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A Collaboration to Unify Emergency Nurse Practitioner Competencies

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Objective: Prior to 2021, two national professional organizations had derived and published separate emergency nurse practitioner (ENP) competency frameworks. Analysis of the 2019 Emergency Nurses Association (ENA) competencies and the 2018 American Association of Emergency Nurse Practitioners (AAENP) practice standards was needed due to the variability that existed in the delineation of, and language used in the two competency frameworks. With the implementation of an ENP academic program validation process, and with the shift toward a competency-based approach in nursing education, confusion existed around which competency model should be translated into learning objectives for ENP curricula.

EBP Model: Iowa Model

Setting: The analysis was performed within two national professional nursing organizations that represent nurse practitioners working in emergency care settings.

Participants: Six subject matter experts appointed by two national professional organizations led this project. All of the subject matter experts work primarily in academic roles at leading universities as well as advanced practice roles in the clinical setting.

Methods: In response to a national call for collaboration to advance the ENP specialty, two national organizations representing ENPs launched the ENP Competencies Workgroup. The workgroup mapped equivalent, identical, or similar across the two distinct competency frameworks. The crosswalk was validated by subject matter experts.

Outcomes: The crosswalk analysis delineated a single set of ENP Competencies that establish a common taxonomy and competency framework supporting a common language not only within nursing, but among other health professions, the public, and employers. They represent the first ENP competencies to be endorsed by NONPF.

Implications: The competencies have implications for academic and fellowship curricula, continuing education, and utilization of ENPs in the workforce to the full scope of their education. This new competency model supports academic programs as they move toward competency-based education that is in alignment with the NONPF Core Competencies. These competencies were developed with a focus on the following documents: The future of nursing 2020-2030: Charting a path to achieve health equity; The NONPF nurse practitioner core competencies content, and the new AACN Essentials.

A Demographic Evaluation of Elderly Patients Arriving to the ED Who Experienced Low Severity Trauma

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Purpose: The geriatric population is increasing. In 2020, the population rose to 71 million and is expected to reach 83 million by 2050. Many geriatric patients lead an independent, active lifestyle, due to having their chronic diseases successfully controlled. The common factor among this group is the physiological changes that occur over time which leads to decreased stability and the increased tendency to fall. The most common mechanism of injury for blunt geriatric trauma seen in emergency departments (ED) worldwide is falls. Our aim was to describe characteristics of geriatric patients sustaining low-severity trauma arriving at our ED to elucidate population information.

Design: The study design was a retrospective chart review of the institution's trauma registry and electronic medical records from May 1, 2021, to September 30, 2021. The study adhered to the STROBE standard and included IRB approval.

Setting: The study setting was an 851-bed urban north Texas hospital with a 100-bed level II trauma ED with an annual emergency department census of 120,000 and a total of 18,000 annual trauma activations of which 6,000 patients qualify for placement into the trauma registry.

Sample: Low-severity trauma was defined physical injury not requiring immediate intervention to prevent degradation of status. Low-severity trauma included ground level falls not resulting in altered mental status, or head trauma if on anticoagulants; patients experiencing low-energy collisions without, rollover, ejection, prolonged extrication, death in the vehicle, crush injury to head, chest, or pelvis, open fractures, suspected neck injuries, or long proximal bone fractures; no high-energy impact or rapid deceleration, or any motorcycle or bicycle collisions or auto-pedestrian collisions. Inclusion criteria included: patients > 65 years who arrived as the ED after sustaining low-severity trauma. Method of arrival was classified as arriving through triage or by ambulance. Exclusions included: < 65 years of age; sustained high-risk trauma; had no traumatic mechanism; or deceased in the ED or during their hospital stay.

Methods: The EMR extraction included the method of arrival, chief complaint, admission/discharge status and location, length of stay, admitting diagnosis, and mechanism of injury. Trauma registry extraction included: age/gender; type of fractures; place of injury. The demographic analyzation of the patient group included age, arrival method, chief complaint, place of injury location, discharge location, discharge diagnosis including fracture.

Results: Total records analyzed were 2668. Patients arriving via ambulance was 1761 (734 admitted). Patients arriving through triage totaled 870 (163 admitted). All admitted patients (907) had a chief complaint of fall. Most admissions (578) ranged from 1-6 days. Of the 907 patients admitted, 768 fell at home or outside of home of which 424 were discharged to a skilled nursing facility. Of these, 314 had a fall-related fracture.

Implications: The findings support the need for allocated resources in the ED to care for the elderly patients sustaining low-severity trauma. The patients most commonly arrive by ambulance, suggesting they are not easily mobile, and often sustain a life-altering fracture, requiring supportive care. Fall prevention outside of home is needed.

A Nationwide Study of Emergency Department Nurses' Triage Decisions for Patients with Potential Acute Coronary Syndrome

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Purpose: To explore emergency department (ED) nurses' triage decisions for patients presenting with possible acute coronary syndrome (ACS).

Design: A descriptive, cross-sectional design was used.

Setting: A stratified random sample of registered nurses from the Emergency Nurses Association (ENA) membership were included. The study survey was posted on the ENA website, and participants were encouraged to share the study link with their professional networks.

Sample: Inclusion criteria were (a) must be a registered nurse, (b) work at least part-time in the ED, (c) the ability to complete an online Qualtrics survey, (d) fluent in English, and (e) perform triage in the ED.

Methods: Participants completed an anonymous Qualtrics survey, including relevant demographic questions, one question about angina assessment/screening, and the Nurses' Cardiac Triage Instrument. Data were analyzed using descriptive statistics.

Results: A final sample of 414 was recruited from across the United States. Participants were a mean of 41.7±12.0 years, had a median 8.0 (IQR 11.0) years of ED nursing experience, and about half (49.5%) were certified emergency nurses. Participants worked in EDs of various sizes, with 53.1% having 31 or more beds. A total of 54.6% of the EDs represented were certified chest pain centers.

Based on a 5-point Likert scale from "none of the time" (1) to "all of the time" (5), participants reported that severity of chest pressure (MDN 5.0) and the nature of chest pain (MDN 5.0) served as the two most common cues to identify patients with potential ACS. Patient gender (MDN 2.0), presence of a fever (MDN 2.0), and marital status (MDN 1.0) were reportedly used the least. To query patients about possible angina, participants most often reported using the terms "chest pain" (79.5%), "chest pressure" (77.3%), "chest tightness" (72.9%), and "chest discomfort" (72.5%).

Once a patient with potential ACS was identified, participants reported that their highest priorities were to obtain a physician read 12-lead electrocardiogram (ECG) within 10 minutes (MDN 5.0) and to get the patient to the cardiac catheterization laboratory (MDN 5.0), if necessary. Nearly all participants (94.9%) reported that after they determine a patient may be experiencing ACS that they obtain a physician-read 12-lead ECG within 10 minutes.

