https://training.fema.gov/is/courseoverview.aspx?code=is-907)” (FEMA, 2021). AMG management had agreed to have all employees participate in training as mandatory during work hours and were compensated for completion. While this QI project was deployed at one facility, the intent was that training would possibly be provided to all sites within the organization. The projected outcome was identified through a self-evaluation questionnaire measuring whether the staff felt more prepared and knowledgeable when confronted with workplace violence, if they knew how to respond, what organizational policies were in place, and their perceived level of safety pre/post intervention. These important topics and similar themes related to personal safety and WPV can be located in publications such as one distributed by OSHA (2015) titled “Workplace Violence in Healthcare” that discusses that clinician safety is paramount, considering physical and perceived hazards when in the workplace.

According to the Institute for Healthcare Improvement (IHI, 2020), a systems approach is needed for success when considering environmental and cultural change. Coordinated efforts by both management and staff are needed to improve healthcare employee safety “Much like we do in the rest of quality improvement, it takes a system to make safety reliable and effective” (IHI, 2020, para. 18). Communication, clarity, and accountability are also important in success, team members must know what decision-making channels to follow and have the right tools and technology available within the organization.

This project aimed to reduce the potential for harm in the clinical setting, therefore improving the quality of care that is delivered through improved safety. The author conducted a micro assessment of the clinical environment using a tool developed by the American Society of

Healthcare Risk Management (ASHRM, 2022) (https://www.ashrm.org/resources/workplace_violence) and a rapid micro assessment developed by the author. These two tools were used to identify potential hazards such as placement of clinician related to the patient and the door with egress considerations, the presence of unobstructed exits, communications equipment, panic buttons, lighting, availability of equipment that could become a weapon, and the number of clinical staff available during operating hours. After the micro assessment AMG management agreed to work with the author to make alterations and improve the overall safety of the Wales clinical site prior to the implementation of the project. Prequestionnaires were deployed to the employees of the site on a mandatory basis and with the approval of AMG management. The author identified who had previous WPV training over the previous twelve months including Active Shooter training (pre and post questionnaire appendices E and F, site micro assessment appendix G). The project delivered results upon conclusion through a follow up micro assessment and post questionnaire of the site and staff. The assessment identified changes that were conducted in conjunction with the post questionnaire that identified staff perceptions and training status changes from onset to conclusion. These results became available in staff satisfaction questionnaires upon conclusion of the project.

The conclusion of the project resulted in improvements to site safety and staff knowledge of WPV and risk reduction. These expected results were supported by literature that had been retrieved and previous reports that were available. The importance of personal safety in the clinical setting and its relationship to patient care can be cited in a Joint Commission report that stated, “research demonstrated that victimized nurses experienced decreased self-confidence and

competence; potentially influencing the quality of nursing care provided and subsequently patient care outcomes" (Joint Commission, 2012, p. 98).

The goal of the pre and post questionnaires was to gain insight into staff understanding of WPV, the physical environment that they work in, and the potential hazards that may be present. It was important to capture the perceptions of staff regarding their feelings of workplace safety that includes patients and environmental considerations. The goal of the site micro assessment was to evaluate and identify safety concerns for the clinical staff. Upon completion of site questionnaires, recommendations of interventions were provided to AMG management and alterations were conducted to improve the clinical setting. Furthermore, the questionnaire's intent was to capture the status of training and preparedness in both pre and post project responses. After receiving the employee prequestionnaire results interventions were deployed to all staff members that included, WPV training that consisted of a YouTube training video (found at https://www.youtube.com/watch?v=5VcSwejU2D0) titled "Run, Hide, Fight, Surviving an Active Shooter Event" (YouTube, 2012) and two computer-based training courses provided free of charge by the Federal Emergency Management Agency (FEMA) titled "IS-906 Workplace Security Awareness" (https://training.fema.gov/is/courseoverview.aspx?code=is-906) and "IS-907, What you can do? (https://training.fema.gov/is/courseoverview.aspx?code=is-907)" (FEMA, 2021). The FEMA training courses each consist of a one-hour computer-based module that provides 0.1 Continuing Education Unit (CEU) and offers a printable certificate at the conclusion of each. Lastly, Department of Homeland Security "Active Shooter" pocket cards were provided to each team member that completes the training (appendix A).

Methods

5. Context

Contextual elements that are considered important as part of the project included environmental factors, collaboration of colleagues and management, training, and alterations to security measures. The process involved the Iowa Model of Evidence Based Practice for Quality Improvement (Haulesi et al., 2021) and was delivered and evaluated in one clinical site in Wales, Wisconsin. The Iowa model uses small tests of change to optimize a process and identify areas for potential improvement. The clinical site being considered provides treatments and evaluations to the veteran populations ranging in age from 18 years old to the elderly and sees 10-30 clients per day. By exploring employee perceptions and the clinical environment, this project sought to decrease harm potential and improve the quality of the work environments for healthcare professionals. Initially, questionnaires were delivered to evaluate the current workplace and the perceptions of those employed throughout the facilities. Evaluations were initially conducted through questionnaires of staff and some observational environmental considerations of the clinical setting in question. Outcomes were evaluated through pre-and post-questionnaires of the staff in the clinical setting. The outcome of the proposal aimed to increase awareness of personal harm reduction interventions in the clinical setting. This outcome was possible through the delivery of interventions such as a site micro assessment designed to reduce physical harm potential and the deployment of training on the topics of WPV and active shooter. The deploy-ability and rapid cycle of “assess/intervene” seeks to decrease personal harm risk to those involved in the clinical healthcare process within a thirty-day period. The end result was expected to be sustainable and replicable throughout any similar healthcare setting.

The specific facility that the QI project was conducted in was like a family practice and/or ambulatory care center, though results will be applicable in a variety of clinical settings. The clinic is Allegiance Medical Group, located in Wales, Wisconsin, a rural moderate sized town. The clinic is located near a large mall area and several small row shopping centers as well as a food district. The clinic has easy access to both city roadways and the highway. The structure is a single-story brick and mortar building with glass fronts to the street and parking areas. The overall size of the clinic is 1200 square feet with a reception area, three examination rooms, a radiology room, and a small staff kitchen. The populations that were recruited as part of the project include an assortment of 15 personnel that are made up of Medical Doctors (MD), Physician Assistants (PA), Nurse Practitioners (NP), Registered Nurses (RN), Medical Assistants (MA), Radiological Technicians, administrative staff and permanently assigned staff to the facility.

