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Enhancing Education to Mitigate Workplace Violence to Increase Staff Safety

In a High Acuity Setting: A Quality Improvement Project

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Table of Contents

| | |
|---------------------------------------|-----------|
| Abstract..... | 4 |
| Introduction..... | 5 |
| Problem Description..... | 5 |
| Available Knowledge..... | 6 |
| Search Strategy..... | 6 |
| Evidence Synthesis..... | 6 |
| Project Implications..... | 9 |
| Rationale..... | 10 |
| Conceptual Framework..... | 10 |
| Specific Aims..... | 10 |
| Methods..... | 10 |
| Context..... | 10 |
| Purpose..... | 11 |
| Patients..... | 11 |
| Professionals..... | 12 |
| Processes..... | 12 |
| Patterns..... | 13 |
| Cost-Benefit Analysis..... | 14 |
| Interventions..... | 15 |
| Study of the Interventions..... | 16 |
| Measures..... | 17 |
| Analysis..... | 17 |
| Ethical Considerations..... | 17 |
| Results..... | 18 |
| Pre-Implementation..... | 18 |
| Quality Improvement Intervention..... | 18 |
| Post-Implementation..... | 18 |

| | |
|---|-----------|
| Missing Data..... | 29 |
| Discussion..... | 20 |
| Summary..... | 20 |
| Interpretation..... | 21 |
| Project Impact..... | 21 |
| Limitations..... | 21 |
| Conclusion..... | 22 |
| Implications for practice..... | 22 |
| Suggested next Steps..... | 22 |
| References..... | 24 |
| Appendix A..... | 27 |
| Median SAQ Pre/Post | |
| Appendix B..... | 27 |
| Pre-implementation SAQ survey response | |
| Appendix C..... | 28 |
| Post-implementation SAQ Domain survey response | |
| Appendix D..... | 28 |
| Pre-Survey Response Questions | |
| Appendix E..... | 29 |
| Post-Survey Response Questions | |
| Appendix F..... | 30 |
| Survey Qualitative Thematic Analysis, Free text Questionnaire | |
| Appendix G..... | 32 |
| Printed Educational WPV pamphlet | |
| Appendix H..... | 34 |
| Educational Bulletin Board | |

Abstract

Background: The current microsystem is a critical access 8 bed Emergency Department with 3 hallway beds. On average it can see anywhere from 30-50 patients in a 24 hour period. Due to the nature of the microsystem, staff are at high risk for experiencing workplace violence (WPV). Within this microsystem staff do not have a readily available communication device on their person in case of an adverse event leaving them susceptible to patient to staff WPV. Staff within this microsystem are Management of Aggressive Behavior (MOAB) 1 and 2 trained, however this does not provide education on risk factors for WPV or the lasting effects.

Methods: Continuous data was collected via Safety Attitudes Questionnaire (SAQ) likert scale (1-5), and median SAQ scores pre- and post- interventions were compared via SAQ pre/post survey. Nominal categorical data was collected via staff self-reporting on two-way radio device use. Free text open ended questions provided qualitative themes to microsystem specific topics.

Intervention: Passive WPV education was provided at optimal times to ensure all staff were covered. Staff were encouraged to use a two-way radio system and self-report meaningful use. Staff were encouraged to complete a SAQ before and after the said intervention.

Results: The data did not provide a statistical significance in device utilization and/or perceived feelings of safety and security. Due to limited post-intervention participation and overall negative survey response. SAQ score of .933 pre-intervention indicated an overall strong sense of current perceived safety and security within this microsystem. SAQ median domain score indicated a high staff perceived safety and security at 0.783; however SAQ domain scores did highlight the two areas of opportunity within the microsystem to enhance perception safety and security. Device utilization frequency during the intervention .009% as compared to 0% pre-intervention, which is not statistically significant.

Conclusions: Quality improvement (QI) interventions within this microsystem should focus on real time feedback and open forum communication. Communication devices should be updated and tailored for ease of use. Yearly SAQ should be performed by management to identify gaps in perceived safety and security.

Keywords: workplace violence (WPV), high acuity, high acuity setting, emergency department (ED), safety and security, critical access, rural hospital

Enhancing Education to Mitigate Workplace Violence to Increase Staff Safety In a High Acuity Setting: A Quality Improvement Project

In New Hampshire (NH) 73% of the healthcare workers that responded to the NH Healthcare Violence Prevention Workgroup survey reported they experienced workplace violence (WPV) in the last 6 months, which happened more than half the time during patient care. In December of 2020, a security officer at Frisbie Memorial Hospital was fatally attacked by a patient, pushing WPV to the forefront of NH's attention (Kozminski, 2020). Since then, NH Gov. Chris Sununu signed SB459 into law on July 22nd, 2022 that helps hospitals address, respond to, and report healthcare related workplace violence, in order to reduce and prevent assaults (Kozminski, 2020). Mandated with this bill, hospitals are now required to provide adequate training in de-escalation and interventions with aggressive patients (Kozminski, 2020). All around the United States, nurses specifically, are being assaulted and killed. According to the National Institute for Occupational Safety and Health (NIOSH) nurses are usually the victims due to the nature of direct patient care, and their risk goes up when working in higher acuity settings such as: Behavioral Health Units (BHU), Emergency Departments (ED), waiting rooms, and Geriatric Care Units.

