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A Safety Program in a Tertiary Care Center Emergency Department: An Evidence-Based Project to Increase Safety Event Reporting and Improve Frontline Staff Perceptions of Hospital Management's Response to Safety Events

Elizabeth Anne McMaster

University of St. Augustine for Health Sciences, e.mcmaster@usa.edu

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**A Safety Program in a Tertiary Care Center Emergency
Department: An Evidence-Based Project to Increase Safety
Event Reporting and Improve Frontline Staff Perceptions of
Hospital Management's Response to Safety Events**

Elizabeth McMaster, BSN, RN

School of Nursing, University of St. Augustine for Health Sciences

This Manuscript Partially Fulfills the Requirements for the Doctor of Nursing Practice Program

and is Approved by:

Jennifer Mensik Kennedy, PhD, RN, NEA-BC, FAAN

Deborah Saber, PhD, RN, CCRN-K

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Abstract

Practice Problem: The lack of a non-punitive safety culture with a healthcare organization is associated with decreased safety event reporting, reimbursement rates, and staff satisfaction.

PICOT: The PICOT question that guided this project was: In emergency department frontline staff, does hospital management involvement in a safety event program, contrasted with no safety event program, improve frontline staff's reporting of safety events and perceptions of hospital management's response to safety events management involvement over four weeks?

Evidence: Three overlapping themes that guided this project included: improving organizational culture, open communication, and leadership support in promoting patient safety.

Intervention: A safety event program, Safety STOP, was utilized as an evidence-based intervention to improve employee reporting of safety events and perceptions.

Outcome: The intervention did not significantly impact frontline staff perceptions of hospital management's response to safety events; however, the proportion of safety events reported during the implementation phase was significantly higher than the proportion of safety events reported before the intervention.

Conclusion: Safety STOP had a significant impact on the organization. After initial implementation, Safety STOP was implemented hospital-wide, reduced the total number of sentinel events required to be reported to the state, and reduced the total time from safety event to root cause analysis.

Keywords: safety, safety event, healthcare, safety culture, staff perceptions, leadership

A Safety Program in a Tertiary Care Center Emergency Department: An Evidence-Based Project to Increase Safety Event Reporting and Improve Frontline Staff Perceptions of Hospital Management's Response to Safety Events

Despite best efforts, humans, technology, and processes still have gaps that allow safety errors to occur, causing up to 98,000 patient deaths nationally per year (Meyer, 2019; Moeller et al., 2019). Safety errors, incidents, and harm are estimated to cost patients, families, and healthcare organizations between 17 and 29 billion dollars annually in the United States (U.S.) alone (Meyer, 2019). Focusing on a culture of safety within health care systems and empowering staff to speak up and report both potential and actual safety events is an ethical and economic responsibility of healthcare caregivers (Novak, 2019). Every safety incident or error prevented will save an organization an average of 13,000 dollars (Novak, 2019).

The purpose of this Doctor of Nursing Practice (DNP) project was to show an increase in the reporting rates of safety events and improve the frontline staff's perceptions of hospital management's response to safety events in the emergency department (ED). This DNP project aimed to identify a change process that would promote timely responses, transparency, and staff accolades of response to safety events.

Significance of the Practice Problem

In 2019, the organization where the DNP project was completed ranked second to last in their organizational healthcare system's Culture of Safety Survey, which compared nine healthcare organizations within the network (NLH, 2019a). The survey results highlighted the need to build a non-punitive safety culture within the organization that supported bringing forward safety concerns (NLH, 2019a; Polonsky, 2019). The penalties associated with the Affordable Care Act's effort to encourage better care cost the organization over two million

dollars of Medicare reimbursements in the 2020 fiscal year (E. Perry, personal communication, May 10, 2020; Kaiser Family Foundation, 2020). Among 17 non-exempt hospitals in the state, this organization is one of four hospitals receiving reduced payments due to preventable complications (Kaiser Family Foundation, 2020). Additionally, it is one of 786 hospitals in the U.S. in the 2020 fiscal year, which received lower reimbursement rates from the Centers for Medicare and Medicaid Services (CMS) due to higher rates of infection and patient injuries compared to other national hospitals (Kaiser Family Foundation, 2020).

The data collected in an annual staff satisfaction survey revealed that 27% of staff felt reporting a safety event would result in punitive repercussions, and more than 25% of staff reported they would not freely speak up if they saw something that may affect patient care (NLH, 2019a). The Agency for Healthcare Research and Quality (AHRQ) survey highlighted areas of opportunity such as management and supervisor support for patient safety, learning from errors, non-punitive response to errors, communication openness, frequency of events reported, teamwork across units, and perceptions of safety (NLH, 2019a). In May 2020, the organization documented over 96 sentinel events and, due to the survey results, leadership recognized they were in jeopardy of missing opportunities to prevent safety events from reoccurring.

Leadership recognized an intervention was necessary to improve the current culture of safety, the quality of care patients receive and reduce the financial burden to the organization due to fines, penalties, and litigation (E. Perry, personal communication, May 10, 2020; NLH, 2019a).

PICOT Question

In emergency department frontline staff, does hospital management involvement of a safety event program, contrasted with no safety event program, increase employee reporting and

improve frontline staff's perceptions of management's response to safety events over a four-week period? The project took place in the emergency department of a tertiary healthcare center and included the population of frontline ED healthcare workers, such as nurses, physicians, nursing assistants, physician assistants, and nurse practitioners. Ancillary staff were not included as participants in this project. The intervention included implementing a safety event program using evidence-based practices to demonstrate a commitment to improving hospital management's response to safety events. The practices fostered a non-punitive culture and focused on improving organizational systems rather than individuals. The intervention aimed to increase the reporting of safety events and to build a trusting relationship between frontline healthcare staff and hospital management. The comparison intervention was derived from the total number of safety events reported in RL Solutions, the online reporting system, during the same period of the previous year and was used as the baseline data. The data collected to measure the perceptions of hospital management's response to safety events were collected using a pre and post-implementation survey.

This DNP project's intended outcomes were to improve hospital management's response and guidance of safety events, improve frontline staff perceptions of management's timeliness to safety events, and increase the total number of safety events reported. This DNP project was implemented over a four-week period from October 5, 2020, to October 30, 2020. The University of St. Augustine for Health Sciences (USAHS) Review Board and the organization's Institutional Review Board (IRB) reviewed and approved the project before implementation. The project manager completed weekly monitoring in collaboration with the organization's director of quality improvement.

Quality Improvement Framework and Change Theory

This DNP project applied the Plan, Do, Study, Act (PDSA) Model as the framework that supported the project's goals after implementation (Institute for Healthcare Improvement, n.d.). Adopting the PDSA model as the framework for this project fostered an environment that encouraged open dialogue and built a culture of safety through each phase to reach the common goal of zero-patient harm. The planning phase highlighted intervention development after receiving organizational feedback and before implementation (Institute for Healthcare Improvement, n. d.). The doing phase identified how to execute necessary changes required for the sustainability of the practice. The study phase analyzed the desired outcomes. Finally, the act phase provided the time to adapt and adopt the changes accepted after implementation and then determined the model's next cycle.

Lewin's Theory of Change (Lewin, 1951) served as this DNP project's foundation and was used to translate evidence-based practice (EBP) recommendations into change within the organization. Lewin's three-step Theory of Change perceives change as achieving an equilibrium between driving and restraining forces that work in opposite directions within an organization (White et al., 2016). Lewin's Theory of Change was applied during the implementation planning phase of this project to help the organization recognize how values, beliefs, perceptions, and behavior patterns led to a change in culture (White et al., 2016). This theory was used as the anchor for the project to unfreeze the organization's current approach to safety, refine organizational behaviors and move towards improvement, and then refreeze the new behaviors (Lewin, 1951).

During project planning, the unfreezing phase prompted disturbances within the organization, which helped propel change within the organization. In this phase, the project manager procured buy-in from stakeholders. The unfreezing phase translated into hospital

management's support and reinforcement of new practices with frontline staff. The movement phase occurred during project implementation and accounted for the new changes in culture and safety event reporting. This phase led to increased safety event reporting rates within the organization. During the movement phase, the project manager and trained stakeholders provided additional education and reminders to ensure fidelity of practice changes. Finally, the refreezing phase reinforced the sustainability of the practice changes, sustainability, and hospital-wide expansion.

Evidence Search Strategy

A literature review was completed using the electronic interface EBSCOhost Research Databases. A federated search was accomplished using the databases provided by EBSCOhost. The initial databases included: CINAHL Complete, Health Business Elite, Gale Academic OneFile, Gale General OneFile, Gale OneFile: Health and Medicine, Gale Academic OneFile, Science Direct, Cochrane Database of Systematic Reviews, Credo Reference, Academic Core, DynaMed, MEDLINE, Academic Search Index, and Journals@Ovid. Keywords addressing the PICOT question were searched via Boolean phrases. The first Boolean phrase included "errors OR incidents OR accidents OR mistakes OR adverse events" (S1). The second Boolean phrase used was "leadership OR administration OR management OR c-suite or executives" (S2). The third Boolean phrase was "zero harm OR no harm OR journey to zero harm" (S3). The next phrase used was "change OR change agent OR transform OR transformation OR development OR translate OR improve OR transition OR improvement OR change management OR behavior change" (S4). The fifth phrase included the keywords "high reliability organizations OR tertiary care center OR healthcare organization OR health care organization OR hospital" (S5). The sixth Boolean phrase was "safety program OR program OR stop the line OR campaign or safety stop"

(S6). The seventh search included “frontline staff OR front line staff OR nursing OR employee OR workforce” (S7). Finally, the last Boolean phrase used to search keywords was “health care quality OR healthcare quality OR healthcare safety OR health care safety OR change in culture OR change of culture OR culture of excellence OR organizational culture OR culture of safety OR safety culture OR just culture (S8).

A Boolean phrase using “search with AND” was then used to search S1 and S2 and S3 and S4 and S5 and S6 and S7 and S8. The search resulted in 7,176 total articles. Filters included source type of academic journals, English language, publication dates between 2015 to 2020, and peer-reviewed. Of the 1,799 studies remaining, results that included “randomized control trial OR rct OR randomised control trial OR randomized controlled trial OR cohort study OR case report OR case control study OR cross-sectional study” were kept. However, studies that included the terms “meta-analysis OR meta analysis OR systematic review OR meta-synthesis or meta synthesis” were excluded, leaving a total number of 129 available study results.

Abstracts and studies were carefully reviewed for relevance according to the following criteria: related to the PICOT question, involved a health care organization, and aimed to reduce incidents, errors, or harm. A total of 22 studies met the criteria and their full text was retrieved and evaluated to determine final eligibility. This process resulted in 18 relevant primary sources.

Evidence Search Results

The search strategy using Boolean phrases produced a total of 7,176 results. A PRISMA diagram (see Appendix A) was created to illustrate the search strategy used to select the research studies. Full-text versions of the 22 research articles that met all inclusion criteria were carefully reviewed to ensure the evidence addressed the PICOT question. Finally, a total of 18 primary articles were selected at the conclusion of the evidence search. The evidence table (see Appendix

B) highlights each article selected, the assigned quality and grade, tools or interventions used, and key findings.

Using the Johns Hopkins Nursing Evidence-Based Practice Research Evidence Appraisal Tool (n.d.), each research article was assessed for strength of evidence. All 18 articles were cross-sectional Level III (non-experimental) articles. A total of seven articles were of high-quality, 11 were of good-quality, and zero were of low-quality. A diagram (see Appendix C) was created to describe each level of quality.

The seven high-quality articles included sufficient sample size, had definitive conclusions and made consistent recommendations based on the literature (Johns Hopkins, n.d.). The evaluations reported in the seven high-quality articles used valid and reliable tools, such as the Hospital Survey on Patient Safety Culture (HSOPSC) survey by the Agency for Healthcare Research and Quality (AHRQ). The HSOPSC survey is a validated tool produced by the AHRQ to assess patient safety culture in hospitals (AHRQ, 2020). The standard measure, Cronbach's alpha, was used to indicate the reliability and how well their tool had worked in previous studies. The 11 level III good-quality articles used a sufficient sample size and the conclusions drawn were referenced to some scientific evidence (Johns Hopkins University, n.d.). The results were reasonably consistent. No low-quality articles were present in the selected 18 articles. Each article used as evidence to answer the PICOT question provided results that had a sufficient sample size and statistically significant results.

The literature review produced cross-sectional, level III articles that assessed organizational culture to draw conclusions and were primary, non-experimental studies. No systematic reviews or meta-syntheses identified in the literature solely used primary resources, and therefore none were included in the evidence used to answer the PICOT question.

Themes with Practice Recommendations

Three overlapping themes were identified as a result of a thorough literature review on how to improve the reporting of safety incidents and errors and the relationship between frontline staff and leadership. These themes included: 1) organizational culture affects the occurrence of incidents and errors; 2) open communication is necessary to improve safety; and, 3) leadership support in promoting patient safety and teamwork.