Implications: These findings confirm that the ED triage process for ACS across the United States are generally based on the patients report of chest symptoms. This may disadvantage patients without chest pain and those experiencing less frequently reported symptoms such as sweating, shoulder pain, and fatigue. The finding that triage decisions were not based on gender is heartening and may help reduce sex disparities in cardiac care. Future research should explore the degree to which reported triage decision-making strategies match actual clinical practice and affect patient care and patient outcomes.

A Quality Improvement Project: Implementing Stop the Bleed to Staff at a Local School District, Saving Lives in Hemorrhagic Situations

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Aim: Children and students continue to die at an alarming rate after sustaining firearm-related penetrating trauma during mass casualty active shooter events in schools across the United States. A timelapse of greater than five minutes from time of injury and arrival of bleeding control trained personnel to the scene can result in death. A call to action from the American College of Surgeons demands the transformation of laypersons to immediate responders in hemorrhagic situations to save lives. School district skills centers have additional unique dangers with frequent use of saws, grinders, and knives. School staff educated in Stop the Bleed training would be able to immediately assist in life-threatening emergencies suffered by firearm or other penetrating trauma. The specific goal of this project was to transition 100% of skills center staff members into immediate responders by completing evidence based Stop the Bleed training.

Framework: The Iowa Model served as the project's process framework to guide investigation of evidence, systematic implementation, and proposal for sustainability. The theoretical framework, Information-Processing Theory, provided the project with insight of how learners understand teachings and retain knowledge which guided purposeful selection of training modalities and content.

Setting: This project was welcomed by a school district located in the Pacific Northwest, comprised of 20 schools and 16,000 students. Implementation was completed at the district's technical skills center which focuses on business, human services, information technology, science and health, trade, and industry. Over 1,000 students hold enrollment at the center annually.

Stakeholder Team: Stakeholders included district representatives, a Stop the Bleed subject matter expert, DNP student as team lead, and DNP faculty mentor. District representatives included the district Director of Transportation and Safety who served as the project point person, skills center Assistant Director, district Lead Nurse, and district Workplace Safety Manager. All representatives collaborated throughout the project to obtain physical space, time, training materials, and skills center staff participation requirements for training implementation. The Stop the Bleed subject matter expert provided educational training and served as a source of information throughout the project.

Methods: Transitioning all 34 skills center staff from laypersons to immediate responders required implementing Stop the Bleed training. Staff completed Qualtrics matched pre-post seven-point Likert scale surveys to obtain information about their knowledge, confidence, preparedness, and willingness to act during a bleeding emergency. Post surveys included three open ended questions for participants to share their perceptions about training facilitators, barriers, and areas for improvement. Descriptive statistical analysis is being completed through Excel software.

Outcomes: Preliminary findings suggest most participants felt they had increased knowledge and confidence after training, and they felt more prepared and willing to act as immediate responders in the event of a hemorrhagic emergency. Qualitative results have shown participant agreeableness to training, enjoyed the hands-on approach, and would like to see the program continued in the future.

Implications: The projected positive outcomes and participants' agreeableness of this project will lead to the formal recommendation to adopt training and hemorrhage control kits district wide. The long-term result will be over 2,500 immediate responders to serve their district and community.

Addressing Patient Experience in the Emergency Department Through a Standard Communication Framework: Connect, Ask, Respect, Ensures Understanding, Summarize (CARES)

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Aim: Consistently, patients and families identify communication as a key area for improvement. Risks of poor provider to patient communication include poor patient outcomes, increased emergency department (ED) re-visits, readmissions and poor patient experiences. Implementation of a standardized communication framework aligns with a commitment to patient and family centered care and a high reliability framework. The aim of this project was to implement a standard communication framework (CARES) for ED nurses, evaluate knowledge gains after an educational intervention, and compare pre- and post-patient experience data, synthesizing science-based innovation to improve nursing practice.

Framework: The CARES framework, an evidence-based tool developed by an interdisciplinary steering committee at the project site, helps clinicians to communicate with patients and families in a way that puts the patient at the center of their care in an inclusive and respectful manner.

Setting: This project took place in a quaternary urban freestanding 412-bed pediatric hospital ED in the Northeastern United States.

Stakeholder Team: The project lead is a DNP prepared nurse leader who holds a nurse executive board certification. The project lead had project site supported by DNP and PhD prepared nurse scientists who are experts in the field of research and quality improvement. Two expert lead nurses, an expert master's prepared ED educator and a bachelor's prepared staff nurse, were included.

Methods: This quality improvement project used one-group pre- and post-design with a longitudinal data collection period to measure nursing knowledge and family satisfaction scores following a CARES educational intervention and rollout. Participants responded to a Likert survey and open-ended questions pre- and 12-weeks-post-intervention. Face and content validity were evaluated by MSN prepared nurse educators. Travel and agency nurses were excluded from this project. The paired data were analyzed using descriptive statistics and thematic analysis. Unit champions supported the rollout and audited framework use.

Outcomes: Of 106 eligible nurses, 84 (79%) completed the pre-education survey. The matching of unique identifiers reduced the sample to 12 participants. While no statistically significant change was found between the pre- and post-education surveys, there was clinical significance. The majority of participants "strongly agreed" that they keep patients and families updated on their care regularly. Post-education, 65% agreed that their communication was effective even during busy shifts. Patient experience surveys demonstrated improved scores for keeping patients informed. Communication barrier themes included ED team communication, time constraints, capacity, and language barriers.

Implications: Given the consequences of ineffective communication on patient safety and satisfaction, there is a critical need to improve communication efficacy in the ED setting. This project informed a current pilot in an outpatient clinic with providers. Data from this project will be compared to outpatient clinic data to inform future practice, including a rollout to interdisciplinary teams across the institution. Improving communication can improve patient outcomes, patient satisfaction, and staff satisfaction.

Ambulance Offload Process Improves Offload Times

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Aim: Ambulance offload delay occurs when care of incoming ambulance patients cannot be transferred immediately from paramedics to staff in a hospital emergency department. This causes an increase in turnaround times for ambulance crews which compromises patient care and creates gaps in community ambulance coverage. Prolonged off-load times can also lead to delays in time to triage, time to physician, definitive patient care, and overall extended length of stay in the emergency department. The aim of this project was to decrease ambulance offload times.

Framework: Lean Six Sigma

Setting: A 72-bed emergency department/Level II Trauma Center that has over 100,000 ED visits per year in Escondido, CA.