Problem Description

The microsystem design structure causes a visual block to either end of the unit with two nurses' stations next to each other divided by a wall. The nurses work out of the first nurses station closest to the triage room and the entryway, and the health care provider, technicians and health unit coordinators are at the other nurses station by the ambulance bay. This causes physical separation and distance between nurses and the rest of the healthcare team, which can impede communication.

The current process for handling an aggressive patient is for nurses to implement their management of aggressive behavior (MOAB) training and request the health unit coordinator to page security for assistance. However, there is no direct link for communication on the unit other than a portable two-way radio, which based on observations and employee interviews are not being utilized due its cumbersome nature. This leaves a gap in communication, security, employee and patient safety.

Available Knowledge

Search Strategy

For a review of the literature to support best practice, Academic Search Ultimate, CINAHL Complete, Cochrane Database of Systematic Reviews, MEDLINE were used. The following Boolean phrases were used: Workplace Violence AND Emergency Department AND Systematic Review. Academic Search Ultimate automatically removed exact duplicates and removed non-peer reviewed sources leaving a total of 14 results. Through the exclusion criteria only 9 articles remained. Exclusion criteria of articles include studies not available in English, not available to UNH students, and articles published before 2020.

Evidence Synthesis

Through a review of the literature, common themes were identified surrounding WPV amongst healthcare professionals. There is much discussion around defined risk factors, poor reporting culture, common interventions, and current gaps in evidence. The literature review framed the educational component of this QI.

Only the highest level of evidence was used in this literature review, however the authors faced many limitations. Most of the data collected were from cross-sectional analysis surveys, which in nature is limited to a small sample size, more segregated samples than mixed samples, lack of standard definitions, lack standard survey protocols about WPV (often missing key

demographics, focusing on only one type of healthcare professional) associated high risk for recall bias from participants, and most of the literature studied mental health units (Aljohani, Burkholder, ran, Chen.. et al, 2021) (Fricke, Siddique, Douma.. Et al, 2020), no consistent outcome measures were used, there was a lack of detailed reporting or correct data analysis, suggesting that the overall quality is low for investigating WPV interventions (Spelten,Thomas, O'Meara.. Et al 020).

Overall the literature suggested the need for more robust research and data, and for the research to be conducted at a higher level of study design. Kumari, Ranjan, Sarkar state this as well in their review and discuss a lack of case-control and cohort studies upon systematic review. Wirth, Peters, Nienhaus,& Schablo agree and state low quality scores were included and most studies did not include multiple measurements after the intervention. Wirth, Peters, Nienhaus,& Schablon also recommend future studies should include control groups, and examine long term effects of these interventions by conducting multiple measurements over a longer period of time.

Aljohani, Burkholder's.. et al systematic review suggests increasing research focused on improving on measurement and prevalence of WPV. Al-Qadi suggests that a mixed method study would be useful to measure the staff's emotional responses, behaviors and perceptions. Future research should also focus on ED nurses' own perspective of WPV and their responses, and which specific ED staff member meets the highest risk. Al-Qadi reports a lack of clarity on which behaviors and mechanisms that frontline staff adopt when faced with WPV. Fricke, Siddique, Douma.. Et al suggests that further research should focus on comparative effectiveness of interventions and the effects of strong leadership and workplace diversity on the experience, frequency, and severity of workplace violence

The literature reports significant findings, that of which report nurses often resist the role of victim and do not reach out for help, this is problematic as it fosters poor coping mechanisms, and increases burnout (Aljohani, Burkholder, ran, Chen.. et al, 2021). In AlShehri's review, it is stated that most nurses report insecurity at work, due to poor reporting processes and lack of penalties for perpetrators of WPV.

WPV Risk factors found from this literature review include: Nurses who providing higher level of care, patients who wait over 3 hours, overcrowding, staff shortages, patients and visitors who are unsatisfied with care, nurses not "thanking" patients for collaborating in their care (AlShehri, 2020), patient history of mental illness, male patients with severe and persistent mental illness, working in a mental health unit, staff who are prone to express rudeness/sarcasm, staff who work over 40 hours per week, staff who has less than 5 years experience, staff that work the evening/night shift, and staff that have the most patient facing contact (Kumari, Ranjan,, Sarkar.. Et al, 2022). This also includes caregivers visiting patient's homes at night, nurses or doctors that face medical malpractice cases, and being of the female gender (Mento, Silvestri, Bruno.. Et al 2020)

From identifying risk factors Fricke, Siddique, Douma.. Et al systematically reviewed guidelines and provided implications for policy, practice and research. They recommend building a comprehensive program that is an evidence based risk assessment, focused on prevention, management, education and training. Leadership's role is to continue to perform regular reassessments and adjust the environment as needed. Wirth, Peters, Nienhaus,& Schablon agree with these findings and go as far to suggest implementing online, hybrid and classroom programs. These programs have shown to improve detection and knowledge of warning signs, verbal de-escalation, defense/escape techniques. Wirth, Peters, Nienhaus,& Schablon state that

by increasing knowledge through multimodal interventions, there has been an overall decrease in assaults. The authors promote a computerized triage algorithm, signage, message broadcasts in waiting rooms, and mediator/video surveillance. In contrast, Spelten, Thomas and O'Meara..et al review states that there is little evidence to support multimodal interventions, and that isolated interventions had the same strength of evidence across reviews.