6. Interventions

This intervention intended to create a safer clinical environment through a quality improvement process. This was achieved through a variety of ways. Initially, a pre-intervention questionnaire was provided and assessed the current employee rating of safety and previous training on WPV in their clinical setting (Appendix G). The pre intervention questionnaire was delivered electronically to all employees with approval of Allegiance Medical Groups (AMG) and allowed employees to remain anonymous if they choose to. The pre- and post-questionnaires were provided at the start and conclusion of the study. The pre intervention questionnaire assessed the employee's perception of safety, aggressive patient encounters, and personal comments from staff. Once completed, interventions were initiated such as adapting facility safety measures, increasing personal awareness, and revising staff training to include

CBT's and handouts. The clinical staff was afforded several training accommodations: computer based or in person that included active shooter, Run/Hide/Fight training, and early identification of a volatile situation. These outcomes were measured beginning with the approved proposal and ended 15 April 2022.

The team involved in the immediate setting were medical staff and visiting personnel to the clinic. The variety and exact numbers for each category of personnel was identified in cooperation with the clinical management team and was conducted in a clinical patient care facility in Wales, Wisconsin. The facility that was included in the project is contracted for veteran examinations and act as a health care center to support the Department of Veterans Affairs. The time frame began with approval of the proposal and conclude on or about 15 April 2022. Those involved in the QI project were required to complete questionnaires, discuss opinions, and provide feedback. The clinical management team agreed to allow implementation of micro assessments, questionnaires, and make safety adaptations that were identified on a case-by-case basis.

7. Study of the Intervention(s)

The micro system assessment and questionnaire approach chosen to evaluate the impact of the Quality Improvement (QI) project was driven by the Iowa Model of Evidence Based Practice to Promote Quality Improvement. Initially, participants were provided with access to the clinical site assessment questionnaire to gain an understanding of their knowledge and identification of potential risk factors (Appendix G). Questionnaires were electronically sent to all assigned team members to complete and were tied to a graphic display model as part of the post questionnaire results and project presentation display. The questionnaires were developed and generated by the

author specifically for this project. The following questions were available as part of the questionnaire.

Micro system assessment questions:

1. Does the clinical site that is being evaluated have any of the following potential safety risks?

Unrestricted public access?

Potential presence of firearms?

Poor environmental design that may block vision or escape routes?

Onsite security?

Work in an area with a high crime rate?

Lack of emergency communications? (Phone, cell, panic button)

No identification of violent patient history?

Poor lighting in hallways or exterior areas?

Other?

2. When are you working do you have access to a chaperone if you feel as though you should need one?
3. Does the facility allow guests in the room with the patient?
4. In the exam room are you seated closest to the door?
5. Are objects located in the room that could be considered physical assault risks such as scalpels, needles, chairs, oxygen bottles, sharp objects?
6. Is there operable emergency lighting on site?
7. Is there a second means of egress/ escape?
8. Is the employee parking area well lit, accessible and visible upon exit of the building?

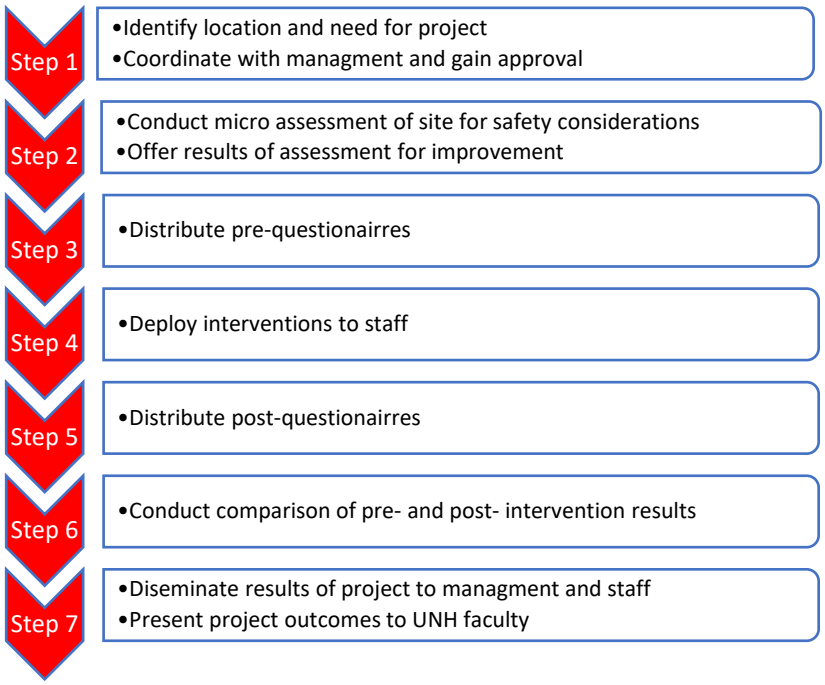
The author assessed the clinical environment using a tool developed by the American Society of Healthcare Risk Management (ASHRM, 2022) (https://www.ashrm.org/resources/workplace_violence) (Appendix H) which is the industry standard for risk management related to WPV. Team members were provided with the pre/post intervention questionnaire (appendix E) that assessed several areas related to WPV, training, and their perceptions of safety.

The approach that was used to assess the results was based on staff satisfaction questionnaires, manager feedback, and actual incident outcomes within the facility. One concern in this case was the timeframe in which the study was conducted, though available time was limited the intent was that the project could be delivered within a thirty-day period or less. Ultimately, the Iowa Model cycles and consolidated responses from clinical sites provided a measurable outcome through pre and post intervention responses.

8. **Measures**

The measures chosen to evaluate outcomes included pre- and post- intervention questionnaires from staff and management, and a micro assessment of the facility, deployment of interventions and dissemination of results and findings.

Flow Sheet: **Rapidly deployable Harm Reduction Interventions in the Clinical Setting**



The operational definition of “Questionnaire” is defined as "the collection of information from a sample of individuals through their responses to questions" (Ponto, 2015). Using questionnaires allows a variety of information to be gathered from participants, collects data, and utilizes several methods of instrumentation.

The rationale for selecting these methods considered the environment, populations, expected outcomes and the timeframe. The project was designed to be rapidly deployable and easily accessible in hopes that subsequent use of this model would be included in other clinical sites throughout the AMG practice model. It was the intention of this author to improve safer clinical settings for all healthcare workers eventually.

Lastly, Incident Reporting Systems (IRS) was implemented using a Quick Response (QR) code with systematic tracking for ease of use (Appendix E-G). IRSs were “not intended to be an accurate picture of the incidence or severity of Patient Safety Incidents (PSI) that occur

within centers, but a valuable resource to understand and act on the latent and contributing factors of a representative sample of PSIs. In fact, the main drawback of the IRS is the high level of under-reporting" (Ramírez, et al., 2018 p. 10). QR data tracking will be a digital link provided to staff that automatically formatted responses immediately into a graph collection document for easy visualization of results by the author. This QR distribution can be dynamically altered to reflect changes to the questionnaire in question and allows for time stamped tracking, individual response identification and repeated use over time.