Importance of Organizational Culture

Organizational culture is defined as the shared values, beliefs, behavior patterns, and perceptions within an organization (Kumbi et al., 2020). A total of 14 out of the 18 articles (see Appendix B) found the culture of safety within an organizational system produced behavioral norms that promoted safety. The evidence suggested that ineffective or inappropriate organizational culture could create barriers to reporting incidence and errors and could discourage staff from reporting these events due to lack of feedback and fear of consequences (Ahmed et al., 2019). The evidence also proposed fear of litigation, reluctance to report one's own mistakes, insufficient knowledge about event reporting, and lack of adequate follow-up after an incident demonstrates a need for a change within the safety culture of an organization (Figueiredo et al., 2018). The findings supported that emphasis should be placed on a culture of safety, not only to increase awareness about safety incidents and errors, but also to understand the importance of effective reporting, which increases the likelihood of adverse events being identified and reported.

Open Communication

The second theme identified in the literature review was communication. Open communication was found to be a necessary tool for improving the reporting rates of safety

incidents and errors and the relationship between frontline staff and leadership. Of the 18 primary articles located in the evidence table (see Appendix B), 17 mentioned effective communication techniques as a critical component in creating an organizational change that would support the reporting of events and foster a trusting relationship between frontline staff and management. The evidence stated open communication between staff members and executive leadership involvement directly affects leadership's response to safety errors and events (Svitlica et al., 2018). The literature also suggested that adequate communication between different departments of a health care organization helped reduce the number of actual incidents and errors and that communication failures within the health care team were the leading causes of near misses (de Brito Paranagua et al., 2015). One study recognized that utilizing a dashboard to standardize quality indicators improved communication within an organization (Patel et al., 2019).

Need for Leader Support

The third theme identified was the importance of leadership support to improve frontline staff perceptions of leadership responsiveness to safety events. Of the 18 cross-sectional studies, 12 stated leadership's role was directly related to the comfort level of frontline staff reporting adverse events, incidents, errors, or bias. The results, as communicated by the authors, encouraged organizational leaders to implement a consistent safety culture in health care organizations (de Quadros Morrudo et al., 2019). The change in safety culture led staff to recognize that reporting events did not lead to punitive consequences but instead to system changes to ensure the safety of patients and other individuals (de Quadros Morrudo et al., 2019). Common barriers to the effective reporting of safety incidents and errors included lack of communication from leadership about the importance of reporting events, fear of the report being

used by leadership to discipline another member of the organization, and not receiving follow-up communication from leadership after an incident had been reported (Ahmed et al., 2019).

Practice Recommendations

Based on a thorough and rigorous review of the literature and evidence grading, 18 high-quality primary resources answered the PICOT question and guided recommendations to create an environment that not only cultivates a culture of safety but also improves reporting (see Appendix E). To increase the reporting rates of safety events and improve the relationship between frontline staff and hospital management, the body of evidence recommended: 1) frontline staff need to feel empowered to report safety events; 2) processes and improvements need to include non-punitive methods and encourage the importance of approaching patient safety systematically; and 3) leaders from within the organization need to respond appropriately to safety events and errors with follow-up and a plan of action for frontline staff. The conclusions drawn from the review supported a valid and reliable safety program that incorporated all three recommendations and emphasized the significance of a safety-focused culture would increase safety events reported by frontline staff, build trusting relationships between frontline staff and hospital leadership, and help cultivate a culture of support and safety rather than a culture that places individuals at fault.

Based on the evidence found in the literature, a safety-focused program that requires prompt leadership support is recommended to increase the frequency of safety event reporting. When organizations eliminate intimidating behaviors, respond promptly to fix problems, and communicate effectively, frontline staff develop trust in leadership and start identifying and reporting safety events more frequently (Benedicto, 2017). The evidence recommended prioritizing patient safety from organizational leaders to ensure staff felt supported and events

are evaluated efficiently (Im & Aaronson, 2020). Immediate leadership support to safety events without assigning individual blame will help standardize continuous patient safety improvements and propel systematic changes to prevent process breakdowns from reoccurring (Im & Aaronson, 2020).

Setting, Stakeholders, and Systems Change

The setting of this DNP scholarly project was completed in the emergency department (ED) of a 411-bed, Level II trauma center, serving more than 40% of the population of Maine (NLH, 2020). The county in which the organization is located is 95.1% Caucasian, the median household income is 45,302 dollars, and 16.5% of the population is aged 65 years of age or older (NLH, 2019b). The high school graduation rate is 88.3% and 34% of the population holds an associate's degree or higher (NLH, 2019b). According to the community health needs assessment, the top health priorities for the county and state included: 1) mental health; 2) social determinants of health; 3) substance abuse; 4) access to care; and 5) physical activity, nutrition, and weight (NLH, 2019b).

The ED serves approximately 100 people per day and is made up of 28 beds, two trauma bays, and a separate 10-bed holding unit for mental health emergencies (B. Berlin, personal communication, August 13, 2020). It employs 15 physicians, seven physician assistants, 52 registered nurses, and 16 certified nursing assistants (B. Berlin, personal communication, August 13, 2020; NLH, 2020). Three of the 28 total beds are used for urgent care patients during peak hours. There are a total of six additional beds utilized for patients requiring observation less than 24 hours, and supplemental staffing covers an additional 10-bed transition area for boarding patients awaiting inpatient bed placement. The unit provides ten additional beds in a separate space for emergency psychiatric services (B. Berlin, personal communication, August 13, 2020).

The organization is part of a larger health care system that employs over 12,000 people (NLH, 2020). The system is comprised of ten member hospitals with 987 licensed beds, a single physician-led medical group, eight nursing homes with 585 long-term beds, five emergency transport members, and 37 primary care locations (NLH, 2020). The ED in which the DNP scholarly project was completed makes up approximately 27% of the system-wide ED visits per year (NLH, 2020).

Key organizational stakeholders included the vice president of nursing and patient care services, the chief medical officer, the director of performance improvement and patient safety, and the associate vice president (AVP) of emergency services. The organization's annual number of sentinel events and the 2019 AHRQ culture of safety and staff engagement survey results have encouraged hospital leadership to focus on cultivating a culture that ultimately prioritizes macro-level change within the organization. This DNP scholarly project aligned with the organization's goal to create a process change in the ED that could be sustained and implemented hospital-wide. Organizational support was obtained through a project charter and presentation with the key stakeholders to ensure the terminology, process, and implementation plan were cohesive and sustainable.

A SWOT analysis (see Appendix F) was completed to evaluate the strengths and weaknesses of the DNP scholarly project. Internal factors included strong organizational support and a large patient population. Weaknesses in the SWOT analysis included turnover in ED leadership roles. During the planning phase of the project, there was an interim director of emergency services and both the nurse manager and daytime assistant nurse manager roles were unfilled. Additionally, the project had the potential to increase the workload for the frontline staff and leaders involved in the Safety STOP response. External opportunities included increased

staff satisfaction and improved organizational reimbursement rates from the Center for Medicare and Medicaid (CMS). Additionally, there was an opportunity for improvements in the AHRQ culture of safety and staff engagement survey and improvements in CMS's hospital rating. External threats included the Sars-CoV-2 virus, also known as COVID-19. The virus created an international pandemic (as of March 2020) and had the potential to cause changes in staffing, resources and create an unpredictable number of ED visits. The pandemic created an increase in levels of hospital staff burnout and stress. COVID-19 also restricted travel for the project manager as travel between states was limited. Finally, COVID-19 affected many federal and state laws propelling changes within healthcare organizations.

Change Process Model: Safety STOP

Safety STOP is a valid and reliable program implemented by PeaceHealth, a large healthcare organization consisting of 10 medical centers and over 16,094 employees in the Northwest area of the U.S. in conjunction with the Moss Adams/Rona Consulting Group in 2018 (PeaceHealth, n.d.). The Safety STOP program was recommended to the organization as the evidence-based change practice model to increase its safety event reporting rates and improve the frontline staff perceptions of management's response to safety events. Safety STOP aligned with the mission and vision of the organization and its goal of achieving 100% zero harm. PeaceHealth (2019) increased their rates of safety reporting by implementing the Safety STOP program, which required a timely response to potential or actual threats to patients and frontline staff by empowering every member of the organization to speak up when there was or potentially could be a serious harm occurrence (PeaceHealth, 2019).

Both PeaceHealth and the DNP project location were Level-II trauma centers attempting to empower frontline staff to report safety events and improve their culture of safety survey

scores (PeaceHealth, 2019). The Safety STOP program required both hospital leadership and frontline staff to work together, identify immediate countermeasures, and prevent safety events from occurring or reoccurring. The Safety STOP program implemented at PeaceHealth (2019) increased its reporting rates of safety events, and the rates of serious safety events decreased from an average of 3.0 safety events to 1.5 events per 10,000 patient days in 12 months. The program has also been recognized for reducing the time from safety events to root cause analysis (RCA) and disseminating the action plan to frontline staff (Premier, 2019).

Implementation Plan with Timeline and Budget

The short-term objectives of the project included increasing the reporting of safety events in the ED and improving frontline staff and hospital caregivers' perceptions of leadership responses to safety events. Long-term objectives include decreasing the number of incidents, errors, and safety and sentinel events in the emergency department, improving the culture of safety and staff engagement survey scores, and increasing the rates of reimbursement from CMS. The Safety STOP program will be utilized as the change process model for this evidence-based practice project to increase safety event reporting and to improve caregiver perceptions of hospital management's response to safety events. The model will be implemented over four weeks in the organization's ED.

The implementation plan began with obtaining stakeholder and organizational support. The DNP project manager provided the vice president of nursing and patient cares services, CMO, and director of quality improvement with a one-page summary (see Appendix G) of the Safety STOP program. The DNP project manager created and presented a PowerPoint presentation (see Appendix H) to educate and obtain buy-in from the stakeholders during an in-person meeting to present the online learning modules used to educate frontline staff. The

organization's nursing education manager uploaded the slides to the hospitals' online learning portal and assigned the learning module to the frontline staff one week before project implementation. The vice president of nursing sent an email to all frontline staff participants on the same day the education was released to provide leadership support, educate staff on the Safety STOP program and timeline, and ask participants to complete the required online learning module. In addition to the email, the project manager attended nursing huddles at the change of shifts to educate frontline staff on the Safety STOP process, tools, and resources, as well as answer frontline staff questions. The online learning module and in-person education during shift huddles guided the project's process to cultivate a culture change that encouraged approaching patient safety systematically without individual or organizational fault.

Activate a Safety STOP

The first step in the Safety STOP program was to activate a Safety STOP. A Safety STOP guide (see Appendix H-2) was made readily available on the unit for participants to use as a resource for the project process. A list of qualifying events (see Appendix I) was provided in the ED in a common area to remind participants of the events that qualified for a Safety STOP activation. Qualifying events included the following circumstances that: 1) did or could result in harm to a patient or frontline staff; 2) qualified as "Never 29 Events" (see Appendix I) defined by the National Quality Forum; 3) caused delays in treatment that did or could result in serious harm or death; 4) could result in equipment or facility failure that required escalation; or 5) involved a sterile processing failure (PeaceHealth, 2019).

Participants were educated to ensure that patients were stabilized before activating a Safety STOP. Participants alerted their supervisor and sequestered appropriate equipment, medication vials, and packaging associated with the event.

Immediate Responder Arrives at Scene

Hospital leadership had a goal of arriving within ten minutes of a Safety STOP activation. During business hours (8:00 am to 5:00 pm Monday through Friday), the house manager, a safety facilitator, and administrator on call (AOC) arrived at the scene to conduct an evaluation of the events and debrief the situations with the frontline staff involved in the incidents. On holidays, weekends, and after-hours, the house manager would respond to the Safety STOP activation, gather the details, and call the AOC to make them aware of the event. The house manager followed the Safety STOP flow sheet for house managers (see Appendix J) to guide them through the Safety STOP process. Upon arrival at the scene, the house manager's role was to ensure both the patient and frontline staff were safe and stable. The safety facilitator's role was to interview the individuals involved in the event and complete the Safety STOP documentation form (see Appendix K).

The house-managers and safety facilitators were educated by the project manager with the support of the vice president of nursing and the director of performance improvement via a two-hour in-person meeting one week before project implementation. Tools shown in Appendix J and K were used to guide the house managers through the Safety STOP process. House-managers were competent in each step of the Safety STOP process as they were typically the first member of the hospital management team to arrive in the ED when a Safety STOP was activated. The safety facilitator (made up of a member of the risk management or performance improvement team) evaluated the event to determine if the event met reportable criteria as determined by the National Quality Forum (see Appendix H) and completed the Safety STOP Checklist (see Appendix J). The response team worked together to identify if additional team members needed to be called to the scene, such as pharmacists, respiratory therapy, facilities, and

provide a summary of the event to the appropriate AOC. The house manager facilitated the debrief huddle

Administrator on Call Role at Scene

The director of performance and quality improvement educated organizational leaders via an in-person presentation on the role of AOC in the Safety STOP process. The goal of this education was to help the AOCs recognize the importance of leadership support and their role in the Safety STOP process. Each AOC learned how to complete each step of the documentation form (see Appendix K), assume the leadership role upon arrival to the scene, initiate a debrief huddle, and present the Safety STOP event details at the organization's daily safety briefing.