Mento, Silvestri, Bruno..et al systematic review focuses on the long term effects of WPV. Stating that job dissatisfaction, drug abuse, excessive drinking, diminished productivity, reduced quality of life, increased rate of burnout, depression, anxiety, and suicidal ideation. All of these factors lead to considerable impacts on the healthcare organization and increased risk for work injuries, absenteeism, and turnover.

Wirth, Peters, Nienhaus,& Schablon systematic review ties all of these concepts together by listing WPV implications of ED staff. Reporting that for emergency staff due to their inherent high risk towards WPV, prevention should be a number one priority. Concluding that de-escalation, self-defense, environmental improvements, risk assessments, frequent walk-throughs, will mitigate and reduce WPV, but also protect ED staff from the long term effects of experiencing WPV. Again, bringing other stakeholders from different aspects of the hospital to intervene and create a culture against WPV.

Project Implications

The review of the literature supported education on risk factors for patient on staff WPV, which expanded to additional education on improving reporting culture. Within this microsystem staff have been MOAB trained, however, the microsystem has not been assessed for WPV risk and staff perception of safety and security. Evidence supports routine assessment and intervention based on safety attitudes and reporting culture. The evidence also supports communication tools to aid in staff safety, and improved communication. This literature review

guided the interventions to be tailored for optimal staff engagement, as the literature shows small response rates via electronic surveys, and disengagement with longer surveys. The literature review provided guidance on validated surveys which provide qualitative and quantitative data. This QI was intended to empower staff to use communication tools, report WPV and feel safer and more secure within this microsystem to maximize staff safety with the use of passive education.

Rationale

Conceptual framework

The Kirkpatrick Model developed by Dr. Donald L. Kirkpatrick was used to guide this QI as it evaluates training programs through 4 levels. Level 1: Reaction, Level 2: Learning, level 3: Behavior, and Level 4: Results (Kirkpatrick, 2022). This model was used in this QI to implement and evaluate WPV learning through passive education. Level 1 was completed during the initial 5P assessment and planning stages of this QI, this was done with open forum discussions about WPV and communication tools on unit. Level 2 was provided in phase 1 of this QI with passive WPV educational pamphlets and pre SAQ. Level 3 was measured in phase 2 of this QI by device utilization and post SAQ. Level 4 analyzed the data from pre/post SAQ and device utilization.

Specific Aims

The first specific aim was to increase perceived safety and security related to WPV by 20%. The second specific aim was to increase perception of cultural factors that impact the reporting of WPV incidents. The third specific aim was to increase device use by 50% and identify the barriers to use over the one week intervention period (June 12 - June 18).

Methods

Context

This microsystem is a 8 bed unit with 3 hallway beds in a critical access hospital in rural NH. This system serves a total of 13,754 people between both towns within their rural community (State of NH Census). It is important to note that a larger macrosystem recently acquired this critical access hospital and its neighboring general hospital. The majority of this macrosystem's previous staff remain employed within their previous positions. Acknowledging this is important, because when framing the assessment around microsystem change, one must consider the amount of overall change since the acquisition.

Purpose

The macrosystem is a charitable organization which exists to meet the health needs of individuals within the communities it serves. This macrosystem exists solely to serve patients and their families. While enthusiastically and collectively engaging with all those seeing and providing services to achieve an optimal healing environment. The macrosystem is committed to emergency medicine excellence. This microsystem provides Emergency Services to the surrounding community and stresses the responsibility to support and uphold the rights of the patient while providing appropriate and prompt care. Emergency service patients, whether by admission, transfer, referral or by discharge, should be undertaken only when it is clear that it is safe and prudent, and all responsibilities have been thoroughly completed. The macrosystem and the microsystem align by their shared value of safe patient-centered care. They both agree on providing services that are best suited for the patient and their needs.

Patients

This microsystem provides emergency care services to patients of any age. The population served is composed of all different age groups including neonates, infants, children, adolescents, adults and geriatric patients. These patients within the community seek care within this microsystem, often due to poor management of chronic health conditions due to lack of

access to regular primary care providers. Most admitted patients are sent to other higher acuity systems for higher level of care, or diverted altogether due to pre-hospital acuity.

This microsystem on average will see 30-50 patients in a 24 hour period. With the top five complaints/diagnosis being chest pain, shortness of breath, abdominal pain, wound/infection, and musculoskeletal injury. The day shift nurse-to-patient ratio is 1:6 if fully staffed with all beds occupied, and at night this can change to 1:10.