Through the validity and reliability of the interventions previously mentioned one could speculate that a questionnaires reliability "on its own does not effectuate/establish validity and vice versa. A valid measure that is measuring what it is supposed to measure does not necessarily produce consistent responses if the question can be interpreted differently by respondents each time asked" (Sullivan, 2011, p. 1). Therefore, the intent was to provide a questionnaire that was simple and precise, encompassing no more than eight questions delivered in the same manner each time to ensure that respondents all receive the same pattern. This data was documented throughout the project to evaluate the clinician's perspective and track trends in relation to improvements being conducted throughout the clinics.

A challenge of observational questionnaires, "is validity. Whereas precision is a lack of random error, validity refers to a lack of systematic error. Observational studies are evaluated in terms of both internal and external validity. Internal validity refers to the strength of the inferences from the study. That is, did the "exposure" or "intervention" cause a difference in the outcome (high internal validity) or was a difference in the outcome caused by systematic error in the study (low internal validity). The key question in assessing internal validity is whether observed changes can be attributed to the exposure and not to other possible causes" (Carlson et

al., 2009 p. 5). Using observational patterns required a systematic approach and precise documentation throughout the process.

The success of the study depended on participation of the populations included and the distribution of pre and post intervention questionnaires with evaluation of potential incidents between March 2022 and April 2022. The efficiency of the project was enhanced by using an electronically generated questionnaires and consolidated response graphs. There will was minimal cost associated with the project for actual materials other than administrative equipment and supplies. However, there was an unknown cost associated with physical safety measures within the clinical facility though this would be dependent upon approval of the clinical management team. As a result of this QI project several important best practices were identified such as “questionnaires for workplace violence in the health sector, anxiety, burnout, and coping styles in general hospital staff exposed to workplace aggression, and the application of scales such as the Staff Observation of Aggression Scale (SOAS)” (Liu et al., 2020, p. 4) (appendix C). Several key countermeasures were identified that improved outcomes for healthcare workers (HW) related to physical harm risks. Some topics that were discussed were found in an article by Liu et al., 2020 that recommended practices such as locating clinics near law enforcement, on site security, reducing physical risk within a site, and participating in safety training courses (Liu et al., 2020, p. 8). It was proposed that through the project Evidence Based Practice (EBP) and best practice guidelines would be incorporated throughout the process while being assessed through questionnaires and evaluated for improvements of perceptions at the conclusion of the project.

The methods included in this project were questionnaires that were electronically distributed by a QR generator for the pre and post intervention questionnaires and a site micro analysis (see

appendices). The Staff QR pre intervention questionnaires evaluated perceptions of personal safety and previous training over the last twelve months. The author noted that it was not apparent that any such WPV or active shooter training has been developed or deployed by AMG to this date. The pre intervention questionnaire results were compared to the post intervention questionnaire results to identify staff perceptions of safety and preparedness to deal with situations such as active shooter and WPV. The hopes were that the questionnaires would identify improvements to perceived workplace safety, if staff felt more prepared in emergency events, and if staff felt that education improved their knowledge of workplace safety. The questionnaires were incorporated and evaluated for relevance during the project timeframe. Should a physical assault or actual incident had occurred within the facility information would be collected and an immediate evaluation would be conducted using the Staff Observation of Aggression Scale (SOAS) (Appendix B-pending approval) to evaluate the impact upon the project group.

9. Analysis

An analysis of results was based on personnel in the clinical setting (N=13) that included assorted staff within the clinic as previously mentioned. After conducting pre intervention questionnaires of the staff and site micro assessment a pre-questionnaire study finding was calculated in a statistical quantitative data analysis. This followed by the post intervention questionnaire quantitative statistical analysis to indicate overall findings of the staff which also included an overall analysis chart indicating qualitative statistical findings.

Within the QI project a site micro assessment was performed, safety modifications were conducted to the clinical environment, and interventions consisting of training and education were employed through CBT's and handouts. Some potential projected recommendations for

physical safety improvements were improved lighting, easier access to egress points, removal of potential weapons from exam rooms, alterations to staff and patient placement in the exam room, and improved communications availability in the clinic. Additional recommendations that could have resulted as evidenced by an assessment of the research material considered; the use of team building interventions, de-escalation training, physical safety measures, and additional resources which were common themes to the research material.

To collect data several different styles were noted among the literature available such as questionnaires, interviews, and observations. The overall effects of the interventions on the safety and attitudes of participants were later evaluated. It was presumptive that positive interventions along with additional training and physical countermeasures had the potential to produce successful outcomes. One could presume that an expected outcome would include positive perceptional outlooks from staff members through post-intervention evaluation questionnaires. Research also indicated that through cultural safety changes improved teamwork and communication skills resulted in the clinical setting.

Some methods for understanding variation throughout the data could be identified through trends in the QR matrix. It was feasible to recommend the questionnaire be disseminated at regular increments to provide for a more longitudinal study that may prove beneficial to the management team of AMG. If positive outcomes result through the QI project, it would be reasonable to seek the deployment of these processes to the remaining AMG facilities.

10. Ethical Considerations

Ethical considerations of implementing this QI project and the interventions associated with it potentially could have been addressed, including, but not limited to, a formal ethics

review, potential conflict of interest, and refusals to participate which must be considered. Some implications of the QI project could be privacy of involved persons, workflow changes if immediate safety concerns are identified, workflow changes if there are identified psychological or physical violence in the workplace during the project, and the effects of supportive counseling for the victim. The reporting mechanism for any major safety incident or concern was to contact AMG management immediately. Currently, there has been no indication of the need for a formal ethics review or a potential conflict of interest. However, some considerations for implementation and review could be identified as personal bias, perspective and time required to fulfill documentation, questionnaires, and technological abilities.

In closing, it was identified throughout research of the available literature that alterations to awareness, education and environmental corrections increased knowledge and the ability to identify personal harm risk factors in the healthcare setting. One article by Liu et al., (2020) stated that to achieve zero tolerance/ zero violence in the healthcare setting staff, management and processes must align and be adopted in a unified setting. Furthermore, the article stated there is a need for a more global political commitment towards ending WPV (Liu et al., 2020). Therefore, this Quality Improvement project intended to assess and adapt the clinical setting, using methods learned through research rooted in evidence-based practice which included interventions such as physical safety improvements, training, education, and awareness of WPV.

Results

13. Results

The project was conducted in Wales, Wisconsin. The project yielded responses from twelve clinicians assigned to the Wales clinic during the project implementation in April 2022.

The participants of the project were from a variety of professions ranging from MD, PA, NP, RN, MA, and Radiological Technician. Demographics were not collected by the author due to confidentiality concerns.