Safety STOP Hand-Off

At the organization's safety briefing, the AOC or safety facilitator would briefly present the information from the event to the group consisting of one leader representative from each department. The event brief included countermeasures utilized after the event and if other departments could be affected. After a Safety STOP event, forms were handed off to risk management, who then completed the process change alert form (see Appendix L), determined if the event qualified as a sentinel event, and triggered a formal RCA, if necessary.

Post Safety STOP Rounding

Within 24-hours of a Safety STOP event, the AOC on duty during the Safety STOP activation completed Post-Safety STOP rounding in the ED. This rounding served as a check-in with the department and frontline staff after the safety event. The purpose of the AOC rounding was to thank the department for reporting the safety event, create a second opportunity for debriefing, and allow frontline staff to ask follow-up questions to hospital leadership regarding the safety event.

Project Timeline and Budget

A project timeline (see Appendix M) and a list of anticipated expenses (see Appendix N) were used to ensure proper communication between the project manager and the organization. A two-week site visit was completed from August 17 through August 28, 2020, to evaluate and observe the ED and the organization's culture, obtain stakeholder buy-in, and make organization-specific revisions to project tools. Approval from the University of St. Augustine's evidence-based practice review committee and the organization's review committee were obtained in September 2020. A baseline survey and education program were completed before project implementation. The Safety STOP project began on October 5, 2020, and ended on October 30, 2020. Data collection was completed prior, during, and post-implementation.

Role of the Project Manager

The DNP project manager provided education to stakeholders, participants (frontline staff employed in the ED), and those required to respond to Safety STOP activations with the support of the vice president of nursing, CMO, and director of performance improvement. The DNP project manager analyzed the results of the Safety STOP project in collaboration with the director of performance improvement. Project results and recommendations for sustainability were provided to the vice president of nursing and director of performance management after data analysis and evaluation were completed to aid the organization in house-wide adaptability.

Evaluation Design and Measurement of Project Objectives

The data collected before, during, and after project implementation were used to measure the pre-intervention changes to post-intervention. The project measured: 1) the total number of Safety STOPS activated; 2) the total number of RL reports submitted by frontline staff; and 3) staff's perceptions of hospital management's response to safety events (see Appendix O for

comparison data). The baseline number of RL reports were collected from the previous year from November 29, 2019 to October 23, 2019. The project manager collected the total number of Safety STOP activations and the total number of RL reports during project implementation from November 29, 2020 to October 23, 2020.

Frontline Staff Perceptions of Hospital Management's Response to Safety Events

A 15-question five-point Likert scale survey was used to measure frontline staff perceptions of hospital management's response to safety events. The survey link was distributed to participants via email by the vice president of nursing before implementation and at the completion of the four-week implementation period. The baseline survey was distributed on September 28, 2020 and an identical post-intervention survey was distributed on November 2, 2020, after project implementation was completed. Each survey period lasted two weeks.

The survey (see Appendix P) was created by the project manager and gathered ordinal data (5=strongly agree, 4=agree, 3=neutral/neither agree nor disagree, 2=disagree, 1=strongly disagree) using a 15-question, Likert scale format. Responses were stored on the Survey Monkey website. The project manager created a unique username and password to access the data. Statistical data was stored on the project manager's password-locked laptop and in a password-locked profile on surveymonkey.com. The survey did not collect any personal or organizational identifiers and was completed anonymously.

Results

Intellectus Statistics (2021) software was utilized with permission from the University of St. Augustine for Health Sciences to determine the statistical significance the Safety STOP program had on frontline staff perceptions of hospital management's response to safety events (see Appendix Q) and the total number of safety events reported.

A two-tailed-independent samples t-test was conducted on each individual survey question as well as on the mean of the combined responses. The two-tailed independent samples t-test conducted to examine whether the mean of responses were significantly different between the baseline and post-implementation survey was determined not significant ($p = .595$), and so the null hypothesis was not rejected. However, question one of the Likert scale survey did show significance (see Table 1). A two-tailed independent samples t-test was conducted to examine whether the mean of question one: Safety is a top priority for hospital management was significantly different between baseline and post-implementation survey. The result of the two-tailed independent samples t-test was significant ($p < .001$), indicating the null hypothesis can be rejected. This finding suggests the mean of question one was significantly different between the baseline and post-implementation surveys. The results are presented in Table 1.

Table 1

Two-Tailed Independent Samples t-Test for Q1: Safety is a top priority of hospital management

Variable	Pre		Post		<i>t</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Q1: Safety is a top priority for hospital management	3.06	1.33	4.11	0.60	-3.76	< .001	1.02

Note. $N = 56$. Degrees of Freedom for the *t*-statistic = 25.93. *d* represents Cohen's *d*.

This finding suggested the means of survey responses were not significantly different between the baseline and post-implementation categories. The intervention did not significantly impact staff's overall perceptions of hospital management's response to safety events in the ED; however, the Safety STOP program did improve staff perception that safety is a top priority for hospital management.

Reporting Rates of Safety Events Before and After Safety STOP Implementation

During project implementation, a total of eight Safety STOPS were activated by frontline staff in the ED. A two proportions z-test was conducted to examine whether there was a significant difference between the proportions of safety events reports in 2019 and 2020.

The result of the two proportions z-test was significant ($p = .003$), indicating the null hypothesis could be rejected. This suggested the proportion of safety events reported during the implementation phase ($n=108$) was significantly higher than the proportion of safety events reported during the same period one year prior ($n=67$). This significance indicates the Safety STOP program created an increase in the total number of safety events reported during the implementation period. Table 2 presents the results of the two-sample proportions z-test.

Table 2

Two Proportions z-Test for the difference between 2019 Safety Stops and 2020 Safety Stops

Samples	Responses	N	Proportion	SD	SE
2019_Safety_Stops	0	67	0	0.00	0.00
2020_Safety_Stops	8	103	0.08	0.27	0.03

Note. $z = -2.95$, $p = .003$, 95% CI: [-0.13, -0.03]

Clinical Significance

The Safety STOP program not only created a significant difference in frontline staff's perception that safety is a top priority for hospital management, but it also created clinical significance within the organization. Before implementing the intervention, there were no immediate responses to safety events reported in the ED (except for falls and pressure ulcers). The intervention created an immediate response from hospital leadership to specific safety events in the ED, which led to a significant reduction in response time.

The time saved on investigating safety events days or weeks after they have occurred translated into a decrease in the total dollar amount paid in staff hours to investigate and review each safety event. Additionally, as the total number of reportable sentinel events continues to

decrease, CMS's total reimbursable rate will increase. The increase in the total number of safety events reported in RL Solutions provided the organization useful information, which has led to both process and quality of care improvements.

Human Rights and Privacy of Health Information

No patient identifiers were collected or used in the statistical analysis of the results and outcomes. Patient labels that included the patient's name, medical record number and birthday were placed on Safety STOP forms to allow the organization to assess the event and develop a proper plan of action. However, the forms with patient labels were not collected by the project manager and remained in the organization's custody. The project manager received a report of the total number of safety events and safety reports completed from the quality improvement director. The project manager did not collect the Safety STOP forms or safety event reports. Caregiver participation in the baseline and post-intervention surveys was anonymous. The project manager did not collect or store any participant or patient information from the project.

Impact

The impact of this DNP scholarly project was significant on the organization. As of February 10, 2021, the project was implemented house-wide, and a total of 95 Safety STOPS were activated. The most considerable impacts include; 1) a reduction in the total number of sentinel events required to be reported to the state; 2) a decrease in total time from incident to RCA; 3) an increased awareness of safety events by hospital leadership; and 4) an increased total number of safety events reported to RL solutions by staff.

The total number of sentinel events required to be reported to the state has reduced since the Safety STOP implementation (discussion with Directors of Risk Management and Performance Improvement, personal communication, January 27, 2021). Before project

implementation, the organization struggled to pull together specific details surrounding a safety incident before the state's 48-hour deadline for reporting sentinel events (State of Maine Department of Health and Human Services, 2019). Safety STOP responders collect information from the safety event upon arrival to the scene, and dynamic interviewing of individuals occurs when responders arrive. Before project implementation, staff interviews occurred two to four weeks after an incident, which delayed hospital management's opportunity to collect information promptly, putting the organization at risk. Additionally, the organization has reduced the amount of time from the initial incident to the RCA. Before project implementation, RCA occurred 30, 60, or 90 days after a safety event; however, since the house-wide implementation of Safety STOP, RCA is completed approximately 15-30 days after the incident. Before intervention implementation, RCA and RCA² were completed during two separate meetings; however, post-house-wide implementation, it is common for RCA and RCA² to occur during the same meeting. This streamlined process has increased efficiency and has reduced the total time from the initial incident to an action plan.

The director of performance improvement reported a positive change in safety culture since implementing Safety STOP (Director of Performance Improvement, personal communication, February 10, 2021). The organization reported an increase in positive discussion around safety events. Safety STOP activations that occurred during the previous day are communicated to hospital leadership in the daily safety briefing. The director of risk management and the director of performance improvement meet weekly to discuss new Safety STOP events and follow-up with previous safety events until the incidents are closed.

To maintain Safety STOPs sustainability over time, the organization addressed AOC's response to the Safety STOP events overnight. Two AOCs reported the pages received overnight

from the house manager were inconvenient. To address this challenge, the organization used the PDSA cycle to improve communication between the house-supervisor and overnight AOC. The organization still requires the AOC to be called for a Safety STOP activation; however, only when an immediate response is required. The purpose of the phone call is to develop a plan of action or receive support the house manager cannot achieve independently without additional resources. Since the project implementation, one employee reported a negative response from the AOC when they activated a Safety STOP. The employee and the AOC involved in the incident were counseled by executive leadership to maintain the positive change in the safety culture created by the intervention. Additionally, the organization's president began sending a card thanking each individual who activated a Safety STOP, which has created a sense of positive reinforcement surrounding safety events.

Limitations

The study's limitations included the COVID-19 pandemic, leadership turnover in the ED, and low participation rate in the post-implementation survey. The implementation period of the project occurred during the 2020 COVID-19 pandemic. COVID-19 impacted the organization by fluctuating the number of patients seeking ED care during the months of implementation and requiring frontline staff to be out of work due to acquiring COVID-19 or presenting COVID-19 symptoms. New hospital regulations required staff to wear personal protective equipment for extended periods creating increased workload and decreased motivation. The pandemic required the organization to re-allocate resources and make adjustments to fiscal year budgets.

During project planning, there was an interim director of the ED, and the nurse manager and daytime assistant nurse manager positions were vacant. A new ED director began employment during the first week of project implementation. This turnover may have created a

positive or negative impact on shareholder and staff buy-in , as well as, participation. Finally, this study had an implementation period of four weeks and survey periods over two weeks. The study would have benefited from an extended implementation phase and survey period to account for the impact of COVID-19 on staff. Despite limitations presented during the implementation period, Safety STOP was sustained in the ED, and the project has been implemented house-wide by the organization.

Dissemination Plan

The DNP project manager shared all results and outcomes of this DNP scholarly project with the organization via an online PowerPoint presentation. The vice president of nursing, director of performance improvement, director of risk management, and the research and evidence-based practice nurse liaison will receive a copy of the final DNP scholarly paper via email. The results will be used to maintain sustainable hospital-wide implementation. The DNP project manager has provided the organization with all of the educational materials and tools used during project implementation.

This DNP scholarly paper will be submitted to SOAR@USA institutional repository to showcase the scholarly work publicly. The abstract will be used to apply for publication in a professional healthcare journal. Potential journals include the *Journal of Emergency Nursing* or *Nurse Leader*. Additional journal categories are journals of nursing, health care safety, health care administration, or health care leadership. Publication of the scholarly paper will disseminate outcomes and results to other nurse leaders and health care organizations looking to improve reporting rates of safety events. The DNP project manager may also apply to present the scholarly project at regional or national conferences such as the Emergency Nurses Association.

Conclusion

The intention of this DNP scholarly project was to improve the reporting rates of safety events in the ED and to improve frontline staff perceptions of hospital management's response to safety events. The Safety STOP program achieved the intended outcomes in four weeks and improved both staff perception that safety is a top priority for hospital management and created a significant increase in the proportion of safety events reported in the ED. The intervention did not significantly impact staff's overall perceptions of hospital management's response to safety events in the ED. However, the Safety STOP program cultivated a change in safety culture by improving leadership's response to safety events, reduced the total number of sentinel events, and improved the time of the incident to the action plan.