Stakeholder Team: Melvin Russell MSN, RN (CNO), Thomas Siminski MSN, RN (Director of ED), Cheryl Graydon BSN, RN (Prehospital Manager)

Methods: In order to decrease ambulance offload times, we implemented an ambulance offload waiting area. This waiting area is similar to a lobby waiting room, except the patients come in by ambulance and are placed on gurneys which are lined up in the hall. Upon arrival, patients are immediately offloaded to this ambulance waiting area, EMS gives report to one of the offload nurses, and then EMS is released back into service. Patients are triaged by the offload nurse and the offload physician evaluates the patient and places orders for treatment. The ambulance offload area is staffed by at least one nurse and an EMT. The nurse starts the ordered treatments for the patient and then moves on to the next patient who is waiting. This offload area is an alternative care space designated by our capacity and surge plan and is used when direct bedding is not an option. Like the lobby waiting area, these patients are not in a 4:1 nurse to patient ratio as the offload nurse is not assigned as this patient's primary nurse but is rather the nurse overseeing and facilitating getting treatments started until a room becomes available. The line continuously moves forward as rooms become available and the patient is then assigned a primary nurse who assumes care of the patient, documents the patient's assessment and continues the ordered treatments. Much like the lobby waiting room, rooms are assigned to patients based on acuity and based on the risk of life or limb-threatening emergency. To determine whether the ambulance offload waiting area would improve patient offload times, we compared offload time data from the six months immediately preceding our intervention to the 12 months immediately following implementation of the intervention.

Outcomes: Ambulance runs increased from 1458 to 2131 a month over a year period. Median offload times decreased from 23.4 median minutes to 14.8 minutes. The percentage of offloads under 30-minute goal increased from 62.9% to 87.4%. Emergency department ranking amongst other facilities in the community increased from 10th to 1st.

Implications: The implementation of the ambulance offload waiting area decreased median offload times and increased overall ambulance runs. It is suspected that more ambulances chose to come to our facility after this intervention due to less offload delay.

An Interprofessional Approach to Decreasing Blood Culture Contamination in the Emergency Department

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Aim: In response to an increase in blood culture contamination rates in the emergency department, our team developed an interprofessional approach to addressing this lagging indicator. This project aims to identify opportunities for improvement in the blood culture collection process in the Emergency Department utilizing an interprofessional approach.

Framework: The Plan-Do-Study-Act cycle was utilized to carry out this project.

Setting: A teaching, level I Adult and Pediatric Trauma Center who also serves the county in the South-Central region of the United States.

Stakeholder Team: This project was approved and received support from the unit's Executive Nursing Director. The Assistant Director, Quality Improvement and the Emergency Nursing Services Coordinator served as the project leads. Emergency Center Technicians were nominated by the Nurse Managers to be Blood Culture Champions. These individuals were required to complete 1:1 training with a phlebotomist prior to fulfilling the role.

Methods: Prior to the implementation of this project, blood cultures were collected in the department primarily by nurses. Although all staff completed hospital-wide training on the collection process, observations revealed varied processes being utilized during specimen collection. Interventions included: education reinforcement, selection of blood culture champions by ED Leadership, individual 1:1 real time training of champions by phlebotomists, blood culture collection by trained champions only, and utilization of badge identifiers to distinguish champions. Phase 1 of the project focused on the area of the Adult ED averaging 48% of the unit’s contaminations between April to June 2022. Of the 181 contaminations, 157 (87%) were collected by registered nurses. Phase 2 focused on the area with the second highest contamination rate (24%) followed by Phase 3 which expanded to the entire Adult ED. Data collection was reviewed monthly utilizing a report generated by the Microbiology Services department.

Outcomes: Overall blood culture contamination decreased from 5.96% to 2.65% in 22 weeks. Reinforcement of education during weeks one and two yielded a decrease of 2.86%. Contamination rates maintained after the implementation of the blood culture champions beginning in week 3, resulting in a sustainment of weekly contamination rates averaging 3.15%.

Implications: Blood cultures are recognized as one of the most important tests performed in microbiology laboratories as they aid in the diagnosis of bloodstream infections. Contamination results in prolonged length of stay, increased healthcare costs, unnecessary or inappropriate antibiotic utilization, and a reduction in quality of care. The results of phases 1 and 2 have revealed a sustained decrease in contamination rates and an improvement in quality of care. Further data collection and process evaluation is needed to identify future interventions.

Assessment and Implementation of a Suicide Prevention Training in the Emergency Department

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Aim: Suicide is a leading cause of death in the United States and up to 43.8% of individuals who die by suicide have visited an Emergency Department (ED) in the year prior to their death. Current research supports the implementation of suicide prevention initiatives in the ED, however barriers such as staff knowledge of evidence-based practices exist. This project seeks to assess ED staff knowledge of suicide prevention before and after Counseling on Access to Lethal Means (CALM) training, in addition to the perceived effectiveness of the program. The project aim is to increase awareness about suicide prevention resources.

Framework: The PDSA and IOWA Models were considered in the development of this project.

Setting: This project was performed at an academic medical center in the Northeast. This Level I trauma center is the tertiary care center for a rural population of more than one million people.

Stakeholder Team: This project was led by a Doctor of Nursing Practice student studying to become a Psychiatric-Mental Health Nurse Practitioner while working as an Emergency Department Nurse. Data analysis was provided by an Emergency Medicine Research team. The project was developed with feedback from mentors, a team of Emergency Department leadership, physicians, psychiatry, physician assistants, nurses, mental health technicians, emergency medical technicians, and local community health partners. Grant support was provided by a local nonprofit organization supporting suicide prevention work in Emergency Departments throughout the state.

Methods: Suicide screening is not consistently performed using validated tools, so a survey was constructed to assess baseline knowledge, barriers to care, and offer an optional training intervention. All clinical ED staff at the selected facility (physicians, physician assistants, nurses, ED technicians, and mental health technicians) were offered voluntary participation in the project. Electronic pre-surveys were administered for baseline assessment, with a post-survey following CALM training. Sixty-four ED staff completed the training and both pre- and post-surveys. Demographic factors, including any history of suicide prevention training, were assessed in the initial survey. The surveys which accompanied the training were previously validated for this purpose and modified according to key stakeholder input.

Outcomes: Our study showed a lack of baseline suicide prevention training among ED staff, with 78% reporting no prior suicide prevention training. Of the staff that participated in CALM training, there was a significant improvement (< 0.001) in comfort and confidence regarding suicide risk assessment, utilizing means reduction approaches, and engaging in conversations around reducing access to lethal means.

Implications: Suicide prevention training in the ED with evidence-based strategies such as CALM is a feasible component of ongoing ED staff training that demonstrates significant improvement in staff awareness, confidence, and belief in suicide prevention efforts. This preliminary quality improvement work will be utilized to inform the development of an upcoming institutional update to suicide care practices.