The initial micro site assessment that was conducted revealed several physical safety concerns. Some of the concerns were open access to the public, provider- patient placement within the exam room, no second means of egress from the exam area, the potential of physical assault weapons in the exam room and no phone or emergency buttons in the exam rooms. As part of the implementation of the project, the author working with AMG management conducted alterations to the clinic to improve the identified safety concerns. As a result, several improvements and alterations were conducted which included: door chime placement of the entry door to notify the forward staff of entry/ exit, staff being relocated to the front lobby/ exam area for first greetings and check in, removal of non-essential items and equipment from the exam room, placing orders for phones to each exam room (cell phones recommended in the interim), and the relocation of desks and patient chairs in each exam room to ensure the provider obtains primary egress from the exam room. The AMG management team identified the need for a second egress point from the clinic and will strive to improve this in the future although currently full structural renovations are not able to be conducted.

Some key indicators of the success of the project were a comparison of the pre and post knowledge and satisfaction levels in the workplace. The pre-project questionnaire was delivered using a QR code and a paper handout form which was delivered to team members for the ASHRM, Workplace Violence Risk Assessment Tool questionnaire. The estimated time for employees to complete the requested material during the pre-project questionnaire timeframe was 30 minutes. It was later realized that the actual time to complete both the pre and post was

roughly 20 minutes. The rapid and easily deployable questionnaires did not cause any complaints from staff or management and were quickly returned. Of the team members assigned to the Wales clinic 100% of questionnaires and ASHRM surveys were returned (*n*=12). As a result of the responses, a clear picture of the knowledge base of the staff in the areas of WPV and active shooter was identified.

The intent of this project was to improve quality using interventions, in this case the interventions being physical adaptations and educational applications. Initially, the pre-project questionnaire was deployed to team members to establish a baseline assessment of current preparedness and satisfaction within the workforce. The pre- project questionnaire was required to be used at the conclusion of the project for a comparison of pre and post analysis results. The conclusions that were identified in the pre-project questionnaire were the following (related to the preceding twelve months):

- 25% felt unsafe or at risk of physical harm, 75% did not
- 100% stated they did not receive WPV or active shooter training
- 16.7% stated they experienced physical or psychological harm because of WPV with the preceding twelve months
- 62.5 % stated that they currently try to relocate themselves and the patient's placement in the exam room to allow the examiner to be closer to the door
- 58.3 % stated that they did not feel safe in the clinic, compared to 33.3% who felt safe
- 83.3% stated that they did not know how to react to an active shooter event

The results of the pre-project questionnaire identified that staff in the clinic over the previous twelve months had never received active shooter or WPV training. It was later

determined that only one in twelve had ever received the training within their career. The results identified that of the twelve respondents nearly all team members were uncertain of what to do in the event of any serious emergency.

Workplace satisfaction was previously identified though available knowledge as a key indicator of employee satisfaction and job performance. Satisfaction levels were based on responses to question eleven in the pre project questionnaire and question nine in the post project questionnaire. The results from the pre project questionnaire resulted in six that stated they were “very satisfied”, four “somewhat satisfied” and two “somewhat unsatisfied”. The results from the post project questionnaire resulted in ten stating they were “very satisfied” with their workplace while two stated that they were “somewhat satisfied” with their work environment.

Employees perception of safety was also previously identified as a major component of job satisfaction and job performance. The staff perception of safety was also included in the pre and post questionnaire. In the pre project questionnaire safety was addressed in question nine resulting in twelve respondents, four stating that they “did not feel as though safety risks impeded their workflow”, seven stating that “they sometimes felt safe at work”, and one stating that they “always felt unsafe at work”. After the interventions had been deployed the post project questionnaire was delivered; question three then asked, “as a result of the training and safety improvements in the clinic, do you now feel more comfortable and safer in your workplace?”. The respondents unanimously stating that they felt more comfortable and safer in their work environment.

The post-project questionnaire was used at the conclusion of the project for a comparison of pre and post analysis results. The conclusions that were identified in the post-project questionnaire were the following (related to post intervention):

- 100% who felt unsafe or at risk previously now feel more prepared or better equipped to deal with a WPV or active shooter situation?
- 100% stated they did receive WPV or active shooter training as part of the intervention
- 83.3 % stated that they will now relocate themselves closest to the door in the exam room
- 66.7% will now include a chaperone in the exam room if safety is in question
- 83.3% stated that they now know how to react to a WPV or active shooter event
- 100% stated that they now have a good understanding of Federal government and AMG recommendations related to WPV and active shooter events
- 83.33% stated that they feel that job satisfaction will be positively impacted by the training while 16.7 are unsure of changes to job satisfaction

It is estimated that due to the educational interventions deployed within the AMG clinic in Wales, WI staff members will benefit from an increased feeling of satisfaction due to morale being improved. It was also noted that the team experienced increased feelings of safety and preparedness as well as an increased feeling of teamwork. It can also be speculated that due to the educational benefits of the interventions the team members have decreased their required future CME hour and cost requirements, have become better prepared to deal with stressful or harmful situations and will possibly result in a career span decrease in harm to themselves or those around them. The positive outcomes to the Allegiance Medical Group management and the owners potentially could be represented in a decreased for employee injuries, patient harm risks, and the unknown possibility for litigation in the event of unprepared staff and WPV/active shooter events.

The actions of employing interventions throughout a facility seemingly effects change throughout several levels, the macro level changes that are realized begin at the management

team or change initiators and rippled throughout the culture or system. These changes affect the entire team, in this case the interventions created alterations to the environment, physical improvements to the working location, system wide guideline improvements and training recommendations. The interventions further created a sense of sustainability and preparedness that was fortified with the completion of each of the training packages. These mezzo level changes to the group included team building through completion of modules, developing a better understanding of group actions in dangerous environments, and working through issues as a team. The relevance of the interventions was evident through the use of chaperones and development of staff preparedness through on-site coaching and team building. Lastly, the individual micro level effect of the interventions in the AMG community could be seen through completion of the modules, open discussion of safety and action plans, as well as a sense of well being and teamwork from the entire group.

Discussion

14. Summary

In summary, analysis of the pre project questionnaire results which considered available knowledge in the areas of WPV and active shooter for those assigned to the Wales, WI clinic found that of the twelve team members (*n*=12), zero had previous training, six were “very satisfied”, four “somewhat satisfied” and two “somewhat unsatisfied”. The author found great success in the post project questionnaire results. Respondents answered that their available knowledge of WPV and active shooter response knowledge had increased significantly which also effected their job satisfaction rating with an increase to ten team members stating they were “very satisfied” and two where “somewhat satisfied”. The increase in knowledge base was also evident through the deployment of the intervention which offered training in WPV and active

shooter response through online CBT's. As a result of the training conducted the respondents gathered a total of roughly 36 continuing education credits that will be available for future re-licensure to the team members that provides not only a cost savings but time management benefit. DHS "How to Respond" handouts were provided to all team members at the conclusion of the project along with WPV reaction flyers being posted in all exam areas. Physical improvements had been conducted by the management team at AMG which will impact future employees and as additional facilities are included in this or similar projects future positive outcomes may be possible.