Professionals

The microsystem recognizes the employees as their major resource with a total of 37 full time registered nurses, five full time paramedics, twelve licensed nursing assistants, eight full time health unit coordinators with an additional thirty four parttime and per diem clinical staff. These staff are split between both microsystems that were recently acquired. Professional competency and quality care is obtained through the recruitment, retention and continuing education of highly skilled staff. Staffing plans for the emergency department are constantly evaluated to determine if personnel can provide quality, competent series within the scope of their professional licensure, and training for the appropriate level and scope of care has been provided. Each shift a staffing assessment shall occur to meet patient and department needs.

Processes

Any patient can walk into the microsystem or be sent by emergency medical services from outside the hospital. The staff work out of the first nurses station closest to the triage room and the entryway, and the health care provider, technicians and health unit coordinators are at a separate nurses station by the ambulance bay. This causes physical separation and distance between nurses and the rest of the healthcare team, which can impede communication and increase risk.

When patients arrive at the unit they are triaged based on an emergency severity index, which does not include an initial risk assessment of potential WPV. Patients are subsequently placed in an exam room while appropriate care takes place, or if there are no rooms available, patients are instructed to wait in the lobby. If a patient or visitor were to become aggressive, staff are instructed to implement their MOAB 1 & 2 training and request the health unit coordinator to page security for assistance. This process is only ideal for when mental health patients are coming by ambulance with the police department or a patient walking in directly from the street asking for a mental health evaluation.

The problem at hand is lack of direct visualization of the entire unit, lack of direct communication to security in the event of an unfolding, unexpected adverse event, and also possible lack of up to date training for clinical staff. Currently, there is a mix of senior emergency department trained staff, and new graduate nurses. Based on the literature, WPV risk increases with staff who have less than 4 years of experience, which is at least half the direct care staff.

Upon visualization of the unit, there is one two way radio system at each nurse station, which is insufficient based on current staffing. Lastly, when addressing the night staff, there is less coverage on the unit, which is at times reduced to a single nurse, along with one security officer for the entire hospital.

The current gap in the process of the availability of direct communication with security within the emergency department, this puts employees and patients at risk for physical and emotional harm. These risks are due to delays in security response or incorrect handling of oneself in a potentially harmful situation.

Patterns

When assessing the microsystem patterns as a whole, Key Performance Index (KPI) information is currently not available from Medicare. However, the microsystem affiliated ED has KPI information provided, which should reflect a similar culture of care due to its staff sharing. KPI is an important measure in regards to WPV as oftentimes patients who perceive a lack of care, delays in care or medical malpractice increases WPV risk significantly.

Per Medicare the microsystem census ranges anywhere from 20,000 - 39,000 patients each year. The microsystems timely and effective care rated higher than the national average for sepsis care at 59% as compared to 57%. The percentage of patients leaving the microsystem before being seen was 3% and is equal to the national average, with patient's waiting an average of 186 minutes before leaving the visit. The average number of minutes before outpatients with chest pain or possible heart attack who needed specialized care were transferred to another hospital was lower than the national average of 63 minutes to the microsystems 61 minutes. Percentage of patients who came to the emergency department with stroke symptoms who received brain scan results within 45 minutes of arrival was lower than the national average of 70% averaging 52%. Complications and death rates compared to the national average are mostly the same or under, primarily with chronic obstructive pulmonary disease, stroke, and pneumonia at or better than the benchmark. Leaving death for heart failure patients higher than the national average.

Cost-Benefit Analysis

Per the American Hospital Association the average medical cost from WPV is \$3,139 per injury, with an incidence rate of 4.9 WPV acts per 10,000 employees. This equates to 58 WPV related injuries per 10,000 healthcare workers. In 2016, it was estimated that a total of 49.9 million dollars were due to violence at healthcare workers (Van Den Bos et al., 2017). This does

not include disability and absenteeism from the resulting injuries and events. When planning this cost-benefit analysis the microsystems risk management team had chosen not to disclose any information related to WPV, but has provided their management strategies. Due to this a limited cost benefit analysis can be made.

The cost for communication devices, data collection, and WPV education is lower than the potential cost of injury, disability and absenteeism resulting from WPV. In the cost benefit analysis estimated initial cost yearly cost of the radio systems were included as they are the essence of the intervention and are a main resource allocation for employees. However, it is noted there is a difference from the current cost which is significantly lower than the initial cost.

Initial cost of radios and device activation is estimated at \$7,199.95, and subsequent yearly radio cost is estimated at \$3,700.00 for the microsystem. What cannot be included in this cost benefit analysis is maintenance of broken or replaced radios, as this information is not made available and is facility dependent per contractual obligations between hospital and vendor. Staff meeting cost estimates were calculated based on the number of full time employees within the microsystem and by the U.S Bureau of average hospital registered nurse salaries across the United States. Resource allocation for materials were calculated for educational and data collection methods.