BE ALERT - Behavioral Excellence: Advancing Leadership and Education in Real Time

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Objective: The increasing prevalence of workplace violence (WPV) in the Emergency Department (ED) continues to be of growing concern across the country, with numerous negative consequences resulting from this epidemic. Recent studies show approximately 70% of ED nurses report some form of physical violence during their work shift. Outcomes associated with WPV include loss of workdays, high staff turnover, burnout, staff dissatisfaction, increased worker's compensation claims, and poor patient quality of care.

De-escalation techniques and tools are widely used to decrease WPV in the healthcare setting. Although no "gold standard" currently exists regarding teaching de-escalation techniques, structured education that provides a standardized approach to address escalating or violent behavior effectively is optimal. This project aimed to evaluate the effectiveness of de-escalation techniques in simulation-based education (SBE).

EBP Model: The IOWA Model of Evidence-Based Practice was utilized for this project. Identification of a practice problem was followed by ensuring there was sufficient evidence to support the change. This model served as a guide and assisted the team with the steps to help identify issues, research solutions, and implement changes.

Setting: Teaching urban level 1 trauma center located in the West.

Participants: ED nurses participated in this project.

Methods: A comprehensive literature review was completed with guidance from our Research Nurse Scientist (RNS) to determine the most appropriate educational intervention for teaching techniques to address WPV. It was determined simulation strategies would be the most effective training to improve confidence among nurses managing these situations. Using a simulated patient experience, the following methods were demonstrated: de-escalation management strategies, modeling appropriate behavior, utilizing empathetic communication, identifying inappropriate patient/family behavior, and strategizing to manage the encounter and self-reflection. The simulation-based experience (SBE) consisted of three scenarios, each with a unique escalating patient/family member to interact with. Prior to the SBE the participants completed a pre-simulation survey to establish a baseline confidence level. Following the first scenario, a debrief was conducted. Education regarding recognition and tools to de-escalate these situations was provided. Participants then progressed through the final two scenarios utilizing this education.

After the three scenarios, a final debrief was conducted, and a post-simulation survey was completed.

Outcomes: The pre-and post-simulation survey administered utilized a 5-point Likert scale. Survey questions assessed confidence and competence in the following areas: Implementation of de-escalation techniques, identifying manipulative behaviors, setting boundaries and limits with a patient and/or family member, and providing care for a behaviorally challenging patient. The results were analyzed by comparison of pre-simulation and post-simulation raw data. The results of the data indicate nurses answered with greater confidence in their skills when managing behaviorally challenging and aggressive patients.

Implications: Simulation education was found to be a successful intervention in addressing WPV, de-escalation techniques, and identifying triggers that escalate behavior. Given these results, the delivery of SBE will be expanded to include a second cohort of staff from the ED, Critical Care, and Acute Care units to offer this simulation education to upwards of 400 additional nursing and provider staff.

Bringing Night Shift Education to the Forefront Through Bedside Training Sessions

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Purpose: Previous studies have shown that, on average, nurses staffing overnight have fewer years of experience compared to their day shift counterparts. New graduate nurses with fewer available resources coinciding with continued presentation of critical care/specialty patient populations presents a unique opportunity for bedside education. Fluctuating night shift volumes allows for informal educational offerings to occur, covering both planned and spontaneous topics.

Design: A retrospective, descriptive research design was used to assess staff perception of overnight educational offerings and confidence in their nursing knowledge.

Setting: The Clinical Nurse Expert is utilized to provide brief on-shift education in a teaching hospital and level 1 trauma center.

Sample: During the study period the emergency department hired 47 new nurses, including 9 with previous RN experience. The group evaluated involved primarily novice nurses, however all nursing staff on shift were encouraged to attend. Additional multidisciplinary staff such as pharmacists and respiratory therapists also attended to assist in discussion of topics in their respective fields. In total, 67 bedside education sessions occurred throughout 2022.

Methods: Presentations or demonstrations approximately 15 minutes in length allowed for the greatest number of participants to attend without disrupting patient care. The timing of education was flexible based on patient volume and availability of staff to attend. Topics ranged from medication administration, to resuscitation, to equipment specific education. REDCap, an electronic survey and documentation software, was used to capture survey data. Baseline data obtained in January 2022 was used to guide the content and gauge interest from staff. A follow-up survey sent in October 2022 was used to evaluate effectiveness of the project objectives and attendance. REDCap software was also utilized track teaching sessions, including topics covered and staff attendance at all bedside education occurring throughout 2022. Likert scaled questions were posed in a survey with scores ranging 1-10 with 1 indicating no helpful or new information was shared and 10 indicating information was helpful or new.

Results: 74 percent of staff answering a survey stated that they had attended an overnight education session, with a median number of 5 sessions attended per staff member. Surveyed staff responded regarding helpfulness of topics covered (mean 9.08/10) and amount of new knowledge gained (mean 7.03/10).

Implications: Engaging directly with nursing staff through bedside education was well-received by staff, with overwhelmingly positive self-reported measures of helpfulness and new knowledge gained. Based on data collected, it is recommended that emergency department management encourages in person, bedside education to occur overnight within a level 1 trauma center.

Buddy Up for Safety

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Aim: The goal of this project was to reduce the ED nurse verbal/physical assault rate through improved ways of identifying patients and visitors who could become aggressive, and finding a creative, non-threatening way to mark the room, so caregivers and support staff know to enter in pairs for safety.

Framework:: ADKAR (Awareness, Desire, Knowledge, Ability and Reinforcement)

Setting: The setting of this project is a community hospital, level 2 trauma center, with 42,000 ED visits annually in the Midwest.

Stakeholder Team: ED Clinical Director- Together with the Behavioral Health Specialist, we determined there was an opportunity to better identify ED patients who were not responding to de-escalation attempts. The clinical director provided subject matter expertise to ED nurse workflows and supported the implementation of the project.

Clinical Practice Specialist-provided staff training, leader rounding and accountability

Behavioral Health Specialist- explored best practices of other health system hospitals and EBP literature search. Proposed the adoption and implementation of the buddy signs. Created workplan education and communication plan. Tracked the data.

Risk Manager- assisted in developing a workflow and criteria for informing clinical staff of patients who may become violent

ED Medical Director- supported the new initiative by partnering from a provider perspective

Methods: A nurse co-led a team including Risk, ED leadership, and a Behavior Health Educator reviewed past assault cases. Identification of the risky patient rooms was a key issue. They created a discrete, non-offensive sign to hang on doors of patients with history of aggression, medical record risk flag, or aggressive behavior currently. They determined parameters for when the sign should be used. Signs were ordered, a 4x4" magnet, later changed to 8x11 for better visibility. Tip sheets and flyers were emailed to 100% of ED staff, leaders, providers, and ancillary leaders. Workflow discussions occurred at daily shift huddles and when rounding. Sign usage was tracked.