The benefit of this rapidly deployable, cost effective, quality improvement project supported the employees and ultimately the patients that they are responsible for through improvements to safety responses in the clinical healthcare setting. Ultimately, the interventions were initiated to increase awareness and knowledge of WPV and provide instructions and preparedness to the potential of an active shooter in a facility. These benchmarks were achieved through readily available courses with little to no cost. The overwhelming response from the team members post survey was one of success and appreciation. It is the hopes of the author to continue to deploy this QI platform to the remaining AMG clinics in WI and nationwide.

15. Interpretation

The results of the QI delivery data revealed that the interventions directly affected the outcomes to the staff population at the Wales clinic. This determination was made using the pre project questionnaires which revealed that of the twelve staff respondents none had previously had WPV or active shooter training, whereas in the post project questionnaires reported a 100% improvement with all staff members stating that they had training in WPV and active shooter response. This 100% achievement met the desired goal and exceeded expectations. The author

also learned that staff and management alike are eager to become involved and learn new techniques as well as improve safety.

The impact of the project on the population at the Wales clinic was well received at both the employee and management levels. The system level improvement worked in a well initiated and developed process that was able to be deployed in a timely, cost-effective manner that allowed for a quick turnaround with amazing results. The intervention trained 100% of the staff initially identified, created opportunities for CME collection, and improved the overall system within the clinic moving forward. AMG management has determined that all employees will conduct WPV and active shooter training as part of the onboarding process moving forward.

There were no differences in observed and anticipated outcomes. The literature and available knowledge discovered by the author provided an exceptional backdrop to the deployment of the project which delivered the expected outcomes in a measurable and calculated format. The project platform has been discovered to be part of future endeavors in other AMG clinics.

16. Limitations

Possible limitations that may have confounded the project but were not identified to have had an effect were ones' personal exposure to prior WPV or personal history such as domestic violence. These past incidences have the potential to affect the results of ones' perception of safety or may affect the manner that questions had been answered. These instances were not captured for this project, though discussions were identified and annotated within the results of the project. Personal bias was another noted limitation, personal bias towards exposure to violence by the author was controlled and not discussed with the participants of the project.

17. Conclusion

In conclusion this quality improvement project was designed to provide both useful and relevant information to clinical staff related to safety in the clinical healthcare setting. The project and intervention did not disrupt workflow, schedules, or patient care. The overall results of the implemented intervention resulted in improved satisfaction, confidence, and overall increased safety to the clinical staff in which both employees and patients benefited.

The need for expansion and further distribution of this project within the AMG clinical settings will be considered. Only through a wider distribution and population would one be able to truly identify the large-scale effects and long-term outcomes to the healthcare setting.

Other Information

18. Funding

The author covered the direct cost of travel to the clinical site in Wales, Wisconsin during the project timeframe. This travel was in conjunction with assigned shifts and had not imposed a detriment to the author or AMG directly.

References

Alzahrani, N., Jones, R., Rizwan, A., & Abdel-Latif, M. E. (2019). Safety attitudes in hospital emergency departments: a systematic review. *International journal of health care quality assurance*, *32*(7), 1042–1054. https://doi.org/10.1108/IJHCQA-07-2018-0164

Aljabri, D., Vaughn, A., Austin, M., White, L., Li, Z., Naessens, J., & Spaulding, A. (2020). An Investigation of Healthcare Worker Perception of Their Workplace Safety and Incidence of Injury. *Workplace health & safety*, *68*(5), 214–225. https://doi.org/10.1177/2165079919883293

American Society of Healthcare Risk Management (ASHRM) (2022) retrieved from: https://www.ashrm.org/resources/workplace_violence

American Nurses Association (2021). Workplace violence, retrieved from https://www.nursingworld.org/practice-policy/advocacy/state/workplace-violence2/

American Nurses Association & LCWA Research Group. (ANA) (2014). ANA HRA: Results and analysis, October 2013–2014, retrieved from https://www.nursingworld.org/~49d6e3/globalassets/practiceandpolicy/nursing-excellence/incivility-bullying-and-workplace-violence--ana-position-statement.pdf

Buckwalter, K. C., Cullen, L., Hanrahan, K., Kleiber, C., McCarthy, A. M., Rakel, B., Steelman, V., Tripp-Reimer, T., Tucker, S., & Authored on behalf of the Iowa Model Collaborative (2017). Iowa Model of Evidence-Based Practice: Revisions and Validation. *Worldviews on evidence-based nursing*, *14*(3), 175–182. https://doi.org/10.1111/wvn.12223

Bureau of Labor Statistics (BLS) (2020). Fact Sheet | Workplace Violence in Healthcare, 2018 | April 2020; retrieved from https://www.bls.gov/iif/oshwc/cfoi/workplace-violence-healthcare-2018.htm

Cabarrus College of Health Science (2021). Cabarrus College of Health Sciences Library: IOWA Model, Nov 3, 2021; retrieved from https://cabarruscollege.libguides.com/c.php?g=465666&p=5283295

Carlson, M. D., & Morrison, R. S. (2009). Study design, precision, and validity in observational studies. *Journal of palliative medicine*, *12*(1), 77–82. https://doi.org/10.1089/jpm.2008.9690

Center for Disease Control and Prevention (CDC), (2022) The national institute of occupational safety and health (NIOSH) report, retrieved from: https://www.cdc.gov/niosh/topics/violence/fastfacts.html

Çıkrıklar, H. Í., Yürümez, Y., Güngör, B., Aşkın, R., Yücel, M., & Baydemir, C. (2016). Violence against emergency department employees and the attitude of employees towards violence. *Hong Kong medical journal = Xianggang yi xue za zhi*, *22*(5), 464–471. https://doi.org/10.12809/hkmj154714

Clark, C. M. (2019). Fostering a culture of civility and respect in nursing. *Journal of Nursing Regulation*, *10*(1), 44–52. https://doi.org/10.1016/s2155-8256(19)30082-1

Clark, C. M. (2013). Creating and sustaining civility in nursing education. Indianapolis, IN: Sigma Theta Tau International Publishing

DHS (2021) Responding to Active Shooter Card, retrieved from https://www.hasc.org/sites/main/files/02_-_active_shooter_pocket_card.pdf

FEMA (2021) IS-907, What you can do, retrieved from https://training.fema.gov/is/courseoverview.aspx?code=is-907

FEMA (2021) IS-906, Workplace Security Awareness, retrieved from https://training.fema.gov/is/courseoverview.aspx?code=is-906

Gerberich, S.G., Church, T.R., McGovern, P.M., Hansen, H.E., Nachreiner, N.M., Geisser, M.S., Ryan, A.D., Mongin, S.J., and Watt, G.D. (2004). An epidemiological study of the magnitude and consequence of work-related violence: The Minnesota Nurses' Study. Occupational and Environmental Medicine. 61(6):495–503

Haulesi, C., Chiwaula, P., Kanjakaya, D., Chikatipwa, A., Kalimbuka, T., Zyambo, L., Nkata, S., Jere, D., (2021) The Iowa Model in Nursing, introducing evidence-based practice in nursing care delivery, utilizing the Iowa model in intensive care unit at Kamuzu Central Hospital, Malawi

Hodgson, M.J., Reed, R., Craig, T., Murphy, F., Lehmann, L., Belton, L., and Warren, N. (2004). Violence in healthcare facilities: Lessons from the Veterans Health Administration. Journal of Occupational and Environmental Medicine. 46(11): 1158–1165.