Interventions

Education was provided during several shift changes on the risk factors for WPV, reporting culture and device use through educational pamphlets. The context of this QI project was highlighted as the subject of this intervention, when employees were asked to use the two-way radio systems over a one week period (3 shifts). Employees were verbally encouraged to wear the device and self-report usage of the device with an educational bulletin board in the

break room. The employees were asked to tally not only meaningful usage, if the radio was used for Management of Aggressive Behavior (MOAB) or patient care. During the week before device tracking, employees will be given an anonymous pre-survey to measure perceived feelings of safety within the microsystem. Once staff had participated in both the educational inservice and one week/3 shift device utilization of a two-way radio system, they were asked to fill out an anonymous post-survey.

Post surveys were provided at the bulletin board, time clocks and communication board to measure if there was increased feelings of safety on the unit post two-way radio utilization and WPV inservice education. Among the post surveys, free text questions and prompts were added to identify barriers towards two-way radio utilization, and overall staff feedback.

Study of the Interventions

The modified survey posed to staff is the Safety Attitudes Questionnaire. This is a survey that has six domains (Job Satisfaction, Safety Climate, Teamwork Climate, Working Conditions, Preparation of Management and Stress Recognition) originally, with a total of 60 items. Each of the 60 items is answered using a five-point Likert scale (1: Disagree Strongly, 2: Disagree Slightly, 3: Neutral, 4: Agree Slightly, 5: Agree Strongly) (Alqahtani, & Evley 2020).

This survey was modified in length to encourage staff engagement and with graduate nursing faculty oversight to ensure proper inclusion/exclusion criteria for each item. Included in this survey were two free text questions on WPV reporting culture. Usage of the two-way radio system was tracked and type of usage was tracked. This was to compare to post-intervention SAQ surveys and free text questions on barriers to use. It was also encouraged via bulletin board to post real-time feedback of the device.

Pre/Post SAQ survey overall average and individual domain scores were to be calculated and compared to determine if education and promotion of the device were adequate interventions to increase staff perception of safety and security.

Measures

Continuous descriptive quantitative data was collected via Pre/Post SAQ. Free text questions added to the end of these surveys provided qualitative information to the current culture on reporting WPV and barriers to use with the two-way radio system. Nominal, categorical data was provided via educational bulletin board over one week's time.

Analysis

SAQ overall average and individual domain scores were compared. Trends in the open ended questions were measured by frequency and type of word. Open ended questions were measured on the frequency of the word and if it has a positive or negative connotation. Pre/post response rates with average length of time were compared. Meaningful device utilization was noted and compared to the literature along with barriers to use.

Ethical Considerations

There is inherent risk of fear of retaliation or peer judgment when providing free text feedback or openly participating in this QI. Ensuring anonymity should lessen the risk with the free text responses and SAQ. Potential HIPPA violations with use of the two-way radio system could hinder participation. This quality improvement project is time limited, and will not reach every employee willing to participate. This proposal was reviewed by the UNH Department of Nursing Quality Review Committee, and a QI determination letter was granted, confirming that this project was intended for quality improvement and not research. No conflicts of interest were identified for this QI project.

Results

Continuous data was collected via a likert scale (1-5), and median SAQ scores pre- and post- interventions were compared via SAQ pre/post survey. The data did not provide a statistical significance in device utilization and/or perceived feelings of safety and security. Due to limited post-intervention participation and overall negative survey response. SAQ score of .933 pre-intervention indicated an overall strong sense of perceived safety and security within this microsystem. SAQ median Domain score indicated a high staff perceived safety and security at 0.783, however SAQ domain scores did highlight the two areas of opportunity within the microsystem to enhance perception safety and security. Device utilization frequency during the intervention .009% as compared to 0% pre-intervention, which is not statistically significant.

Pre-Implementation

Phase one included dispersion of SAQ pre-intervention surveys and printed educational pamphlets on WPV to clinical staff over a one week period in order to capture as many staff as possible. Dispersion times were coordinated at change of shift to ensure both night and day staff were covered. Sections of the WPV pamphlet can be found in appendix B.

Quality Improvement Intervention

Phase 2 provided an educational bulletin board displayed in the staff break room encouraging meaningful use of a two-way radio system for communication. This poster listed all dates included in the implementation period, specific aims, potential reasons for use, frequency of use and barriers to use. Appendix C provides a sample of the bulletin.

Post-Implementation

Staff were encouraged to complete the post-survey during this week period after they completed their 3 shifts within that time frame. Once staff completed their 3 shift window within the implementation period, it was encouraged to complete a post-survey to evaluate if the communication device and educational pamphlet increased perceived feelings of safety and security. This resulted in missing data as only 1 staff member completed the post-survey and participated in device utilization self-reporting. This staff member tallied device usage one time on one out of the three shifts scheduled during the intervention period. This usage was both for patient care and MOAB.