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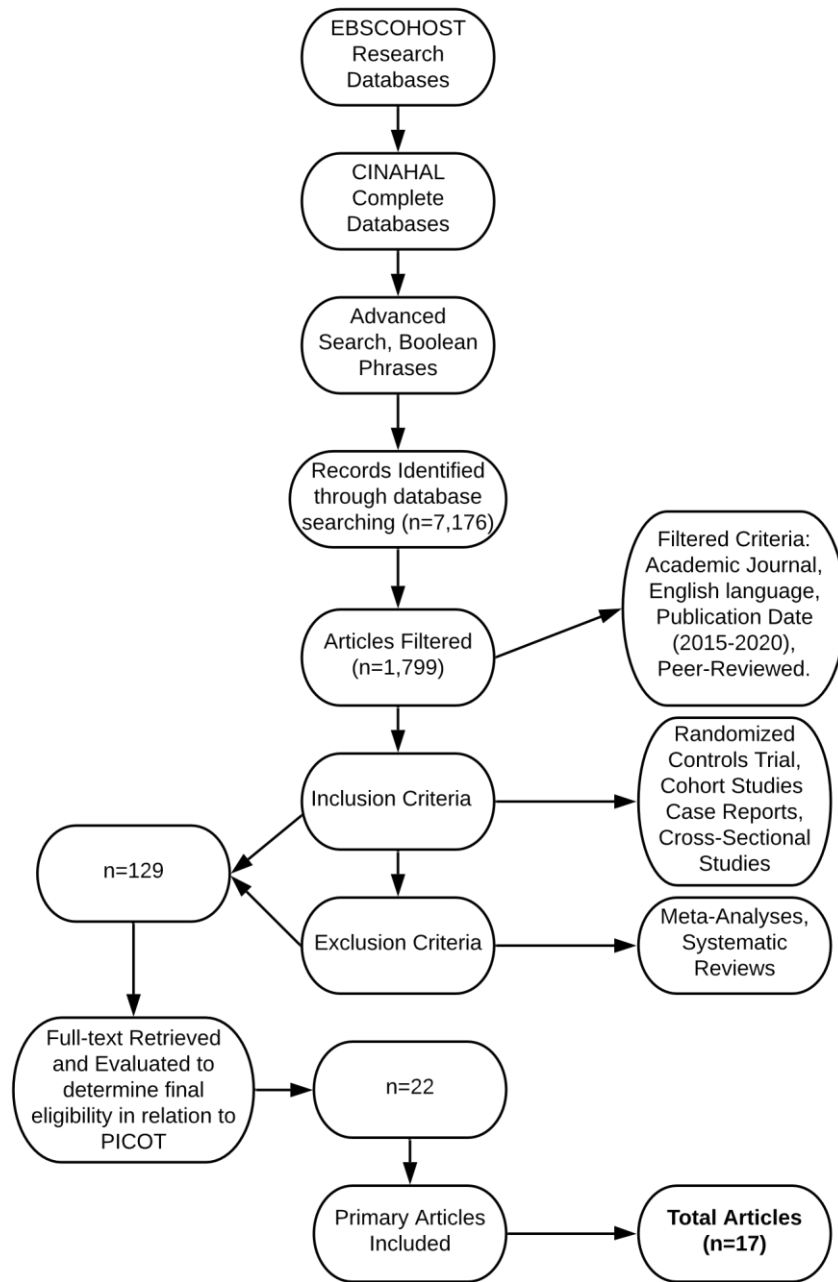
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Appendix A

PRISMA Diagram



Appendix B

<i>Evidence Table</i>					
	Citation	Design	Level/ Quality	Tools, Intervention	Key Findings
1	Kumbi, M., Hussen, A., Lette, A., Nuriye, S., Morka, G. (2020). Patient safety culture and associated factors among healthcare factors among health care providers in Bale Zone hospitals, Southeast Ethiopia: An institutional-based cross-sectional study. Dove Medical Press Limited. http://dx.doi.org/10.2147/DHPS.S198146	Cross-sectional study, facility-based, over 30 days.	Level III/Good Quality	Self-administered questionnaire. A survey called the “Hospital Survey on Patient Safety Culture” was used to collect data (developed by AHRQ)	Patient safety scores were lower than the recommended standard by AHRQ. Well-designed patient safety interventions are needed to be integrated with organizational policies addressing all dimensions of patient safety culture.
2	Svitlica, B. B., Milutinovic, D., Bozic, A., Maletin, S., & Lalic, I. (2018). The assessment of patient safety culture- the psychometric study of the Serbian version of the questionnaire hospital survey on patient safety culture. <i>Medicinski Pregled</i> , 71(1), 45-52. 10.2298/MPNS18S1045B	Cross-sectional study. Response rate was 1,435.	Level III/High Quality	The “Hospital Survey on Patient Safety Culture” was used to collect data (developed by AHRQ). 42 questions via Likert Scale.	Respondents reported good teamwork on their unit but a lack of wiliness to work with colleagues from other units. Nurses express a negative opinion about their relationship with physicians and other nurses. There is a need for open communication among healthcare workers to improve safety. Human will cause errors-determining how the error occurred is key.
3	Ahmed, Z., Saada, M., Jones, A. M., & Al-Hamid, A. M. (2019). Medical errors: Healthcare professionals’ perspective at a tertiary hospital in Kuwait. <i>PLoS ONE</i> , 14(5). ISSN: 1932-6203	Cross-sectional study, quantitative. Random sampling. 206 participants.	Level III/Good Quality	Self-administered open and closed-ended questionnaire.	57% of medical errors occur in the emergency department concluding that E.D.s are should be targeted to reduce the number of incidents and errors. 54.7% of the participants stated that they do not report incidents due to organizational culture, lack of knowledge, and complex incident reporting forms. Other reasons include not receiving follow-up from the incident report and fear

					of liability and legal action Recommends increasing awareness of the need for incident reporting and improve the reporting process.
4	Sivanandy, P., Maharajan, M. K., Wei, T. T., Loon, T. W., & Yee, L. C. (2020). Evaluation of patient safety culture among Malaysian retail pharmacists: Results of self-reported study. <i>Patient Preference and Adherence</i> , 1317-1326. http://dx.doi.org/10.2147/PPA.S111537	Cross-sectional study. The response rate was 1,435.	Level III/High Quality	Non-interventional surveys. The Pharmacy Survey on Patient Safety Culture (PSOPSC) questionnaire. 36 questions. Cronbach's [alpha] showed tool valid and reliable.	The pharmacy environment is a significant factor related to dispensing errors. A continuous learning culture will reduce errors. Effective communication is very important. Team-members with a high-level understanding are willing to admit their mistakes and accept feedback. Being able to talk about and become aware of errors will promote patient safety. Root cause analysis should be utilized to determine the underlying cause of the error.
5	Patel, M. S., Rathi, B., Tashfeen, K., & Yarubi, M. A. (2019). Development of implementation of maternity dashboard in regional hospital for quality improvement at ground level: A pilot study. <i>Oman Medical Journal</i> , 34(3), 194-199. http://dx.doi.org/10.5001/omj.2019.38	Prospective, cross-sectional study.	Level III/ Low quality.	Maternity Dashboard, automated.	The use of a dashboard allowed the study to determine that the healthcare facility was overbooked, had insufficient staff, and too many young doctors compared to experienced doctors. Recommends standardization of quality indicators. A dashboard can improve patient safety and quality of care.
6	Omidi, L., Akbari, R., Hadavandi, E., & Zarei, E. (2019). An intelligent algorithm for assessing patient safety culture and adverse events voluntary reporting using PCA and ANFIS. <i>International Journal of Risk and Safety</i> , 30(1), 45-58. DOI: 10.3233/JRS-180036	Cross-sectional, 311 participants.	Level III/High Quality	HSOPSC questionnaire and a two-part questionnaire. Assessed 12-dimensions of patient safety.	Half of the participants have experienced a medical error or adverse event. Less than 50% of participants voluntarily reported their medical errors. About 50% of participants have experienced a medical error in the 12-months before the survey—organizational culture affects error rates.

7	Lopes de Figueiredo, M., de Oliveira, E. S., Silvana, C., Santos Figueiredo Brito, M. F., D'Innocenzo, M. (2018). Analysis of incidents notified in a general hospital. <i>Revista Brasileira de Enfermagem</i> , 71(1), 111-119. http://dx.doi.org/10.1590/0034-7167-2016-0574	Retrospective, descriptive, quantitative. Random samples. 1,316 incidents reviewed.	Level III/High Quality	Electronic notification forms of incidents and errors were reviewed.	The most reported type of errors are those related to the medication supply chain, followed by pressure ulcers, and failures during techniques, procedures, and transfers. Emergency department is overall the largest area for incidents and errors to occur. Punitive culture still exists. Communication barriers imply greater adverse events.
8	Karimi, F. Z., Ebrahimipour, H., Hooshman, E., Bayrami, R., Pourshirazi, M., Afiat, M; Esmaili, H., & Vafae-Najar, A. (2016). Medication errors and its contributing factors among midwives. <i>Journal of Midwifery and Reproductive Health</i> , 4(4), 784-756. http://dx.doi.org/10.22038/jmrh.2016.7563	Descriptive, cross-sectional study. 79 participants completed the survey.	Level III/Good Quality	A questionnaire consisting of four sections, Likert Scale. Reliability and validity of the tool confirmed by previous studies. Cronbach's alpha used for evaluation.	Overcrowding of unit, fear of authorities, and attributing the medication error to individual factors were the main reason against reporting medication errors. More attention should be paid to error reporting systems and education.
9	Yaprak, E. & Intepeler, S. S. (2015). Factors affecting the attitudes of health care professionals toward medical errors in a public hospital in Turkey. <i>International Journal of Caring Sciences</i> , 8(3), 647-655. ISSN: 1791-5201	Descriptive, cross-sectional study. 652 participants.	Level III/High Quality	Sociodemographic and Working Characteristics questionnaire From and Medical Errors Attitude Scale. Likert Scales. Cronbach's alpha .66.	All managers at all levels, along with healthcare professionals, should be encouraged to participate in education programs based on improvements in patient safety in healthcare. The participant's perception of medical errors is negative.
10	de Brito Paranagua, T. T., Queiroz Bezerra, A. L., & de Camargo Silva, A. E. (2015). The occurrence of near misses and associated factors in the surgical clinic of a teaching hospital. <i>Cogitare Enfermagem</i> , 20(1), 120-127. ISSN: 1414-8536	Retrospective cohort transversal study. 750 medical records were reviewed.	Level III/Good Quality	The Open Epi Calculation tool was used to determine a sample size that represents the total population. The questionnaire was used	The development of the culture of recording incidents must be encouraged. Resources should be directed towards preventative factors. Adequate communication between different departments of a hospital can reduce the number of near misses. Lack of training leads to more incidents and