Houry, D., Cunningham, R. M., Hankin, A., James, T., Bernstein, E., & Hargarten, S. (2009). Violence prevention in the emergency department: future research priorities. *Academic emergency medicine: official journal of the Society for Academic Emergency Medicine*, *16*(11), 1089–1095. https://doi.org/10.1111/j.1553-2712.2009.00544.x

Institute for Healthcare Improvement (IHI) (2020). *Every Injury to a Health Care Worker Is Preventable,* Institute for Healthcare Improvement, January 22, 2020

International Journal of Africa Nursing Sciences,Volume, 14,2021,https://doi.org/10.1016/j.ijans.2020.100272.

Joint Commission (2012). Improving Patient and Worker Safety: Opportunities for Synergy, Collaboration and Innovation. Oakbrook Terrace, IL: The Joint Commission, Nov 2012. http://www.jointcommission.org/.

Jonker, E. J., Goossens, P. J. J., Steenhuis, I. H. M., & Oud, N. E. (2008). Patient aggression in clinical psychiatry: perceptions of mental health nurses. *Journal of psychiatric and mental health nursing*, *15*(6), 492-499.

Li, S., Cao, M., & Zhu, X. (2019). Evidence-based practice: Knowledge, attitudes, implementation, facilitators, and barriers among community nurses-systematic review. *Medicine*, *98*(39), e17209. https://doi.org/10.1097/MD.0000000000017209

Li, Y. L., Li, R. Q., Qiu, D., & Xiao, S. Y. (2020). Prevalence of Workplace Physical Violence against Health Care Professionals by Patients and Visitors: A Systematic Review and Meta-Analysis. *International journal of environmental research and public health*, *17*(1), 299. https://doi.org/10.3390/ijerph17010299

Morken, T., Baste, V., Johnsen, G. E., Rypdal, K., Palmstierna, T., & Johansen, I. H. (2018). The Staff Observation Aggression Scale - Revised (SOAS-R) - adjustment and validation for emergency primary health care. *BMC health services research*, *18*(1), 335. https://doi.org/10.1186/s12913-018-3157-z

National Institute for Occupational Safety and Health (NIOSH) (2002). "Violence: Occupational hazards in hospitals." Retrieved from http://www.cdc.gov/niosh/docs/2002-101/pdfs/2002-101.pdf.

National Safety Council (NSC) (2022). Work injury cost 2022; retrieved from https://injuryfacts.nsc.org/work/costs/work-injury-costs/

Nijman, H. L., Muris, P., Merckelbach, H. L., Palmstierna, T., Wistedt, B., Vos, A. M., ... & Allertz, W. (1999). The staff observation aggression scale–revised (SOAS-R). *Aggressive Behavior: Official Journal of the International Society for Research on Aggression*, *25*(3), 197-209.

Occupational Safety and Health Administration (OSHA). (2015). Guidelines for preventing workplace violence for healthcare and social service workers. No. 3148-04R, retrieved from https://www.osha.gov/workplace-violence

Occupational Safety and Health Administration (OSHA). (2019), worker safety in hospitals retrieved from https://www.osha.gov/hospitals#:~:text=In%202019%2C%20U.S.%20hospitals%20recorded,private%20industry%20as%20a%20whole.

Ponto J. (2015). Understanding and Evaluating Questionnaire Research. *Journal of the advanced practitioner in oncology*, *6*(2), 168–171.

Pompeii, L., Benavides, E., Pop, O., Rojas, Y., Emery, R., Delclos, G., Markham, C., Oluyomi, A., Vellani, K., & Levine, N. (2020). Workplace Violence in Outpatient Physician Clinics: A Systematic Review. *International journal of environmental research and public health*, *17*(18), 6587. https://doi.org/10.3390/ijerph17186587

Ramírez, E., Martín, A., Villán, Y., Lorente, M., Ojeda, J., Moro, M., Vara, C., Avenza, M., Domingo, M. J., Alonso, P., Asensio, M. J., Blázquez, J. A., Hernández, R., Frías, J., Frank, A., & SINOIRES Working Group (2018). Effectiveness and limitations of an incident-reporting system analyzed by local clinical safety leaders in a tertiary hospital: Prospective evaluation through real-time observations of patient safety incidents. *Medicine*, *97*(38), e12509. https://doi.org/10.1097/MD.0000000000012509

Reed, J. E., Davey, N., & Woodcock, T. (2016). The foundations of quality improvement science. *Future hospital journal*, *3*(3), 199–202. https://doi.org/10.7861/futurehosp.3-3-199

Schwerin, D. L., Thurman, J., & Goldstein, S. (2020). Active Shooter Response. In *StatPearls*. StatPearls Publishing.

Song, J. W., & Chung, K. C. (2010). Observational studies: cohort and case-control studies. *Plastic and reconstructive surgery, 126*(6), 2234–2242. https://doi.org/10.1097/PRS.0b013e3181f44abc

Sullivan G. M. (2011). A primer on the validity of assessment instruments. *Journal of graduate medical education, 3*(2), 119–120. https://doi.org/10.4300/JGME-D-11-00075.1