Outcomes: ED Buddy Sign usage is a success in reducing workplace violence. Baseline nurse assault rate/100 patient visits= 16.84%. Post-implementation nurse assault rate =10.04%/100 visits, (a 40.38%/100 patient decrease in physical and verbal assaults), improving the nurse care environment in the ED. Teamwork has improved, sharing when patients or families may be at risk for aggression, so the sign can be placed. Anecdotal reports of nurses and other caregivers also indicate that staff feel supported and empowered by the organization's leadership to set limits on aggression and protect themselves.

Implications: The success in the ED resulted in the dissemination and adoption of Buddy Signs house wide. Room numbers with Buddy Sign alerts are reported at the organization's interdisciplinary leadership Daily Safety Huddle so that other leaders can inform their staff caring for those patients. The aim of this work is to empower the emergency department staff to proactively identify patients with prior history of aggression or currently aggressive and implement the buddy sign process and safety precautions to ensure their safety, reducing physical and verbal assaults.

ChargED Up for Leadership; Developing Your Dream Team

Rosemarie C. Nolazco, MSN, RN, TNS, NE-BC, Director of Patient Care Services Emergency Department and Critical Care Unit, Northwestern Medicine Delnor Hospital, West Chicago, Illinois; **Katherine M. Czyzewski**, MSW, LCSW, SEP, Social Worker - Professional Development Specialist, Northwestern Medicine Delnor Hospital

Aim: The purpose of this work was to optimize the Magnet nursing culture, where every nurse is a transformational leader, to empower a dedicated group of charge nurses to improve the nursing care environment in the Emergency Department (ED). This work impacted the quality of our leader's performance..

Framework: ADKAR (Awareness, Desire, Knowledge, Ability, Reinforcement)

Setting: The setting for this project is a community hospital, level 2 trauma center with 42,000 ED visits annually, located in the Midwest.

Stakeholder Team: ED Clinical Director- Provided the vision for charge nurse team development, facilitator and mentor
Clinical Practice Specialist- developed case scenarios for simulation and was an ad hoc mentor
Social Worker- developed and presented standardized leadership development program, ongoing consultation, coaching and education
4 ED Clinical Shift Coordinators- participants

Methods: Partnering with internal experts from operations and HR, charge nurses were educated in operational skills including scheduling, payroll, HR topics, orientation and onboarding, productivity and finance. For soft skills, the Professional Development (PD) social worker taught and facilitated discussion on communication styles, executive presence, emotional intelligence, self-regulation and navigating courageous conversations. The social worker collaborated with the clinical practice specialist to create case scenarios to practice the essential leadership skills in a simulation setting. Health system resources were used for self-guided education for the one-year leadership development program. Charge nurses met monthly with nurse clinical director and PD social worker to debrief situations. Advice and feedback were provided. The charge nurses grew in cohesiveness.

Outcomes: This standardized charge nurse development program was a success. Prior to this project, the charge nurses did not have the skill set, nor comfort level to provide peer coachings, leaving much of that to the clinical director. Post-development, the charge nurses manage 100% of staff coachings and escalate to the clinical director as needed. They independently manage daily operations of the unit. Throughout this process, the ED staff were surveyed in three key areas. The ED staff surveys revealed the following: team accountability- baseline 73%, post 82% (12.3% increase); real-time feedback- baseline 73%, post 88% (20.5% increase); and acknowledgement of a job well done- baseline 65%, post 82% (26.2% increase).
There was 100% voluntary retention of the first cohort. One charge nurse in the cohort won 2022 organization Transformational Leadership Award and another has been promoted to the ED Manager role.

Implications: Based on staff surveys, the nurse care environment has improved. Charge nurses in the ED operate autonomously, continuing to gain confidence. This standardized charge nurse development will be disseminated further within the organization. New cohorts are being developed with input from their peers. Prior to this program there was not a standardized approach to develop the charge nurse team. By providing this opportunity for growth, the department has had improved staff engagement, recruitment and retention. The cohesiveness of the charge nurse team has positively impacted the culture of the department.

Community Outreach for Patient Engagement

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Purpose: There is a critical need to address patients' difficulty with accessing primary/subspecialty care, resulting in frequent ED visits. For patients that visit the ED >3 times in 90 days, the Community Outreach for Patient Engagement (COPE) program aims to reduce ED utilization and address rural health care disparities through improved access to healthcare.

Design: This is a randomized controlled trial using implementation framework.

Setting: This study takes place in a level 1 trauma center in rural New England.

Sample: Patients who have visited our ED greater than three times in the past 90 days are included in this study. Exclusion criteria includes a recent history of violence and being under the age of 18. Participants meeting eligibility criteria are randomly assigned in a 1:1 ratio to the in-person (intervention) or telephone follow-up only (control) groups.

Methods: In-person, low barrier visits occur in the community, and address clinical and social determinants of health needs. Based on the patient's needs, these visits occur as frequently as daily, ranging to weekly. Our primary analysis is based on the intention-to-treat principle. We are tracking engagement with primary care, overall health, food security and safety. ED utilization and hospital admission are compared to the subject's number of visits and admissions during the year prior to enrollment.

Results: 30% of patients in the COPE pathway were assigned a high acuity, compared to 29% of patients in the phone call pathway. Patients in the COPE pathway had 15.1 pre-enrollment ED visits, and 14.2 post enrollment visits (a change of -1.0). Patients in the phone call pathway had 12.8 pre-enrollment ED visits, and 14.9 post enrollment ED visits (a change of -0.25). A cost-benefit analysis was completed. The decrease in ED visits shows a cost avoidance of $4,361, and the decrease in hospital admissions results in a cost avoidance of $322,218.

The COPE pathway's hard savings of $366,579, minus project costs of $50,000 show a return on investment (ROI) of $316,579, or a cost ratio of 7.33. We estimate that 27 Emergency Medical Services (EMS) calls were avoided as part of the COPE pathway.

Implications: Patients in the COPE pathway have 3.1 fewer ED visits/year than those in the phone call pathway, and 1.17 fewer admissions. This data shows that the COPE pathway has a positive impact on reducing ED utilization. At a time when the ED is facing unprecedented staffing shortages, paired with increasing patient acuity, decreasing resource utilization will benefit Emergency Medicine. We would like to investigate further uses of this community-based approach to Emergency Medicine. Specifically, we are interested in investigating the COPE team's involvement in facilitating the initiation of Medications for Opioid Use Disorder (MOUD).

Creation of an EMS Throughput Initiative in Order to Decrease EMS Wall Times

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Aim: Background: EMS volume accounts for approximately 30% of our total patient volume. EMS wait times greatly impact community response times and facilitating EMS units to get back into service to be available for the community is pivotal. No standardized process for initiating care for EMS patients who are waiting for ER room placement.