Missing Data

Due to the lack of device utilization during the intervention period and a post-survey response rate of 0.02 there is a large amount of missing and incomplete data. Therefore, SAQ surveys, WPV education, and device utilization cannot be measured in regards to impacting safety and security within the microsystem. The data provided from the pre-survey SAQ does give insight to the current state of the microsystem, which was an unintended beneficial consequence. The microsystem is a rural critical access hospital with limited funds, this contributes to missing data as most often the microsystem is short staffed, staff have limited resources and are often inundated with high acuity patients. These factors add strain and discourage staff participation in QI. For contextual purposes it is important to note, that this microsystem encountered a higher acuity of patients during the implementation period. As it was "Bike Week," an annual motorcycle rally that draws thousands of attendees, there were several associated traumas and an increased census during this project's intervention period. This left a lot of staff unable to fully engage in this QI.

Discussion

Summary

Specific Aim #1 was not met as there was not enough participation in the post survey to compare how raising awareness of WPV risk factors or encouragement of device usage affected perceived safety and security. However, upon presurvey the median SAQ score of .933 indicates a current strong sense of perceived safety and security. Median domain scores of the SAQ revealed areas of strengths and weakness of perceived safety within the microsystem. Preparation of Management (0.70) and Stress Recognition (0.66) being the lowest two domains. Further improvement of safety attitudes within the microsystem should focus on these two domains.

Specific Aim #2 of increasing the perception of microsystem cultural factors that implement reporting WPV was met, as passive education was offered through an educational pamphlet and staff provided free text responses about WPV and reporting culture. Out of the 8 entries 85% indicated reporting WPV, in alignment with the literature many of these reports left staff feeling discouraged with replies such as: “ I hoped that change would come from reporting these incidents to the proper people. It seems that was in vain.” “I know my immediate coworkers have my back, but I don’t trust that the organization does.” and “ I did in one instance but not in another because other staff members justified it as “they cant help it.””. To further understand the extent of this passive education on reporting culture, an audit of the total number of WPV reports before and after would have been beneficial.

Specific Aim #3 of increasing device utilization was not met, and had a negligible increase of device use from 0% to .009%. More information of barriers to device use came from direct conversations with staff on shift, and one post survey response aligned with previous

feedback. Previous feedback suggested the devices were loud, violated HIPPA regulations, and were cumbersome to wear. In the free text response asking if they felt safer with the device on their person: “No, no one answers them”.

Interpretation

Staff were receptive to passive education and the initial SAQ; however, did not engage with device utilization or post SAQ. This is largely due to the nature of the device, because while staff acknowledge the importance of a communication tool, they are biased against device use due to reported low usability of the device model. Staff will not put emphasis on the device but rather the usability of the device. Also, due the constant high acuity of the microsystem future interventions should be focused on real-time feedback and open forum discussions. This microsystem is a complex dynamic unit with staff sharing between two separate ED locations, interventions should be based in real time. Pre SAQ scores provide a high level of insight, and can guide future interventions.

Project Impact

This QI project provided an opportunity for staff empowerment, encouraging team members to apply evidence-based knowledge into their practice in order to increase their personal safety. Despite the negative trend in quantitative data, initial staff engagement was positive and provided valuable insight for management on the safety attitudes for the microsystem. It provided areas for growth and opportunity for management to address.

Limitations

Many limitations existed in the study including a small sample size of 35 staff with .2857 response rate pre intervention, 0.02 response rate post intervention, and response bias. Not all

staff were able to participate in this QI project and both ED microsystems were not included simultaneously. There was limited stakeholder buyin, as there is not a CNL implemented in this microsystem, and a recent change in management mid-QI intervention. Attempts to reduce limitations included SAQ modification to reduce survey length in order to promote staff engagement. Multiple attempts to engage staff were made via rapport building over 300 hours of direct care clinical work, anonymity was provided for SAQ, and ensuring proper timing of education during change of shift. Passive forms education on the communication boards and time clocks to engage staff that were missed.

Conclusion

Implications for practice

Moving forward, regular microsystem SAQ and/or risk assessments should be conducted. This will have the highest implications on practice as it identifies strengths, weaknesses and gaps for safety and security. Investigating reporting culture has large implications on the macrosystem, in doing so, staff can feel empowered to report WPV and ultimately enhance safety and security. Risk management through reporting, can identify patterns, and factors that contribute to increased WPV risk that is specific to this microsystem. Providing consistent WPV education allows for awareness on how WPV affects life outside of this microsystem. Macrosystems should focus on overall safety and wellbeing of staff, as poor mental health can increase WPV. Macrosystems should have regular debriefing sessions or employee assistance programs that stress the importance of the WPV effects of staff within high acuity microsystems.

Suggested next steps

In relation to the Kirkpatrick Model- as it has guided this QI, the next steps in this QI pertain to understanding and analyzing level 3 and 4. Level 3 measures and analyzes the degree

to which participants apply what they learned during training when they are back on the job. This would have been measured by device utilization and post survey responses from using the device. Since these data points are missing, this could not be analyzed. Level 4 measures and analyzes the degree to which targeted outcomes occur as a result of the training as measured by device utilization & future increased WPV reporting culture and continued reporting. And as mentioned previously could not be analyzed. This would benefit the microsystem and macrosystem as it pertains to staff security and safety. Comprehensively understanding why current safety measures are not being adhered to and the current safety attitudes of the unit this will mitigate WPV risk.