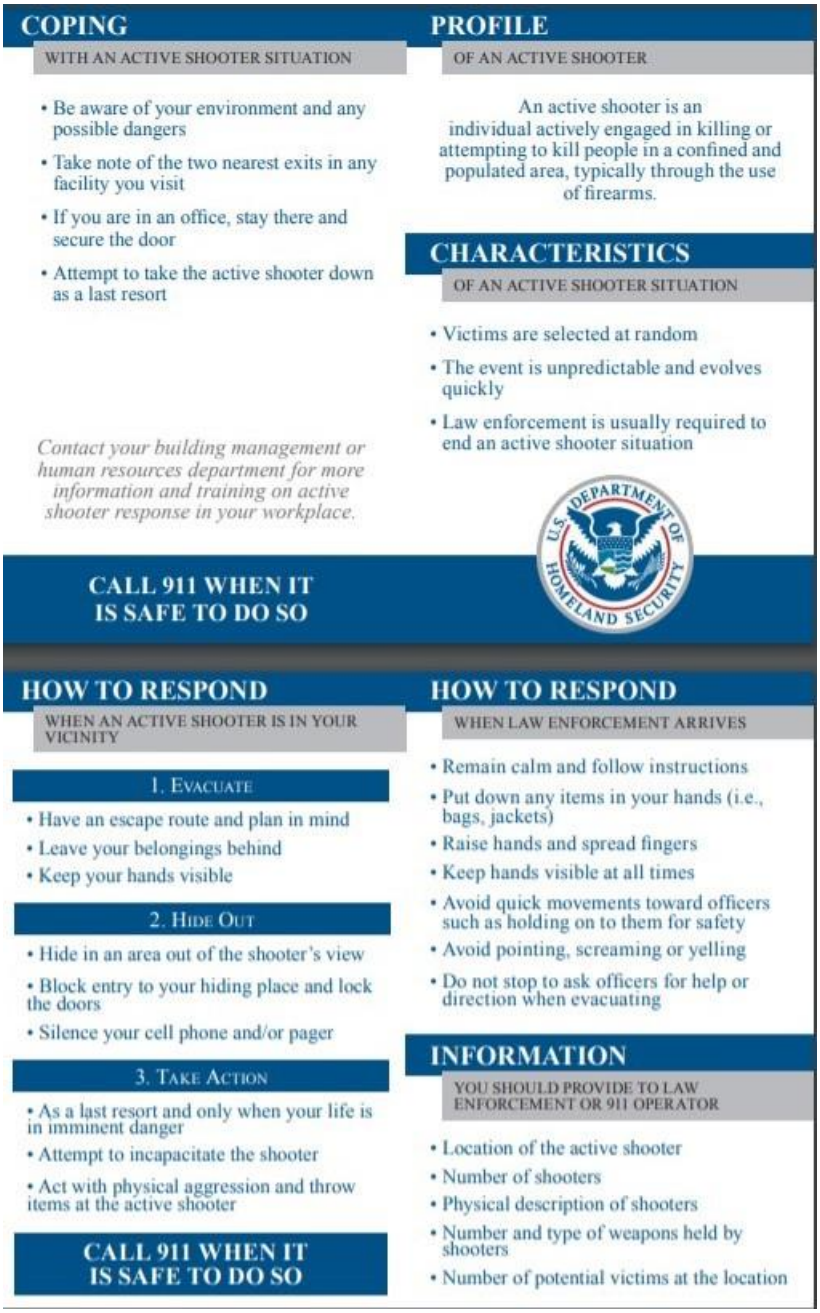
University of Rochester (2022) New York State Emergency health preparedness coalition, retrieved from https://www.urmc.rochester.edu/emergency-preparedness/preparedness-and-response-tools-resources/active-shooter.aspx

U.S. Department of Labor, Bureau of Labor Statistics, (USDL) (2014). Nonfatal occupational injuries and illnesses requiring days away from work, 2013. (No. USDL-14-2246). Retrieved from http://www.bls.gov/news.release/pdf/osh2.pdf

You tube (2012) Ready Houston. Surviving an active shooter event, retrieved from https://www.youtube.com/watch?v=5VcSwejU2D0

APPENDICES

APPENDIX A:



(DHS, 2021)

APPENDIX B:

Cost Benefit Analysis

Cost Benefit Analysis

Project Title: Theberge_DNP

			Cost/Benefit	$, hours, units Unit	E.g., $/unit Entry/Quantity	$ Final/Total	Year 1/partial year Description	Year 2	Year 3
Project/solution title			**Implementation costs** (one time)			1,150			
Harm Reduction in the Clinical Setting	COSTS	1	Training during assigned shifts	45	5	225	Conceptual wage total for observation		
Description		2	Prrinted handouts with QR code	25	60	25	Paper products for hand out to staff		
Allegiance Medical Group LLC.		3	Observation time	45	20	900	Conceptual wage total for observation		
Sponsor		4							
			Ongoing costs (monthly)			50,100			
Financial analyst		1	Update traing	45	10	450	Est. cost of wages for site visits		
		2	Monthly check in to clinic	45	10	450	Est cost of wages for site visits		
Analysis horizon (in months)		3	Potential loss of time post incident	50	144	7,200	Est of lost time at average rate at 36 hours per/wk x one month		
2		4	Per incident cost of Medical injury	42000	1	42,000	National Safety Council standards 2022		
First year months (maximum 12)			**>>>Total Costs** (monthly)			**50,675**	0	608,100	1,216,200
	BENEFITS		**Hard and soft savings** (monthly)			14,400			
Average labor cost (hourly / daily)		1	Potential savings of lost time w/o incident	50	144	7,200	Est. cost savings of non lost time wages to buisness original employee		
		2	Additoanl employee savings from loss time injury	50	144	7,200	Est. cost savings of non lost time wages to buisness new employee		
Assumptions/Comments		3							
1		4							
2			**Savings** (one time)			91,400			
3		1	Attourney cost savings	5000		5,000	Retainer fee		
4		2	Annual cost savings of injured employee per year	7200	12	86,400	Savings of non lost time annual employee salary		
5		3							
6		4							
7			**>>>Total benefits** (monthly)			**16,900**	0	202,800	405,600
Benefit-cost ratio	0.33		575	Monthly payback	Net cash flow	Net gains	0	-405,300	-810,600
Monthly payback period	36.0		2,500	0.0	-35,700	ROI		-66.7%	

(NSC, 2022)

APPENDIX C:

Staff Observation of Aggression Scale (SOAS)

The SOAS consist of five columns.

- Column 1 If an incident occurs in the clinical setting the provocation that led to the aggressive incident will be recorded in column one.
- Column 2 Column two will contain the type of aggression that was noted (i.e., verbal physical, weapons)
- Column 3 Column three will record observations outlining whom the aggression was directed towards.
- Column 4 Will record what occurred as a result, the consequences.
- Column 5 Measures taken to mitigate the risk of aggressive action. (i.e., force, de-escalation, re-direction

(Morken, 2018)

Approval pending 2022

APPENDIX D:

Perceptions of the Prevalence of Aggression Scale (POPAS)

A score ranking the number of actual confrontations with aggression seen in the clinical setting within the past 30 days.

- Employees anxiety towards aggression (1–5)
- Feeling of importance of using less coercive interventions with patients (1–5)
- Employees feeling of social support from colleagues (1–5)
- Perceived behavioral control (1–5) over the situation
- Employee's ability/capability to use least invasive interventions with patients (1–5)

(Jonker, et al., 2008)

Appendix E

QR Code Sessions (Scan)

Pre intervention questionnaire

Clinical Team Feedback :Session 1

We would love to hear your thoughts or feedback on how we can improve your experience as clinicians.
Please answer these short questions related to your feelings of workplace safety (environmental and experience based).

wfd2379@gmail.com (not shared) Switch account

* Required

Related to the clinical setting; In the last twelve months have you felt unsafe or at risk of physical harm in the clinical environment? *

- ◯ Yes
- ◯ No

Related to the clinical setting; In the last twelve months have you received training on clinic or provider safety measures?