Aim: Creation of a consistent EMS offload process to improve patient flow of EMS patients and to expedite EMS units going back into service to be more readily available to the community. To decrease EMS wall times so EMS units can respond quicker to critical patients (i.e. patients who meet trauma, STEMI, stroke, sepsis alert criteria). To improve throughput and initiation of care for EMS offload patients waiting for bed placement after care is transferred to ER staff from EMS personnel.

Framework: The Plan-Do-Study-Act guide was used to guide this quality initiative

Setting: A teaching, urban level II trauma, comprehensive stroke, certified comprehensive cardiac care center located in the Southeast with a 633 inpatient bed capacity.

Stakeholder Team: Vice President of ER assisted in collecting EMS data.

ER leadership assisted with obtaining equipment needed for EMS offload area and assisted with staff education during shift huddles.ER patient flow coordinators conducted education and ensured process was followed during roll out.

Project champions consisted of selected ER staff members who assisted in educating staff during process rollout.

ER EMS coordinator assisted in education of new process to members of EMS leadership.

Methods: Creation of a standardized EMS offload process to facilitate getting EMS units back into the community. Prior to this quality initiative, there was no standardized EMS throughput process. Creation of this process was to ensure EMS throughput would be expeditated and be able to be back into service sooner to better serve our community. A 22 bed capacity EMS offload process was initiated after receiving buy in from necessary stakeholders. Two EMS triage nurses were designated to assess and assume care of all EMS patients arriving at our facility. EMS triage nurses would facilitate their placement into designated offload areas if no ER room was available. Designated offload areas would be staffed by ER staff members and care would be initiated on these patients while waiting for room placement.

Outcomes:

AVERAGE EMS UNITS MONTHLY	AVG WALL TIME IN MIN	MEDIAN WALL TIME IN MIN	EMS UNITS WAITING OVER 60 MIN PER MONTH AVERAGE
PRE-PROCESS AVERAGE:2781	PRE-PROCESS AVERAGE; 30.16	PRE-PROCESS AVERAGE: 16.85	PRE-PROCESS AVERAGE: 337.75
PRELIMINARY RESULTS AVERAGE: 3094	PRELIMINARY RESULTS AVERAGE: 15.56	PRELIMINARY RESULTS AVERAGE: 10.08	PRELIMINARY RESULTS AVERAGE: 106

Implications: Our preliminary data has shown that the EMS offload process has been successful in decreasing EMS wait times at our facility by expediting EMS throughput. This process has standardized offloading EMS patients who are waiting for room placement and expedited getting EMS units back into service. Patients are also assessed sooner and have their care initiated by ER staff while waiting for room placement.

Decreasing Emergency Department Door to Triage Time with Evidence-Based Process

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Aim: Triage is the pivotal component of a patient's emergency department (ED) course. EDs have demonstrated low triage accuracy and an increase in door to triage time, which significantly impacts quality of patient care, healthcare costs, and patient satisfaction. Evidence-based triage education, such as the ENA ESI course, is critical to providing accurate, high-quality triage. The aim of this quality improvement (QI) project was to decrease door to triage times for adult ED patients with a chief complaint of chest pain by 20% from 18 minutes to less than 15 minutes in 3 months.

Framework: The Model for Improvement with Plan-Do-Study-Act Cycles was used to design and guide this quality improvement project.

Setting: The QI initiative took place in the ED of a midwestern urban, academic, healthcare center from October 1, 2022 and December 31, 2022.

Stakeholder Team: Core team members included the QI project leader who identified the quality gap, developed a focused triage education module, and collected data, ED leadership who supported project production and assisted with participation recruitment, ED informatics team, and ED staff RNs, nurse practitioners, and physicians who voluntarily participated in the project.

Methods: ED RNs, nurse practitioners, and physicians voluntarily completed an anonymous pre-implementation survey which collected baseline demographics and assessed ED ESI/triage knowledge and AHA Chest Pain Guidelines (case studies and quiz) via the Qualtrics web-based platform. Participants then reviewed an evidence-based narrated PowerPoint presentation summarizing ENA ESI/Triage and AHA Chest Pain Guidelines. Immediately following the education, participants completed a post-implementation survey and quiz similar to the pre-implementation survey and quiz Qualtrics to assess changes in knowledge. Data analysis was performed using Qualtrics and the EMR (EPIC Slicer Dicer). EPIC Slicer Dicer allows customizable data reporting, analytics and exploration for patient populations.

Outcomes: Preliminary data in the quiz scores demonstrated participants improved triage accuracy, however they tended to under triage patients more than over triage. Door to triage times for patients presenting to the ED with chest pain did decrease, however they did not decrease by the goal of 20%. There was improvement in door to EKG times and also in overall participant scores in the post-implementation quiz. A significant number of participants reported an increased level of confidence in their triage skills after viewing the education.

Implications::This project supports the need for continuing education of ED ESI/triage. The results also highlight the urgency to address the impacts of triage accuracy, door to triage times for all patients, and the perception that triage is a vital component to a patient's ED course. As triage accuracy and door to triage times improve, there may be an opportunity to expand and improve other important ED metrics.

Developing a Pediatric Emergency Behavioral Health Acuity Assessment

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Aim: The national pediatric behavioral health crisis with subsequent increases in emergency department (ED) mental health visits has changed ED nursing (RN) practice. In the ED, children with behavioral health issues have dynamic acuity levels. Acuity assessment allows nurses to determine the level of severity of patients and helps identify needed resources and interventions. There are no comprehensive evidence-based tools that support ED nursing acuity assessment. The aim of this quality improvement project was to use the plan-do-study-act (PDSA) model to develop a novel, collaborative, interprofessional approach to design the emergency behavioral health acuity assessment tool (EBHAT) for pediatric behavioral health patients.

Framework: The PDSA framework guided project design and implementation.

Setting: The setting was a 47-bed urban Level 1 Pediatric Trauma Center in an academic, free-standing, non-profit, Magnet-designated 187-bed teaching hospital the Northeast.

Stakeholder Team: Stakeholders included the ED Nurse Manager and Medical Director of ED Behavioral Health Services (project co-leads) that oversaw the entire project. The Behavioral Health Nurse Team Lead supported tool development, testing, education, and roll-out. Social Work, Psychology, Psychiatry, Clinical ED RNs, and Advance Practice Providers gave feedback and suggestions for changes to the tool throughout PDSA cycles. The Nurse Scientist provided evidence, project design, and data analysis support. The Director of Injury Prevention Center worked on conceptualization and grant submission. The Research Associate (project manager) supported grant management and project logistics.