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Appendix A

Table A1 *Median SAQ pre/post*

| | Presurvey | Postsurvey |
|-----------------------------|---------------|-------------------|
| Response Rate (n=35) | .2857 | 0.02 |
| Median time spent on survey | 235.7 seconds | 74 seconds |
| Overall Score | 0.933 | 0.57 |
| Median Overall Domain Score | 0.783 | Insufficient data |

Appendix B

Table A2 *Pre-implementation SAQ survey response*

| Domain | Question(s) | Median Domain Score |
|---------------------------|--|---------------------|
| Job Satisfaction | 1. Morale in this Emergency Department is high | 0.728 |
| Safety Climate | 1. I would feel safe being treated here as a patient 2. I am encouraged by my colleagues to report any patient safety concerns I may have | 0.890 |
| Teamwork Climate | 1. The physicians and emergency department staff here work together as a well-coordinated team | 0.956 |
| Working Conditions | 1. Problem staff or patients are dealt with constructively in this Emergency Department | 0.756 |
| Preparation of Management | 1. I get adequate, timely info about events that might affect my work | 0.706 |

| | | |
|--------------------|--|-------|
| Stress Recognition | <ol style="list-style-type: none"> 1. I am more likely to make errors in tense or hostile situations 2. Fatigue impairs my performance during emergency situations | 0.662 |
|--------------------|--|-------|

Appendix C

Table A3 *Post-implementation SAQ Domain survey response*

| Domain | Question(s) | Median Domain Score |
|---------------------------|--|---------------------|
| Job Satisfaction | <ol style="list-style-type: none"> 1. Morale in this Emergency Department is high | 0.02 |
| Safety Climate | <ol style="list-style-type: none"> 1. I would feel safe being treated here as a patient 2. I am encouraged by my colleagues to report any patient safety concerns I may have | 0.08 |
| Teamwork Climate | <ol style="list-style-type: none"> 1. The physicians and emergency department staff here work together as a well-coordinated team | 0.1 |
| Working Conditions | <ol style="list-style-type: none"> 1. Problem staff or patients are dealt with constructively in this Emergency Department | 0.05 |
| Preparation of Management | <ol style="list-style-type: none"> 1. I get adequate, timely info about events that might affect my work | 0.02 |
| Stress Recognition | <ol style="list-style-type: none"> 1. I am more likely to make errors in tense or hostile situations 2. Fatigue impairs my performance during emergency situations | 0.1 |

Appendix D

Table A4 *Pre-Survey Response Questions*

| Domain | Mean | Median | Mode | Range | Std. Deviation | Sample Size |
|------------------|------|--------|------|-------|----------------|-------------|
| Job Satisfaction | 3.5 | 4 | 4 | 1-5 | 1.66 | n=10 |

| | | | | | | |
|--------------------------------|-----|-----|---|-----|------|------|
| Question #1 | | | | | | |
| Safety Climate Question #1 | 4 | 4.5 | 5 | 1-5 | 1.41 | n=10 |
| Safety Climate Question #2 | 4 | 5 | 5 | 1-5 | 1.85 | n=10 |
| Teamwork Climate | 4.3 | 5 | 5 | 1-5 | 1.06 | n=10 |
| Working Conditions | 3.6 | 4 | 4 | 1-5 | 1.35 | n=10 |
| Preparation of Management | 3.2 | 3.5 | 4 | 1-5 | 1.37 | n=10 |
| Stress Recognition Question #1 | 3 | 3.5 | 4 | 1-5 | 1.5 | n=10 |
| Stress Recognition Question #2 | 3.5 | 4 | 4 | 1-5 | 1.06 | n=10 |

Appendix E

Table A5 *Post-Survey Response Questions*

| Domain | Mean | Median | Mode | Range | Std. Deviation | Sample Size |
|------------------------------|------|--------|------|-------|----------------|-------------|
| Job Satisfaction Question #1 | 1 | 1 | 1 | 1-5 | 0 | n=1 |
| Safety Climate Question #1 | 2 | 2 | 2 | 1-5 | 0 | n=1 |
| Safety Climate Question #2 | 5 | 5 | 5 | 1-5 | 0 | n=1 |
| Teamwork Climate | 4 | 4 | 4 | 1-5 | 0 | n=1 |
| Working Conditions | 2 | 2 | 2 | 1-5 | 0 | n=1 |
| Preparation of | 1 | 1 | 1 | 1-5 | 0 | n=1 |

| | | | | | | |
|--------------------------------|---|---|---|-----|---|-----|
| Management | | | | | | |
| Stress Recognition Question #1 | 4 | 4 | 4 | 1-5 | 0 | n=1 |
| Stress Recognition Question #2 | 4 | 4 | 4 | 1-5 | 0 | n=1 |