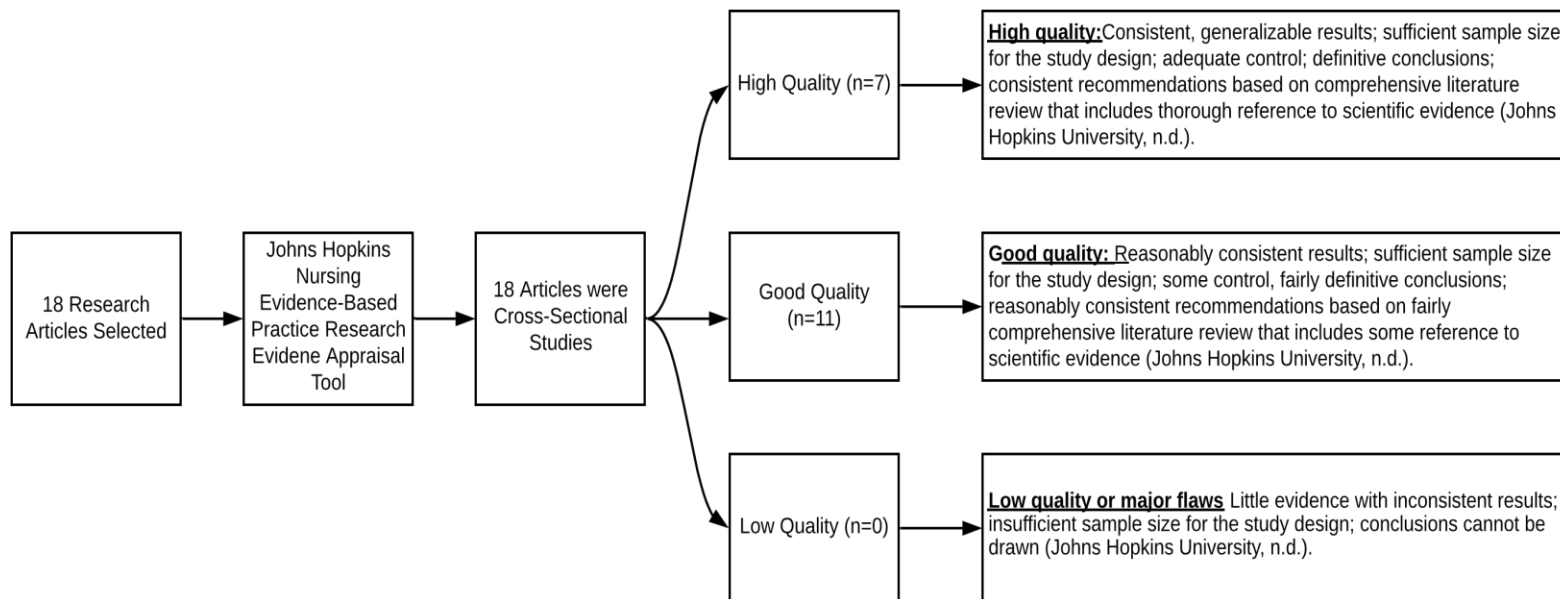
				before and after the pilot.	errors. There is scarcity in the literature regarding reporting near misses and studying failures and preventative actions.
1 1	Top, M.& Tekingunduz, S. (2015). Patient safety culture in a Turkish public hospital: A study of nurse's perception about patient safety. <i>Systemic Practice and Action Research</i> , 28(2), 87-110. DOI: 10.1007/s11213-014-9320-5	Cross-sectional study. Participation rate 300.	Level III/High Quality	HSOPSC questionnaire, developed by AHRQ.	The frequency of event reporting about medical errors was low. Units with supervisor/manager support and expectations, promoting patient safety and teamwork had the highest rates of positive responses. Staffing problems can lead to lower rates of incident reporting. Proper communication is essential to eliminating threats to the safety of patients in hospital settings. Reporting of events, non-punitive policies, with respect to error reporting, open communication, and leadership support for safety culture may help guide proactive strategies to decrease incidents and errors.
1 2	Sendlhofer, G., Gombotz, V., Tiefenbacher, P., Leitgeb, K., & Brunner, G. (2018). 6th grazer risk day: The future of yesterday in healthcare. <i>Safety in Health</i> , 4(1). ISSN: 2056-5917	Retrospective Cohort study. 683 cases reviewed. 283 used for study.	Level III/Good Quality	Electronic Critical Incident Reporting System (CIRS).	Nurses reported into CIRS more than physicians. Largest percentage of cases were reported by surgical disciplines. Reasons for under reporting of events is diverse. There is fear for punitive repercussions.
1 3	de Quadros Morrudo, E., Digueiredo, P. P., Silveira, R. S., Barlem, J.T., Oliveira, S. G., & Ramos, F. C. (2019). Errors in medicinal therapy and the consequences for nursing. <i>Cuidado Fundamental</i> , 11(1), 88-96. http://dx.doi.org/10.9789/2175-5361.2019.v11i1.88-96	Descriptive-exploratory cross-sectional study with qualitative approach. 26 participants (total of four nurses).	Level III/Low (sample size of nurses).	Semi-structured interviews analyzed through the Bardin Content Analysis.	A more consistent safety culture in health institutions is necessary to reduce errors. When analyzing errors, personifying the error to those who committed it directly should not occur. Many staff deny the existence of errors occurring when initially questioned. Many participants were not aware of the errors occurring within their organization. When staff was made aware that errors were not being

					recorded, they openly states that some cases of errors do occur.
1 4	Hee-Eun, J., Yeongsuk, S., & Hee-Young, K. Nurses' perception of patient safety culture and Safety control in patient safety management activities. <i>Journal of Korean Academy of Nursing Administration</i> , 23(4), 450-451. https://doi.org/10.1111/jkana.2017.23.4.450	Cross-sectional study. 222 nurses participated	Level III/Good Quality	Structured questionnaire.	Nurses feel that they are not able to modify their work conditions to make it safer. Placing employees on safety committees can encourage staff to feel ownership of safety and participate in improving the environment. Majority of incidents reported were due to errors in communication. Majority of hospital staff believe that nurses have the primary responsibility for preventing patient safety accidents. Creating a culture of safety promotes where safety activities fit.
1 5	Golle, L., Ciotti, D., Gehrke, H., Gehrke Herr, G. E., Aozane, F., Schmidt, C. R., Bernat & Kolankiweics, A. C. (2018). Culture of patient safety in hospital private. <i>Cuidado Fundamental</i> , 10(1), 85-89. http://dx.doi.org/10.9789/2175-5361.2018.v10i1.85-89	Cross-sectional study. 215 nursing participants.	Level III/High Quality	Safety Attitudes Questionnaire. Used with permission. Used in multiple primary studies. Cronbach's alpha test 0.837.	There is distance between nursing management and leadership and frontline staff. Experienced nurses tend to develop safer practices. It is critical that managers analyze the cultural aspects of the organization. Lack or resources leads to higher rates of error. The incorporation of a safety culture is a key strategy for providing excellence in care.
1 6	Jember, A., Hailu, M., Messele, A., Demeke, T., & Hassen, M. (2018). Proportion of medication error reporting and associated factors among nurses: A cross sectional study. <i>BMC Nursing</i> , 17(1). http://dx.doi.org/10.1186/s12912-018-0280-4	Quantitative cross-sectional study. ICU settings. 423 participants.	Level III/Good Quality	Self-administered questionnaire.	Encouraging administrators attitudes and responses to medication error reporting were appreciated. 70.8 % of medication errors were made by married individuals compared to non-married individuals. The medication error experience, having had a past medication error, sex of the participant and marital status were significantly associated with medication errors.

1 7	Costa Fermo, V., Ranunz, V., Martins de Rosa, L., & Mendes Marinho, M. (2018). Patient safety culture in a bone marrow transplantation unit. <i>Revista Brasileira de Enfermagem</i> , 68(6), 827-834.	Quantitative cross-sectional study. Analyzed 33 professional studies.	Level III/Good Quality	Safety Attitudes Questionnaire. Used with permission. Used in multiple primary studies.	The health institution should develop protection measures to prevent mistakes. A common objective should be determined. Leadership must be leveraged. Involve the frontline staff. Do not generate guilt so that events can be evaluated to determine how faults go past the defense mechanisms in place.
1 8	Hahtala, M., Tolvanen, A., Mauno, S., & Feldt, T. (2015). The associations between ethical organizational culture, burnout, and engagement: A multilevel study. <i>Journal of Business and Psychology</i> , 30(2), 399-414. DOI:10.1007/s10869-014-9369-2	Cross-sectional study. 3,402 participants.	Level III/Good Quality	Questionnaire. Likert Scale. Self-administered, anonymous.	Ethical organizational culture is a socially constructed phenomenon that differs between work units. Culture is associated with occupational well-being at both the individual and work-unit levels.

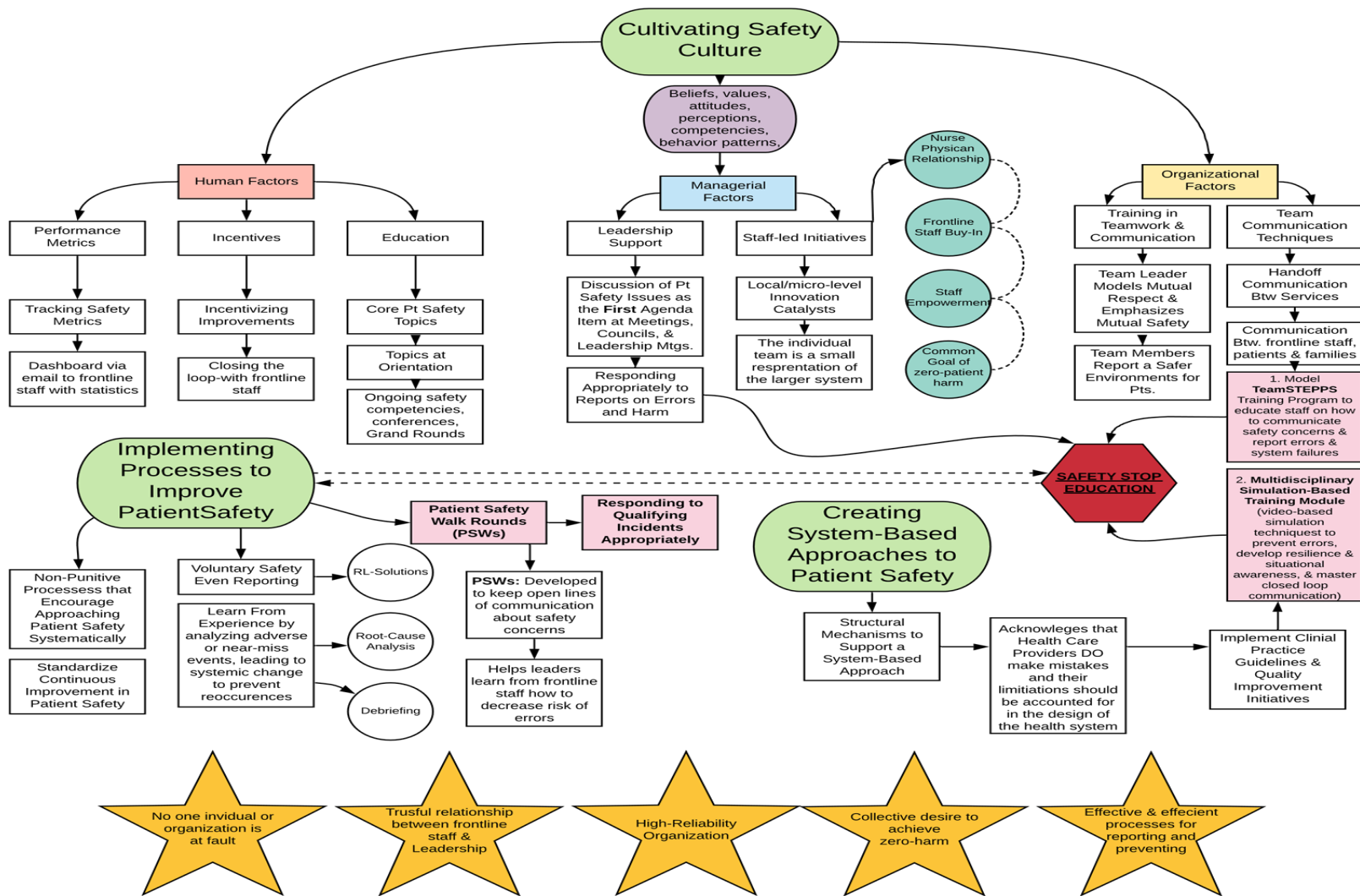
Appendix C

Quality of Evidence



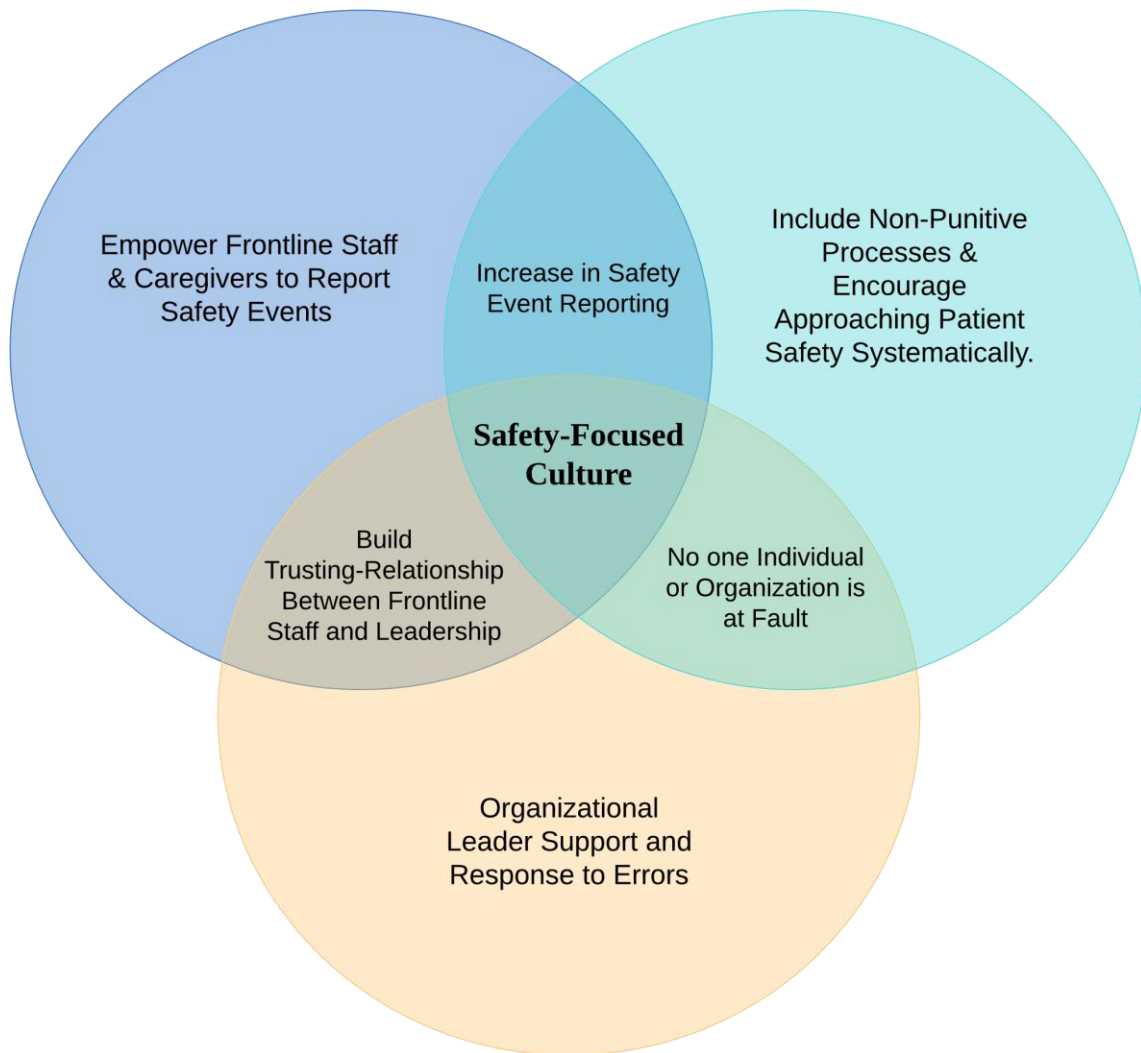
Appendix D

Themes Gathered from the Evidence



Appendix E

Practice Recommendations from Literature Review:



Appendix F

PROJECT SWOT ANALYSIS		
	<i>Helpful (to achieving the objective)</i>	<i>Harmful (to achieving the objective)</i>
Internal Origin (attributes of the system)	Strengths	Weaknesses
	<ol style="list-style-type: none"> 1. Organization operates within a large healthcare system that supports cultivating a change in culture. 2. Organizational leaders support the project and encourage sustainability. 3. Emergency Department leadership supports the project. 4. Large patient population. 	<ol style="list-style-type: none"> 1. There is currently an interim Director of the Emergency Department. New Director begins at time of training. 2. Large budget cuts due to COVID19 2. The nurse manager role is vacant. 3. The assistant nurse manager role is vacant. 4. The nursing staff is unionized. 5. There is currently a hand-off communication pilot occurring in the emergency department. 6. Administrator on-call may need to drive to the organization during off-hours creating decreased job satisfaction. 7. Increased workload for leadership responding to Safety STOP. 8. House-manager workload/responsibilities and participation in training.
External Origin (attributes of the environment)	Opportunities	Threats
	<ol style="list-style-type: none"> 1. Can decrease the long-term cost to the U.S. healthcare system. 2. Can increase reimbursement rates from Medicare and Medicaid 3. Project is cost-effective. 4. Can increase levels of patient satisfaction and prevent harm. 5. Can improve the culture of safety and staff engagement survey results, which can lead to an improvement in hospitals' five-star rating and quality of care. 	<ol style="list-style-type: none"> 1. The United States is facing the COVID-19 pandemic. This can lead to reduced staffing, staff burnout, reduced resources, unpredictable number of emergency department visits. 2. COVID-19 may cause travel restrictions for the project manager. 3. COVID-19 can affect changes in laws, regulations, and may cause a shift if organizational focus away from the project.

Appendix G



Safety STOP Pilot Project

(October 5 - October 30, 2020)

Safety STOP is a valid and reliable tool used to effectively and efficiently respond to potential threats to patient and caregiver safety. A Safety STOP will activate a leader team to rapidly respond to an event that has caused or has the **potential** to cause harm.

Pilot Purpose: Test the Safety STOP program before implementing it hospital-wide. Findings from the pilot will be used to make necessary changes and countermeasures to ensure a sustainable Safety STOP program at NLEMMC.

This pilot will test the following:

1. Education of caregivers
2. Activation of Safety STOP
3. Response to Safety STOP
4. Hand-off of event at daily NLEMMC organization safety briefing

Setting: NLEMMC Emergency Department

Participants: Physicians, nurse practitioners, physician assistants, nurses, certified nursing assistants, and psychiatric technicians employed in the ED (caregivers).

Pilot Metrics that will be Measured:

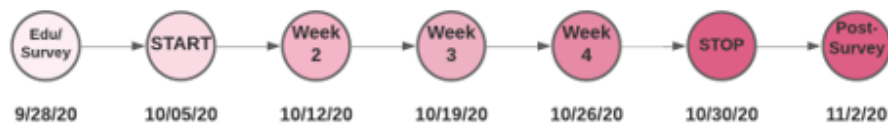
- 1). The rate (percentage) of all safety events reported in the ED.
- 2). Caregiver Perceptions of hospital management's response to safety events (5-point, Likert scale pre and post survey).
- 3). Total number of safety events reported via Safety STOP activation.
- 4). Total number of safety events reported via RL Solutions.

Pilot Goals:

- 1). Increase the total number of safety and harm events **reported** by ED caregivers.
- 2). Improve caregiver perceptions of hospital management's response to safety events.
- 3). Identify areas for improvement before hospital-wide implementation of Safety STOP program.

Long-term Safety STOP Goals:

- 1). Empower *everyone* at NLEMMC to speak up and "Stop the Line" *every time* to achieve the common goal of zero harm.
- 2). Reduce the opportunity for human error and capture errors before they reach the patient and caregiver.
- 3). Improve the safety and quality of care patients receive at NLEMMC.
- 4). Cultivate a culture of safety that supports a "Just Culture" and non-punitive processes that encourage approaching patient safety systematically.
- 5). Improve the relationship between caregivers and hospital leadership.



Appendix H



Safety STOP

Stop the Line for Zero Harm

Safety STOP
Empowering Everyone to Speak-up, Every Time

A red octagonal sign with the words "Safety STOP" in white text.

NLEMMC_Safety STOP_McMaster_8/25/20

Purpose



Safety STOP Pilot



Timeline



Pilot education for caregivers



Cohesive terminology that aligns with NLEMMC



List of Never Events

Pilot Summary

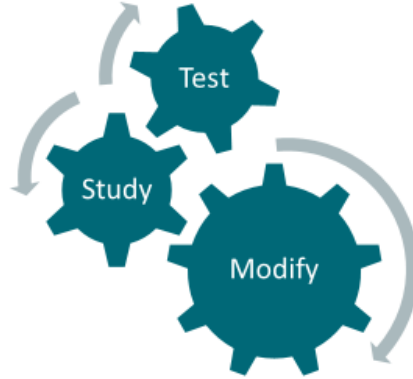
- Caregiver will activate Safety STOP by calling operator (Voicera or telephone) by dialing zero and request a safety stop. Operator will page Safety STOP responders.
- 0700-1700 (M-F)
 - House Manager, Safety Facilitator, AOC
- 1700-0700 (M-F) & Weekends
 - House Manager, triages situation and requests AOC if event qualifies (National Quality Form-Serious Reportable Events)
- Checklist/Documentation Form
 - Safety Facilitator 0700-1700 (M-F)
 - House Manager 1700-0700 (M-F) and weekends
- RL Solution Event Report
 - Completed by Caregiver
 - Checklist uploaded by Safety Facilitator (Day) House-manager (night and weekends)
- Hand-off
 - Daily Safety Debriefing
 - AOC shares safety event to group

Pilot

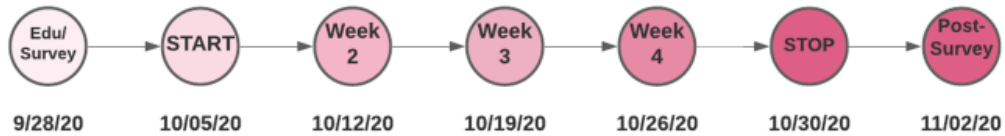
- Four (4) weeks
- Oct 5 – Oct 30
- Emergency Department
- Caregivers Nurses, physicians, CNAs, PAs, NPs
 - Online-Education
 - Flowsheet/list
- Leadership: AOCs, Risk Management, Patient Safety/Performance Improvement
 - Operator
 - House-managers: Spreadsheet List

Pilot Goals

- Test and identify areas for improvement before hospital-wide implementation
 - Process, tools/forms, communication, follow-up to caregivers
- Improve caregiver perceptions of hospital leader’s response to Safety Events
- Increase the total number of safety events reported by caregivers
- Sustainability



Timeline



Safety STOP Training: Caregivers

Safety STOP Training: Caregiver

- **Important:** You must complete this required learning course
- Safety STOP Training is comprised of one video and one PowerPoint presentation
- There is a quiz at the completion of this training. A score of **100%** must be achieved to demonstrate competency.
- **Learning Objectives:**
 - Describe what a safety STOP is why it is being implemented at NLEMMC
 - Explain why reporting safety events is essential to learn and prevent harm
 - Outline how and when to activate a Safety STOP
 - Articulate your role and responsibility when activating a Safety STOP

Safety STOP Training: Caregiver

Stop the Line for Zero Harm

Safety STOP

Empowering Everyone to Speak-up, Every Time



Safety STOP:

- **Empowers every employee at NLEMMC to “stop the line” when a safety or harm event is recognized**
- Is a timely response from leadership to serious safety events to patient and caregiver safety
- Activation of a leadership team to rapidly respond to an event that has or has the potential to cause serious harm
- **Is a non-punitive process** that encourages approaching patient safety systematically

WHY should we call a Safety STOP?

- To provide immediate and comprehensive response to serious safety events
- To ensure appropriate care and attention is given to the patient family, family, caregivers and providers
- Allows NLEMMC to learn from experience by analyzing serious safety events and making systemic changes to prevent reoccurrences



WHEN to call a Safety STOP

- Any unsafe circumstance that did or could result in harm to a patient or caregiver
- Is considered a “Never Event” (see next slide)
- Delays in treatment that did or could result in serious harm or death
- Equipment or facility failure that requires escalation
- Sterile Processing Failure
- Any event that impacts 3 or more patients or caregivers
- Threat of harm to patient or caregiver

A list of qualifying Safety STOP events will be available at the nurses station.



National Quality Forum Serious Reportable Events in Healthcare	
Surgical or Invasive Procedure Events	<ul style="list-style-type: none"> •Surgery or other invasive procedure performed on the wrong site •Surgery or other invasive procedure performed on the wrong patient •Wrong surgical site or other invasive procedure performed on a patient •Unintended retention of a foreign object in a patient after surgery or other invasive procedure •Intraoperative or immediately postoperative/post-procedure death in an ASA Class 1 patient
Product or Device Events	<ul style="list-style-type: none"> •Patient death or serious injury associated with: <ul style="list-style-type: none"> -The use of contaminated drugs, devices, or biologics provided by the healthcare setting -The use or function of a device in patient care, which the device is used or functions other than as intended •Vascular air embolism that occurs while being cared for in a healthcare setting.
Patient Protection Events	<ul style="list-style-type: none"> •Discharge or release of a patient/resident of any age, who is unable to make decisions, to other than an authorized person. •Patient death or serious injury associated with patient elopement (disappearance) •Patient suicide, attempted suicide, or self-harm that results in a serious injury, while being cared for in a healthcare setting
Care Management Events	<ul style="list-style-type: none"> •Patient death or serious injury associated with, or resulting from: <ul style="list-style-type: none"> -A medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation, or wrong route of administration) -Unsafe medication of blood products -A fall while being cared for in a healthcare setting -The irreversible loss of an irreplaceable biological specimen -Failure to follow up or communicate laboratory, pathology, or radiology test results OR •Maternal death or serious injury associated with labor and delivery in a low-risk pregnancy while being cared for in a healthcare setting •Death or serious injury of a neonate associated with labor and delivery in a low-risk pregnancy •Key stage 3, Stage 4, and unstageable pressure ulcers acquired after admission/presentation to a healthcare setting
Environmental Events	<ul style="list-style-type: none"> •Artificial insemination with the wrong donor sperm or wrong egg •Patient death or serious injury associated with: <ul style="list-style-type: none"> -An electric shock in the course of a patient care process in the healthcare setting -A burn incurred from any source in the course of a patient care process in a healthcare setting -The use of physical restraints or bedrails while being cared for in a healthcare setting OR •Any incident in which systems designated for oxygen or other gas to be delivered to a patient contains no gas, the wrong gas, or are contaminated by toxic substances
Radiologic Events	<ul style="list-style-type: none"> •Death or serious injury of a patient or staff associated with the introduction of a metallic object into the MRI area
Professional/ Criminal Events	<ul style="list-style-type: none"> •Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider •Abduction of a patient/resident of any age •Sexual abuse/assault on a patient or staff member within or on the grounds of a healthcare setting •Death or serious injury of a patient or staff member resulting from a physical assault (i.e. battery) that occurs within or on the grounds of a healthcare setting

[http://www.qualityforum.org/Topics/SREs/List of SREs.aspx](http://www.qualityforum.org/Topics/SREs/List_of_SREs.aspx)



If Patient is Unstable

If your patient is **UNSTABLE**:

- Follow hospital policy and activate code, as necessary.
- See the EMMC Emergency Conditions and Basic Staff Response

Safety STOP does NOT replace Emergency Conditions & Basic Staff Response



EMERGENCY CONDITIONS & BASIC STAFF RESPONSE

All Emergency Conditions and Codes are announced beginning with "Attention Please"