Methods: This project aimed to design and implement an ED nursing acuity assessment tool for behavioral health. Plan: the project team reviewed current evidence, available tools, and drafted tool design. Grant funding was obtained. Available pediatric and adult acuity assessments provided the framework for the EBHAT. Stakeholder input was incorporated. Do: EBHAT was tested in paper-form. Study: Feedback from RNs and staff was obtained. Act: the EBHAT was modified and re-trialed. Subsequent PDSA cycles included implementing modifications, feedback, and EBHAT revisions to frontline staff. EBHAT was added to EPIC in August 2021. PDSA cycles continued; RNs incorporated EBHAT into workflows. Project outcomes included: a behavioral health acuity dashboard, restraint use, and acuity levels. Descriptive statistics and comparative analyses were planned.

Outcomes: Since implementation, a dashboard with real-time capture of ED behavioral health patients, acuity levels, and resource use was executed and informed staffing and resource decisions. From 2021 to 2022, restraint episodes decreased by 22.7%. August 2021 to August 2022 the average number of patients per shift with high acuity was 0.75, moderate acuity was 8.93, and low acuity was 12.6. The EBHAT was fully integrated into ED nursing care of behavioral health patients. Use was expanded to medical patients who the RN suspected had a mental health concern.

Implications: This novel tool provided improved insight into the acuity of pediatric patients presenting with behavioral health concerns and allowed for better outcomes and resource utilization. The PDSA framework guided development and implementation of a new tool for pediatric ED RNs to guide and support care in this special patient population. Future studies are planned to look at patient indicators and the predictive value of the EBHAT.

Effects of Process Changes on Emergency Department Crowding in a Changing World; An Interrupted Time-Series Analysis

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Purpose: In this study, we assess the effects of process changes that we introduced during a six-year period. The process changes, such as the introduction of a general practitioner cooperative (GPC) at the emergency department (ED) and additional medical staff during peak hours, were expected to improve patient flow and decrease crowding. Meanwhile, centralization of emergency care took place, decreasing the number of EDs from three to one. We aim to provide insight into the effects of several process changes on crowding, patients' ED length of stay (LOS), and number of exit blocks in the remaining ED, while accounting for changes in external circumstances and a changing population.

Design: We assessed the effects of several process changes and external circumstances over a six-year period. Using a time series design, we described the effects on three crowding measures: ED patients' LOS, a modified version of the National ED Overcrowding Scale (mNEDOCS) and the number of patients experiencing exit block. We extracted the following patient and visit characteristics from the hospital's database for each registered patient: age, sex, presenting problem, triage level, day and time of the visit.

Setting: The hospitals are located in the Netherlands. The facility delivers hospital care at three hospitals. Acute care was centralized from three EDs to two in 2017, and from two EDs into one in 2019. The remaining 34-bed ED serves as a regional level 1 trauma and acute neurovascular center and has a 29% admission rate.

Sample: During the study period, 487,375 ED visits were registered: 50,201 in the ED that closed in month 33, 108,802 in the ED that closed in month 60), and 318,372 in the remaining ED.

Methods: Crowding was defined as a mNEDOCS of >100. We calculated ED LOS and number of patients experiencing exit block (LOS >four hours for patients who need hospital admission. We summarized mNEDOCS scores, LOS and number of exit blocks per week and determined time points at which the various interventions and external circumstances took effect. We built an interrupted time-series model per outcome measure using ARIMA modelling to account for autocorrelation in the outcome measures. The statistical package for social sciences was used for the analyses. The regional medical research ethics committee exempted the study.

Results: Longer patients' ED LOS was associated with more inpatient admissions and more urgent patients. The mNEDOCS decreased with the integration of the GPC and the expansion of the ED to 34 beds, and increased with the closure of a neighboring ED and ICU. More exit block occurred when more patients with shortness of breath and more patients > 70 years of age presented to the ED. During the severe influenza wave of 2018-2019, patients' ED LOS and number of exit blocks increased.

Implications: In the ongoing battle against ED crowding, it is pivotal to understand the effect of interventions, corrected for changing circumstances and patient and visit characteristics. In our ED, interventions which were associated with decreased crowding measures included expansion of the ED with more beds and integration of the GPC on the ED.

WINNER EN23 Best ePoster Award!

Emergency Department Nurse Preceptor Development

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Aim: The project aimed to improve the training abilities and competence of the nurse preceptor in the ED. The ED nurse preceptor can positively or negatively impact the career trajectory of a new graduate ED nurse; therefore, it is essential for the preceptor to have the skills and tools to precept effectively.

Framework: The framework used in the project was the PDSA model.

Setting: The study setting was a tertiary Level 1 trauma center teaching hospital in the Midwest.

Stakeholder Team: The key stakeholders for this project were the ED learning consultant, ED nursing director, simulation center director and coordinator, and the ED system administrator.

Methods: Based on the literature review, the nurse preceptor who received education and development positively impacted the new nurses' successful transition into independent practice. Education themes that emerged from the literature review for preceptor education included identifying learning styles, providing feedback and evaluating performance, facilitating difficult conversations, and developing clinical reasoning skills. Case studies, group discussions, role-play, and simulation experiences were effective teaching strategies. This project aims to create an immersive, interactive experience for preceptor education. Developing and enhancing the skills of the nurse preceptor can positively impact the orientation experience of the new graduate nurse in the emergency department. Using interactive and engaging strategies in the preceptor workshop provides a realistic experience to develop the confidence and competence of the nurse preceptor.

The plan for this project is to develop an immersive and interactive eight-hour preceptor workshop. Objectives for the workshop include the following:

• Identifying the learning style and generational learning styles of the new nurse.
• Developing learning strategies based on the different learning styles.
• Develop verbal and written feedback communication skills through interactive case scenarios.
• Evaluate the performance of new nurses in simulated experiences using an evaluation rubric.
• Deliver oral performance evaluation of new nurses in the simulation environment.
• Develop teaching strategies on clinical reasoning skill development using live simulation experiences.

Outcomes: Evaluation methods used in the workshop include pre- and post-workshop surveys completed by the participants and surveys conducted by new graduate nurses whom the participants oriented. Qualitative and quantitative data were collected from the surveys for analysis of the overall effectiveness of the workshop and the impact on the preceptor participants.

The preceptor workshop project data analysis is currently being conducted. The data analysis results will be available at the time of the presentation.

Implications: Initial data analysis supports a positive effect on the competence and confidence of the ED nurse preceptor following attendance at the preceptor workshop.

Data analyzed from the initial workshop includes confidence in using the skills and tools learned after the workshop and recommendations for future workshops. Once the data analysis is finished, the workshop will be reviewed, and updates will be made as needed.

Recommendations for ED nursing leaders would be to encourage nurses with an interest in precepting to attend a workshop before precepting a new graduate nurse.