Appendix F

Table A6 Survey Qualitative Thematic Analysis, Free text Questionnaire

| Presurvey Free text Questions: | Responses: |
|--|---|
| Have you ever experienced workplace violence (WPV)? If so, to what extent? | <ol style="list-style-type: none"> 1. "Yes, security is really good about responding to violent patients , we will call, they will come running to protest the staff any way possible" 2. "Yes, I have been attacked physically by patients" 3. "Yes, by a dementia patient and was told that it should be expected because of his dementia " 4. "Yes, have been assaulted more than once " 5. "Yes. Physical abuse such as hitting, scratches and being spit on. Frequent verbal threats and abuse, name calling. Threats against my life to the point a police report had to be made incase anything happened. All of these are by patients not other coworkers" 6. Blank 7. "I have been spat on, hit, shoved" 8. "No" 9. Blank |
| If you have experienced WPV, have you reported the event? Why or why not? | <ol style="list-style-type: none"> 1. "I did in one instance but not in another because other staff members justified it as "they cant help it" 2. Blank 3. "No , nothing to report, security would take care of it " 4. "Yes, I hoped that change would come from reporting these incidents to the proper people. It seems that was in vain." 5. "I got hurt so yes" 6. "Yes.Necessary for change " 7. "Yes. I know my immediate coworkers have my back, but I don't trust that the organization does. |

| | |
|--|--|
| | <p>They have a “zero tolerance policy” and post signs all “</p> <ol style="list-style-type: none"> 8. Blank 9. Blank 10. “Yes with a positive outcome.” |
| Postsurvey Free text Questions | Responses: |
| Did you feel safer with the radio being on your person? Why or why not | <ol style="list-style-type: none"> 1. “No, no one answers them” |
| Would you recommend using a two-way radio system to a new employee on the unit? Why or why not | <ol style="list-style-type: none"> 1. “Yes, because we’re supposed to, but they’re seldom used” |

Appendix G Printed Educational WPV pamphlet

Patients who Pose Risk:

- Military background
- Mental Health disorders
- Substance Use Disorders
- Dissatisfaction with care
- Cultural considerations
- Excessive wait times
- Male gendered patients
- Family members are just as likely to display aggression
- Previous history of aggression



Risk Factors For Staff:



- Female gender staff
- RN, LNA, MD/DO, PT/OT profession
- Under 4 years experience
- Direct patient contact over 60% of the time
- Lack of training
- Staff under 40 years old
- Evening/Night shift
- Working over 40 hours per week
- Locations:
 - Waiting rooms
 - ED
 - ICU
 - BHU
 - Home Health
 - Long term care

Interventions:

- Implement WPV Prevention Program
- Frequent simulations of adverse events
- Educational trainings
- Stakeholder buy-in



- Frequent environmental assessments from leadership
- Burnout prevention
- Improve reporting culture
- Reduce wait times to less than 3 hours
- Improve personal style of communication
- Adequate staffing

Long Term Effects of exposure to WPV

- Job dissatisfaction
- Depression
- Anxiety
- Diminished productivity
- Increased alcohol intake
- Reduced quality of life
- Suicidal ideation
- Feelings of helplessness
- Isolation
- **Invisible wounds:**
 - Compulsive caregiving
 - Painful memories
 - Unhealthy attachment styles



Quality Improvement:

Why the walkie-talkies??

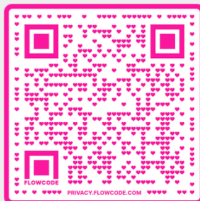
To Investigate the use of a communication tool to improve **staff safety**.

WPV is **NOT** a part of the job. You should feel safe & secure and should feel empowered in your decision **to report** WPV.

What is being measured?

- Device utilization
- Feelings of perceived safety & security

References:



Goals:



1. Your participation for only 3 shifts (over 1 week)
2. Survey participation
3. To improve WPV awareness
4. To improve staff safety
5. To ensure staff is well equipped for an adverse event

Please scan below!



Email: mnv38@unh.edu

Enhancing Education to Mitigate Workplace Violence to Increase Staff Safety in a High Acuity Setting: A Quality Improvement Project



Use of the walkie-talkie can potentially:

- Improve staff safety
- Decrease wasted time and movement
- Improve patient care

Specific Aim: To increase walkie-talkie utilization by 50% from current utilization rate. To increase feelings of perceived safety and security related to workplace violence by 20%.

Goals:

- To identify gaps, usability and ease of use
- To measure meaningful use

Please mark with a tally if the following prompts were applicable:

| Date | Did I use the walkie-talkie today? | Did I use it for patient care? | Did I use it for MOAB/personal safety? | Device Utilization Feedback |
|------|------------------------------------|--------------------------------|--|-----------------------------|
| 6/12 | | | | |
| 6/13 | | | | |
| 6/14 | | | | |
| 6/15 | | | | |
| 6/16 | | | | |
| 6/17 | | | | |
| 6/18 | | | | |

Questions? Concerns?
Email mnv38@unh.edu

Please scan QR code to complete the post-survey