- ◯ Yes

Pre intervention questionnaire questions:

Related to the clinical setting:

1. In the last twelve months have you felt unsafe or at risk of personal harm in the clinical environment?
2. In the last twelve months have you received training on clinic or provider safety measures?
3. In the past twelve months have you experienced physical or psychological harm because of violence in the workplace?
4. What safety risk mitigation measures have you employed in the last twelve months?

   -Prescreening questionnaires

   -Changes to provider/patient placement in the room

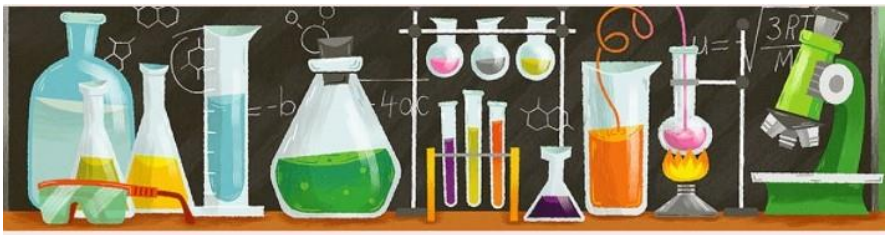
   -Addition of chaperones or team members in the room with you

   -Other

1. Do you feel that safety concerns impede your workflow in the clinic?
2. In the last twelve months have you had Active shooter training?
3. In the last twelve months have you had Workplace Violence training?
4. In the last twelve months have you seen a Nation-wide increase in the media related to Workplace Violence?
5. Currently, do you feel that you are in a very safe environment when working in the clinic?
6. Do you feel that you have a good deal of knowledge of how to react to Workplace Violence and or an Active Shooter?

Appendix F

Post intervention questionnaire (Scan)



Clinical Team Feedback :Post QI Survey

We would love to hear your thoughts or feedback on how we can improve your experience as clinicians.
Please answer these short questions related to your feelings of workplace safety (environmental and experience based).

wfd2379@gmail.com (not shared) Switch account

* Required

Related to the clinical setting; In the last twelve months have you felt unsafe or at risk of physical harm in the clinical environment? *

- ◯ Yes
- ◯ No

Related to the clinical setting; In the last twelve months have you received training on clinic or provider safety measures?

- ◯ Yes

Post intervention questionnaire questions:

Related to the clinical setting:

1. If you have felt unsafe or at risk in the last twelve months, do you now feel more prepared or better equipped to deal with a similar situation?
2. As a result of the training that was conducted, what measures will you employ in the clinic to ensure improved safety?

   -Prescreening questionnaires

   -Changes to provider/patient placement in the room

   -Addition of chaperones or team members in the room with you

   -Other

3. As a result of the training and safety improvements in the clinic, do you now feel more comfortable and safer in your workplace?
4. As a result of the Active Shooter training do you now feel more prepared should an adverse situation occur?
5. As a result of the Workplace Violence training do you now feel more prepared and able to handle a WPV situation?
6. Related to increasing nationwide WPV do you now have a better understanding of risk factors, safety concerns, and risk identification?
7. Compared to your perception of safety before the training do you now feel that you are better prepared and safer while in the clinic?
8. Do you now have a better understanding of the policies, safety measures and reporting process of AMG related to the clinic environment?

Appendix G

Clinical Site Questionnaire Assessment Tool (QR)

Clinical Site Survey Assessment Tool

Please use this site evaluation survey tool to identify possible improvement markers for this DNP Qi project hosted at AMG clinics 2022.

wfd2379@gmail.com (not shared) Switch account

* Required

Clinic Location *

Your answer

Does the clinical site that is being evaluated have these potential safety risks? Check all applicable * 1 point

- ◯ Poor lighting in hallways or exterior areas?
- ◯ Unrestricted public access?
- ◯ No Identification of violent patient history
- ◯ Lack means of emergency communication? (Phone/ Cell/ panic button)

Assessment Questions:

1. Does the clinical site that is being evaluated have any of the following potential safety risks?

   Unrestricted public access?

   Potential presence of firearms?

   Poor environmental design that may block vision or escape routes?

   Onsite security?

   Work in an area with a high crime rate?

   Lack of emergency communications? (Phone, cell, panic button)

   No identification of violent patient history?

   Poor lighting in hallways or exterior areas?

   Other?
2. When are you working do you have access to a chaperone if you feel as though you should need one?
3. Does your facility allow guests in the room with the patient?
4. In the exam room are you seated closest to the door?
5. Are objects located in the room that could be considered physical assault risks such as scalpels, needles, chairs, oxygen bottles, sharp objects?
6. Is there operable emergency lighting on site?
7. Is there a second means of egress/ escape?
8. Is the employee parking area well lit, accessible and visible upon exit of the building?

Appendix H

Risk Management Questionnaire

ASHRM AMERICAN SOCIETY FOR HEALTHCARE RISK MANAGEMENT
safe and trusted healthcare

Workplace Violence Toolkit

Proactive Prevention: Patient to Staff Violence		Notes and Action Steps
Pre-employment background screening	❑Yes ❑No	
Patient Rights and Responsibilities clearly outline expectations re: violence, weapons, illicit substances and exclusion of visitors who are aggressive/violent • All inpatients provided copy of patient rights and responsibilities (outpatient equivalent?) • Family and Visitor Guidelines published and posted • Process for security escort off campus	❑Yes ❑No	
Training: Physician, Advanced Practice Provider, and Staff: • Recognize precursor signals of violence • Medical record documentation expectations • De-escalation and Self-Defense training • Safe restraint use / ordering providers	❑Yes ❑No	
Security Environmental Risk Assessment of High Risk areas: • Secluded location (satellite clinics, isolated patient exam rooms, no direct line of sight or panic switches) • Off site location: Home Health services • Screen home for safety prior to visit (i.e. Western Health Risk Assessment Screening Tool)	❑Yes ❑No	
Patient Specific Proactive Prevention • Intake assessment includes screening for risk of violence/aggression; documentation in medical record • Patient past history of violence or aggression is clearly communicated to all team members (electronic alert, care plan) • Unique safety plan developed based upon known risks	❑Yes ❑No	

Reactive Response to Event: Patient to Staff Violence		Notes and Action Steps
Security response • De-escalation attempted • Behavioral Control • Termination of care relationship • Law Enforcement Notification • Sharing minimum necessary PHI • If taken into police custody, ensure ongoing medical needs are communicated to law enforcement medical clinic/MD • Process for discharge/transfer to law enforcement • Restraining order	❑Yes ❑No	

(ASHRM, 2020)