OVERHEAD ANNOUNCEMENT	DESCRIPTION OF CONDITION	INITIAL RESPONSE	SECONDARY RESPONSE	FOLLOW UP
CODE RED (FIRE)	Fire, smoke or smell of something burning	DIAL 4444 - Follow EOC: Report alarm location	Follow the universal protocols. Response verbally in hospital's emergency room or if outside	Waiting Supervisor will notify Hospital Operator of "911 Clear Status"
CODE BLUE ADULT (MEDICAL EMERGENCY) CODE BLUE PEDIATRIC (MEDICAL EMERGENCY)	Adult or pediatric breathing cessation Infant or child has a life-threatening condition	DIAL 4444 - Identify code and location	Code Blue Team responds	Visual of Services will terminate
CODE PINK (INFANT/CHILD REDUCTION)	Minor loss of infant or child	DIAL 4444 - Identify code, age of infant if unknown location. Post parent name location of incident	Hospital Operator will notify all staff at 911. Search area and notify Hospital Operator of "911 Clear Status"	Waiting Supervisor will notify Hospital Operator of "911 Clear Status"
CODE YELLOW (BOMB THREAT)	Notification of suspicious package	EMERGENCY SERVICES: Notify security and police and DIAL 4444	Security will contact 911 if Hospital Operator with verbal "Attention Please"	Reporting Hospital Operator will notify Hospital Operator of "911 Clear Status"
CODE GRAY (SCISSOR PITCHER)	Person exhibiting assaultive or aggressive behavior	DIAL 4444	Security will contact 911 if Hospital Operator with verbal "Attention Please"	Waiting Supervisor will notify Hospital Operator of "911 Clear Status"
CODE SILVER (PERSON WITH WEAPON AND/OR HOSTAGE SITUATION)	Person with weapon or hostage situation	Call for police and information DIAL 4444	Security will contact 911 if Hospital Operator with verbal "Attention Please"	Police Department will advise when 911 call is cleared
CODE ORANGE (FALL)	FALL TO HARD SURFACE Small fall presenting risk of injury to patient or caregiver in the emergency	NEED TO MARK AREA Clinical user shows up with appropriate personal protective equipment. Reassess patient status.	Appropriate clinical staff, Hospital Operator to page Safety Office (page number shown on 911 Dashboard after 30 seconds)	Complete Incident Report, Marked, light work
CODE CHANGE (HAZARDOUS MATERIALS, OIL, OR GAS)	HAZARDOUS (SPILL) Spill will result in person being exposed to hazardous material	HAZARDOUS (SPILL) Spill will result in person being exposed to hazardous material. Notify appropriate staff. Assess patient status in the event of a spill. If spill is to be safely, other regular team, notify Security Office (page 200)	Spill team will respond to spill. If spill is to be safely, other regular team, notify Security Office (page 200)	Complete Incident Report, Marked, light work
CODE BLACK (ELEVATOR FAILURE)	Emergency elevator failure presenting emergency condition with all personnel, equipment, telephone and/or other	Emergency Group will contact Code Blue to respond to emergency. Hospital Operator	Code Blue team will respond to elevator emergency. Hospital Operator	Code Blue team will notify Hospital Operator of "911 Clear Status". Follow necessary procedure as described in Elevator Trouble
CODE GREEN (ELECTRIC SHOCK/STUN)	Medical Emergency Delayed to Code Blue of independent	DIAL 4444 - Get appropriate page 911	Spill team will respond to spill. If spill is to be safely, other regular team, notify Security Office (page 200)	Complete Incident Report, Marked, light work
CODE TRIAGE: INTERNAL CODE TRIAGE: EXTERNAL	Priority of internal/external emergency of potential threat situation	Waiting Supervisor will notify Hospital Operator of Code Triage	Security will contact 911 if Hospital Operator with verbal "Attention Please"	Incident Commander will advise when 911 call is cleared and notify Hospital Operator of "911 Clear Status"

DIAL 4444 FOR ALL EMERGENCIES

If patient is STABLE

PATIENT CONDITION IS STABLE:

CHECK IF ONE OF THE SIGNIFICANT EVENTS HAS OCCURRED:

- NQF Never 29 Event
- Delay in treatment that resulted in serious harm
- Equipment or facility failure that requires increased physician ordered interventions or escalation to a higher level of care
- Sterile Processing failure that reaches the patient
- Any unsafe circumstance that could result in imminent harm

IF IT APPEARS A SIGNIFICANT EVENT HAS OCCURRED:

- Dial Operator to initiate a Safety STOP Call
- Notify on-duty Charge Nurse/Supervisor immediately
- All involved staff must remain in the area until dismissed by the response team
- Complete a RL event report



Activating a Safety STOP

1. When you recognize a safety or harm event has occurred
2. Ensure the patient is safe and stable
3. If the incident qualifies, call a **Safety STOP.**

Use the unit telephone or voicera to call the operator and ask for a Safety STOP. Be ready to provide the room # and unit name.

What happens when you call a Safety STOP?

1. Three (3) representatives from leadership will arrive to the scene within ten minutes of the notification
2. A safety checklist form will be completed by the Safety Facilitator
3. Patient and caregiver safety and wellbeing will be assessed
4. Items will be sequestered, if necessary
5. RL safety report will be completed by caregiver
6. Immediate countermeasures will be put in place to prevent future harm

After the Safety STOP

1. The Safety Facilitator will upload the completed Safety STOP checklist into the RL report created by the caregiver
2. The event will be discussed at hospital's next daily safety debriefing
3. Leadership will follow-up with the unit or staff after the debriefing to thank team for participation and update on plan of action to prevent another occurrence



Over Night & Weekends



- From the hours of **1700 to 0700 and Weekends**, *one person* will arrive to scene (house manager)
- The house manager will assess the event and determine if the Administrator on Call should come to scene.



	Task Description
1	Ensure patient is safe/stable. Ensure appropriate clinical personnel are called to stabilize the patient as needed (i.e. provider, RRT, Code).
2	Call Safety STOP
3	Notify Charge Nurse, Manager, Supervisor, or Lead that 'Safety STOP' has been called.
4	Sequester appropriate equipment, medication vials, packaging, etc.
5	Describe the event to the House Supervisor when they arrive.
6	Your wellbeing is important during this process. The Safety STOP response team will be checking in with you to see how you are doing. During this process, please identify and
7	Stay on the scene (unit) until excused by Safety STOP Response Team.
8	Participate in interview.
9	Important: Complete RL Safety Event report. Notify AOC/Responder of report number.
10	Attend the on-unit debrief huddle.

Thank you!

- By activating a Safety STOP, you are contributing to keeping our patients safe from harm
- You are helping NLEMMC approach patient safety systematically

**YOU ARE HELPING OUR
ORGANIZATION ACHIEVE
ZERO PATIENT HARM**

Quiz Questions

1. Safety STOP is a timely response from leadership to serious safety events to patient and caregiver safety

- a) True - Correct
- b) False

2. Who can call a Safety STOP?

- a) Any caregiver or staff member - Correct
- b) Only physicians
- c) Only charge nurse

3. Safety STOP will improve patient and caregiver safety?

- a) True - Correct
- b) False

4. I have read the presentation on Safety STOP and understand how to activate Safety STOP.


- 1. True - Correct
- 2. False

Appendix H-2



Stop the Line for Zero Harm

Safety STOP
Empowering Everyone to Speak-up, Every Time



Safety STOP' Flow Sheet: ACTIVATOR

Activator: Any NLEMMC staff member who recognized the safety event.

	<i>Location of Event:</i>	
	<i>Date of Event:</i>	
	<i>Time of Event:</i>	
	<i>Employee who Activated Safety STOP:</i>	
	<i>Name of Supervisor/Charge Nurse:</i>	
	Task Description	
1	Ensure patient is safe/stable. Ensure appropriate clinical personnel are called to stabilize the patient as needed (i.e. provider, RRT, Code).	
2	Call Safety STOP	
3	Notify charge nurse, manager, supervisor, or lead that 'Safety STOP' has been called.	
4	Sequester appropriate equipment, medication vials, packaging, etc.	
5	Describe the event to the safety facilitator/house manager when they arrive.	
6	Your wellbeing is important during this process. The Safety STOP response team will be checking in with you to see how you are doing. During this process, please identify and verbalize if you are physically, mentally, and emotionally safety to continue patient care.	
7	Stay on the scene (unit) until excused by safety facilitator/house manager.	
8	Participate in interview.	
9	Important: Complete RL Safety Event report. Notify safety facilitator/house manager of report number.	
10	Attend the on-unit debrief huddle.	
<i>Comments/Feedback to improve form or Safety STOP process:</i>		

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Appendix I

National Quality Forum Serious Reportable Events in Healthcare	
<i>Surgical or Invasive Procedure Events</i>	<ul style="list-style-type: none"> ▪Surgery or other invasive procedure performed on the wrong site ▪Surgery or other invasive procedure performed on the wrong patient ▪Wrong surgical site or other invasive procedure performed on a patient ▪Unintended retention of a foreign object in a patient after surgery or other invasive procedure ▪Intraoperative or immediately postoperative/post-procedure death in an ASA Class 1 patient
<i>Product or Device Events</i>	<p><u>Patient death or serious injury associated with:</u></p> <ul style="list-style-type: none"> ▪The use of contaminated drugs, devices, or biologics provided by the healthcare setting ▪The use or function of a device in patient care, which the device is used or functions other than as intended ▪Intravascular air embolism that occurs while being cared for in a healthcare setting.
<i>Patient Protection Events</i>	<ul style="list-style-type: none"> ▪Discharge or release of a patient/resident of any age, who is unable to make decisions, to other than an authorized person. ▪Patient death or serious injury associated with patient elopement (disappearance) ▪Patient suicide, attempted suicide, or self-harm that results in a serious injury, while being cared for in a healthcare setting
<i>Care Management Events</i>	<p><u>Patient death or serious injury associated with, or resulting from:</u></p> <ul style="list-style-type: none"> ▪A medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation, or wrong route of administration) ▪Unsafe medication of blood products ▪The irretrievable loss of an irreplaceable biological specimen ▪Failure to follow up or communicate laboratory, pathology, or radiology test results <p>OR</p> <ul style="list-style-type: none"> ▪Maternal death or serious injury associated with labor and delivery in a low-risk pregnancy while being cared for in a healthcare setting ▪Death or serious injury of a neonate associated with labor and delivery in a low-risk pregnancy ▪Artificial insemination with the wrong donor sperm or wrong egg
<i>Environmental Events</i>	<p><u>Patient death or serious injury associated with:</u></p> <ul style="list-style-type: none"> ▪An electric shock in the course of a patient care process in the healthcare setting ▪A burn incurred from any source in the course of a patient care process in a healthcare setting ▪The use of physical restraints or bedrails while being cared for in a healthcare setting <p>OR</p> <ul style="list-style-type: none"> ▪Any incident in which systems designated for oxygen or other gas to be delivered to a patient contains no gas, the wrong gas, or are contaminated by toxic substances
<i>Radiologic Events</i>	<ul style="list-style-type: none"> ▪Death or serious injury of a patient or staff associated with the introduction of a metallic object in the MRI area
<i>Potential Criminal Events</i>	<ul style="list-style-type: none"> ▪Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider ▪Abduction of a patient/resident of any age ▪Sexual abuse/assault on a patient or staff member within or on the grounds of a healthcare setting ▪Death or serious injury of a patient or staff member resulting from a physical assault (i.e. battery) that occurs within or on the grounds of a healthcare setting
<i>Other (NLEMMC specific)</i>	<ul style="list-style-type: none"> ▪Any unsafe circumstance that did or could result in harm to a patient, caregiver/employee ▪Delays in treatment that did or could result in serious harm or death ▪Equipment or facility failure that requires escalation ▪Sterile processing failure ▪Any event that impacts 3 or more patients or caregivers ▪Threat of harm to patient or caregiver

Appendix J



Stop the Line for Zero Harm

Safety STOP
Empowering Everyone to Speak-up, Every Time

Safety STOP' Flow Sheet:
HOUSE MANAGER

Immediate Responder

<i>Date of Event:</i>	
<i>Time of Event:</i>	
<i>Name of House Manager:</i>	
<i>Location of Safety STOP:</i>	
<i>Name of Charge Nurse:/Supervisor:</i>	

Task #	Task Description	Task Time
1	Receive notification of 'Safety STOP' from designated communications.	
2	Respond to Safety STOP location within 10 minutes .	
3	Ensure patient and caregiver are safe/stable.	
4	Start documentation on the Safety STOP Checklist.	
5	Handoff Safety STOP checklist to Safety Facilitator upon their arrival. <u>If the Safety STOP occurred between the hours of 1700 and 0700, house-manager is responsible for completing the Safety STOP check list.</u>	
6	<p>*Between the hours of 1700 and 0700, the house-supervisor should evaluate the event to determine if support from AOC is required. The AOC should be notified if the event involves one of the following:</p> <ol style="list-style-type: none"> 1). Any event on the list of Serious Reportable Events from the National Quality Forum. 2). Diversion of narcotics. 3). An event that has caused serious patient harm. 4). Any event requiring support for disclosure. 	

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7	<p>Caregiver support: Assess the wellbeing of the caregiver(s). A list of "red events" that have the likelihood of impacting caregivers' sense of wellbeing and have the potential to impact the care we provide should be used to help identify high-risk caregivers (see below).</p> <p>Red Events:</p> <p><i>Unanticipated death or deterioration</i></p> <p><i>Pediatric death</i></p> <p><i>Permanent serious injury</i></p> <p><i>Patient known to staff</i></p> <p><i>First death for a new caregiver</i></p>	
8	Ensure caregivers remain available to Safety STOP team until officially released from duty by the safety facilitator/house manager	
9	Ensure provider(s) has/have been notified and asked to come in, if appropriate.	
10	Collaborate with charge nurse/manager/supervisor to secure scene, initiate scene documentation and sequester equipment (including, but not limited to photographs of scene, equipment, supplies, medication vials, packaging, lot number, etc.).	
11	Work with safety facilitator/house manager to identify additional team members to be called to the scene. (Example: respiratory, pharmacy, infection prevention, facilities, security, biomed, etc.).	
12	Support caregiver/activator in completing RL safety report. Take note of RL report #.	
13	Between the hours of 1700-0700, upload completed Checklist in to RL Safety Report created by Caregiver.	
14	Participate in debrief huddle with caregivers and staff involved in the event, including provider if present. Upload this form into the RL report.	
15	This documentation will be needed for the safety facilitator to give a detailed report of the event during the daily organizational safety briefing.	
<p><i>Comments/Feedback to improve form or Safety STOP process:</i></p>		

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Appendix K



SAFETY STOP DOCUMENTATION FORM
NOT A PART OF THE MEDICAL RECORD

Instructions: Safety Facilitators and House Manager complete this form. Ensure this form is uploaded the RL report and brought to the daily Organization Safety Briefing.

Event Details			
Event Date:		Event Time:	
Department/Unit Name:		Room #:	
Section A: Safety Facilitator (M-F,0700-1700), House Manager (1700-0700 and Weekends)			
Name & Title:		Response Date & Time:	
<input type="checkbox"/> Ensure Patient is safe and stable <input type="checkbox"/> Assess caregiver wellbeing <input type="checkbox"/> Ensure caregivers remain available until officially released from duty by safety facilitator or house manager		Initiate sequestration of scene and information: <input type="checkbox"/> Photographs <input type="checkbox"/> Supplies <input type="checkbox"/> Other (Specify) <input type="checkbox"/> Equipment <input type="checkbox"/> Packaging _____	
Event Description			
Is provider notification required? <input type="checkbox"/> Yes, already notified <input type="checkbox"/> No, not required <input type="checkbox"/> Notification Underway Provider Name: _____ Method of Notification _____ Time _____			
Event Participants:			
Title	Name (first & last)	Title	Name (first & last)
Provider		Employee who called Safety Stop	
Charge RN/Lead		Others:	
Primary RN(s)		Others:	
Manager		Others:	
Director		Others:	

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Section B: Ensure Caregiver Wellbeing & Confirm RL Event Report is Created		
<input type="checkbox"/> Ensure Section A is complete <input type="checkbox"/> Unit Manager notified? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unit Director Notified? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Assess caregiver wellbeing - Is caregiver okay to continue work? <input type="checkbox"/> Yes <input type="checkbox"/> No Action Taken: _____		<input type="checkbox"/> Ensure RL safety event report is completed RL #: _____
<input type="checkbox"/> During the conversations, notify caregivers that RCA may occur. Document caregiver availability for the week.		
Follow-up measures to taken to protect patient and caregivers:		
Description	Assigned Leader	Date Completed
Are there additional areas at risk? <input type="checkbox"/> Yes <input type="checkbox"/> No List here with names of leader(s) advised: _____		
Are there network/system risks? <input type="checkbox"/> Yes <input type="checkbox"/> No Plans for escalation (who and when)? _____		
Information to consider/gather for Safety STOP Huddle: Event disclosure required? <input type="checkbox"/> Yes <input type="checkbox"/> No Date/Time Disclosed: _____ Disclosed to: <input type="checkbox"/> Patient <input type="checkbox"/> Other _____ Disclosed By AOC: _____ Provider: _____ Safety Facilitator: _____ External reporting required? <input type="checkbox"/> Yes <input type="checkbox"/> No Action Taken? Explain : _____ Action Required? Explain : _____ Work Order Number (If Submitted): _____		
Section C: Response Debrief and Notification		
<input type="checkbox"/> Debrief huddle held with house-manager, AOC, safety facilitator, and caregivers (to debrief, confirm countermeasures, and discuss next steps to be taken.		
<input type="checkbox"/> Safety Facilitator completes and uploads Safety STOP documentation form to RL report created by caregiver.		
<input type="checkbox"/> AOC and Safety Facilitator should be prepared to discuss Safety STOP event at next day's daily NLEMMC Organization Safety Briefing		
<input type="checkbox"/> Quality leadership delegate follow-up tasks to the appropriate individuals.		
<input type="checkbox"/> AOC who responded to Safety STOP event should return to unit within 24 hours thanking the caregiver and unit for reporting the event and their participation. The participants should be made aware they are contributing to keeping our patient's safe from harm and helping NLEMMC approach patient safety systematically.		
Additional comments and feedback: _____ _____ _____		

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Appendix L

Date Issue Received:

Keep Posted For:

Date Posted On:

PROCESS CHANGE ALERT

<p>NAME OF ISSUE/PROBLEM</p>	<p>PROBLEM/ISSUE DESCRIPTION</p>
<p>CURRENT PROCESS</p>	<p>CORRECT STANDARD/PROCESS</p>

Name of Process Owner:

Appendix N

Potential Project Expenses

	Project Expenses
1	On-call pay for non-leaders, non-salaried staff responding to Safety STOP.
2	Mileage reimbursement for team members responding to safety events when on-call overnight.
3	Increased workload to nursing education (i.e. uploading and implementing online education modules).
4	The potential cost of staff stays over allotted shift time to complete an online learning module.
5	Cost of paper and printing of Safety STOP forms, tools, and materials.

Appendix P

Safety STOP Pilot Survey (baseline and post-implementation)

Safety STOP Pilot Survey: NLEMMC Emergency Department						
Send to ED caregivers (Physicians, RNs, CNAs, NPs, PAs) on <u>9/28/20 and 11/2/20</u>						
1	Please indicate your Department/Unit Name:					
2	If department is not listed in previous question, please enter here:					
1	Please indicate your role:					
2	If your role is not listed in previous questions, please enter here:					
On what level do you agree or disagree with the following statements?		Strongly Agree	Agree	Neutral/ Neither Agree or Disagree	Disagree	Strongly Disagree
3	Safety is a top priority for hospital management.					
4	I know how to report a safety event, incident, or error.					
5	I have reported a safety event, incident, or error in the past					
6	Safety event reporting is a non-punitive process.					
7	I can openly talk about a safety event, incident, or error with fellow employees or hospital management.					

8	Employee well-being is addressed by hospital management after a serious safety event.					
9	I know what a sentinel event is.					
10	When a safety event, incident, or error is reported, it is handled professionally by hospital management.					
11	I receive feedback from hospital management after reporting a safety event, incident, error.					
12	The feedback I receive from hospital management after a safety event is timely.					
13	I am satisfied with the actions and feedback provided by the leadership team when I report a safety event, incident, or error.					
14	I know what actions the leadership team/hospital takes after a safety event, incident, or error is reported.					
15	When I report a safety event, incident, or error, I am helping the hospital improve systems and processes to prevent the same safety event from occurring again.					
16	Reporting a safety event, incident, or error will contribute to a safer work environment for patients, visitors, and employees.					
17	I believe zero patient harm is achievable.					

Appendix Q

Baseline (pre) and post-implementation Likert scale responses from Participants (Strongly agree=5, agree=4, Neutral=3, disagree=2, strongly disagree=1):

Respondent	Pre or Post Implementation	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Mean Perception of Staff
1	Pre	4	4	4	4	4	3	4	3	3	3	3	3	4	4	3	3.533333
2	Pre	4	4	5	4	4	4	5	2	4	4	1	4	4	5	4	3.866667
3	Pre	4	5	5	5	4	4	5	4	4	4	3	3	4	5	4	4.2
4	Pre	2	4	4	3	3	3	4	3	2	3	3	2	3	3	3	3
5	Pre	2	4	4	3	2	3	4	3	2	2	2	2	3	3	3	2.8
6	Pre	3	4	4	2	4	2	4	2	2	2	3	3	4	3	3	3
7	Pre	4	4	4	4	4	4	4	4	4	3	4	3	4	4	4	3.866667
8	Pre	4	5	5	5	5	5	5	5	4	4	5	5	4	5	4	4.666667
9	Pre	4	5	3	4	4	4	5	4	3	3	2	2	4	4	1	3.466667
10	Pre	4	5	3	3	4	4	5	4	5	4	3	4	5	4	4	4.066667
11	Pre	4	4	3	4	4	4	4	4	3	3	3	4	4	4	4	3.733333
12	Pre	1	5	5	3	1	1	5	1	3	1	1	3	5	3	5	2.866667
13	Pre	2	4	4	3	2	2	5	3	2	2	2	2	3	4	5	3
14	Pre	4	4	4	4	4	4	4	4	4	4	4	3	3	4	4	3.866667
15	Pre	3	4	4	3	4	3	4	3	3	3	3	2	3	2	2	3.066667
16	Pre	1	5	5	1	1	1	5	1	5	3	1	5	1	1	5	2.733333
17	Pre	2	4	4	4	2	2	4	2	2	1	1	2	2	2	4	2.533333
18	Pre	4	5	5	5	4	5	5	5	4	4	4	4	4	5	5	4.533333
19	Pre	4	4	3	5	5	5	5	5	3	4	4	4	5	5	1	4.133333
20	Pre	1	4	1	1	1	1	5	1	1	1	1	1	1	1	4	1.666667
21	Pre	2	4	4	3	3	2	4	3	4	3	3	3	3	3	3	3.133333
22	Pre	2	4	4	2	2	2	5	2	1	1	1	1	1	1	4	2.2
23	Pre	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
24	Pre	1	5	4	2	1	1	5	1	2	1	1	2	3	3	5	2.466667
25	Pre	5	5	5	5	5	4	5	4	3	3	3	3	4	4	5	4.2

26	Pre	5	5	5	5	5	3	5	5	3	3	3	4	5	5	5	4.4
27	Pre	5	4	4	3	4	3	1	4	1	1	4	1	3	4	1	2.866667
28	Pre	4	5	5	4	5	4	5	5	4	4	4	2	4	4	4	4.2
29	Pre	2	3	1	2	3	2	4	3	2	3	3	2	3	3	3	2.6
30	Pre	3	5	5	3	4	2	5	3	1	3	2	1	5	5	5	3.466667
31	Pre	4	5	5	5	3	1	5	2	3	3	2	4	4	4	4	3.6
32	Pre	3	4	2	2	3	3	5	3	3	3	3	3	4	4	4	3.266667
33	Pre	5	4	4	5	3	4	5	4	5	5	4	4	5	5	4	4.4
34	Pre	4	5	2	4	4	4	5	4	4	4	4	4	4	4	3	3.933333
35	Pre	5	5	3	5	5	5	5	5	3	5	5	5	5	5	5	4.733333
36	Pre	1	5	5	2	1	2	5	2	2	2	1	3	5	5	4	3
37	Pre	2	5	5	2	2	1	5	2	3	3	1	1	5	1	4	2.8
38	Pre	5	5	3	5	5	5	5	5	3	3	5	5	5	5	5	4.6
39	Pre	2	4	4	3	3	2	5	2	3	3	3	3	4	4	4	3.266667
40	Pre	3	5	5	2	2	2	5	2	3	3	3	3	4	4	5	3.4
41	Pre	1	4	4	3	2	2	4	3	4	4	3	3	4	5	4	3.333333
42	Pre	2	5	2	2	4	4	4	3	3	2	3	4	4	4	4	3.333333
43	Pre	2	4	5	4	4	2	4	3	1	1	2	2	5	5	4	3.2
44	Pre	1	3	4	1	1	1	5	1	3	3	1	1	3	3	4	2.333333
45	Pre	4	4	5	5	4	5	5	5	5	5	5	5	5	5	4	4.733333
46	Pre	4	5	5	5	5	5	5	5	5	4	5	5	5	5	3	4.733333
47	Pre	2	5	5	2	2	1	5	2	1	1	1	2	3	4	4	2.666667
48	Post	4	4	4	4	3	2	5	3	1	1	1	1	3	3	2	2.733333
49	Post	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
50	Post	4	5	3	5	5	3	5	3	3	3	3	3	3	4	2	3.6
51	Post	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4	3.933333
52	Post	5	5	5	5	5	4	5	5	4	5	5	5	5	5	3	4.733333
53	Post	4	5	5	5	5	4	5	5	2	2	2	2	5	5	4	4
54	Post	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4.933333
55	Post	5	5	5	1	1	1	5	1	1	1	1	1	1	2	4	2.333333
56	Post	4	4	2	3	4	3	4	4	2	4	3	2	4	4	4	3.4