Emergency Psychiatric Assessment, Treatment, and Healing Units: Decreasing Violence, Increasing Throughput, and The Future of Emergency Mental Healthcare

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Objective: Patients with acute mental health disorders have few resources besides visiting the Emergency Department (ED). Once in the ED, they are often subject to inhumane treatments i.e., forced removal of belongings, intramuscular injections without consent, and physical restraining. Emergency Psychiatric Assessment, Treatment, and Healing (EmPATH) units offer an alternative to traditional emergency mental health treatment by providing a comfortable "milieu" experience. The objective of this evidence-based practice (EBP) study was to determine if an EmPATH like unit would decrease "as needed" behavioral control medications (e.g., Zyprexa, Ativan, Geodon), restraints, Length of stay (LOS), and increase ED Throughput when compared to the traditional emergency mental health treatment process.

EBP Model: Iowa Model for Evidence Based Practice

Setting: Teaching, Urban level III trauma center located in metro Detroit

Participants: ED Nurses, ED providers, and boarded mental health patients.

Methods: Recent studies show that EmPATH units decrease ED boarding times, LOS, psychiatric admissions, cost of healthcare, while increasing ED throughput and patient satisfaction.

Our hospitals EmPATH like unit (also called ED Annex) is a four-room, eight-bed unit off the ED. This unit holds boarded mental health patients awaiting psychiatry assessment or inpatient placement. Patients with significant disruptive behavior are excluded from the Annex to preserve the therapeutic milieu. The annex has four showers, a communal area with television, board games, creative activities, library, and pantry. Patient socialization is encouraged and attention to the healing milieu is a priority. Finally, medical exams are performed daily and home medications are ordered/administered.

In this quantitative pre-post comparison EBP study four outcomes were measured, "as needed" behavioral control medications (e.g., Zyprexa, Haldol, Geodon) in the Annex unit versus the ED, restraint application in the Annex versus the ED, and LOS in the Annex versus the ED. Overall ED throughput was also measured. Comparing ED throughput prior to the Annex and after.

Outcomes: Projected outcomes for the Annex unit are a reduction in "as needed " behavioral control medications (e.g., Zyprexa, Haldol, Geodon) in the Annex versus the ED, reduced restraint application in the Annex versus the ED, and reduced LOS in the Annex versus the ED. Finally, overall, ED throughput is projected to be increased post opening of the Annex unit.

Implications: Implication of EmPATH units are, reduction of psychotropic medications (e.g., Zyprexa, Ativan, Geodon), reduction of restraint application, LOS, and increased ED throughput. Furthermore, mental health patients receive better, more holistic care. It is recommended that units with large mental health populations and or long boarding times create an EmPATH unit. The outcomes and implications above are anticipatory. Data analysis will be done when data collection is complete.

Ensuring Compliance with Documentation Policy for Patients Waiting to Be Evaluated

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Aim: At our institution, patients are spending increased lengths of time in the Emergency Department waiting to be assigned to a treatment area and evaluated by a physician. During this time, patients do not have an assigned nurse, therefore vital signs and reassessments were not being performed every two hours as per department policy. This compromised patient safety and regulatory compliance. The aim of this project was to improve patient safety and satisfaction through implementation of a designated nurse to reassess, intervene when necessary and ensure documentation is completed every two hours on waiting room patients.

Framework: LEAN Methodology was used for this quality improvement project.

Setting: This project was implemented at an urban, level I trauma center located in the Western United States.

Stakeholder Team: The deviation from documentation policy was identified by the department's Executive Director who proposed that a designated q2hr reassessment nurse role be created within the existing department staffing pattern. Assistant nurse managers developed the role definition and staffing strategy using feedback from frontline clinical end users, including charge nurses and staff working in the assignment during a pilot period.

Methods: Our department implemented a new nursing role to re-assess patients who are experiencing long holding times in the waiting room. Vital signs and a focused assessment are completed by a reassessment RN every two hours after the initial triage encounter with patients. Vital signs may be assisted by Emergency Trauma Technicians or Clinical Care Partners. The Electronic Medical Record displays a red flag indicating when the reassessment is past due. Periodic chart audits will be performed throughout the day by the charge nurse and administrative nurse to increase compliance.

Outcomes: Implementation of a designated nurse to provide re-assessment documentation every two hours for waiting room patients occurred in October 2022 and data collection is ongoing. Preliminary data demonstrates a mean non-compliance rate of 17.77% (range 3.26%, 30.47%). Ongoing analysis will examine associated factors to rates of low and high compliance days, including ED volume and staffing.

Implications: Emergency Departments are experiencing longer wait times to be evaluated and treated by providers. Due to the acute nature of patients' presenting illnesses, it is imperative that patients are frequently monitored and reassessed in order to receive timely and appropriate care. Based on preliminary data collection, designating nursing staff to the role is a strategy that may effectively perform these assessments in the waiting room environment. Data also suggests that compliance is best achieved by having clear indicators on the Electronic Health Record (EHR) to notify staff of overdue documentation. Real-time chart audits by administrative nurses may additionally provide a positive effect in the implementation of the documentation and care standards. With a multi-faceted approach, the impact of various strategies will be analyzed to evaluate which demonstrated the most positive impact on nursing documentation and practice.

Evaluating Fall Prevention in Emergency Department Patients

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Aim: The purpose of this project was to evaluate fall prevention strategies in the emergency department by evaluating if the correct tools were in place to assist staff in decreasing anticipated physiological falls and make the essential tools available to staff.

Framework: LEAN strategies were used throughout this project.

Setting: This hospital system is public, not-for-profit located in rural North Carolina serving seven counties. The main hospital, where this project was conducted, has 350 beds with 40 ED beds and operates as a referral hospital. The ED sees a mix-population of adults and pediatrics.

Stakeholder Team: The stakeholders were the Direct of Nursing Excellence who aided in running reports and obtaining resources for quality metrics, ED Directors approved purchasing of equipment and ensured project was supported with hospital administration. Other stakeholders were Epic Analysts who were essential in updating the documentation for the ED specific assessment tool, ED Supply Tech ensured supplies for staff and patients were maintained, and infrastructure services assisted with relocation of phones in ED patient rooms.

Methods: A 3-question survey was sent to all ED staff to gather information on fall prevention and barriers. This information was used to determine if they had supplies needed to assist in fall prevention and whether there were barriers to implementing fall prevention strategies. With this information, a safety drawer with fall prevention supplies was implemented in all patient rooms, patient phones were relocated for ease of access, and ceiling tiles with “Call Don’t Fall” reminders were placed over patient beds. In addition, an evaluation of documentation was completed after a review of evidence and ENA practice guidelines were reviewed. This led to a change in documentation (in process) to appropriately identify ED patients who were high risk versus all patients being high risks (current practice).

Outcomes: The initial survey revealed gaps to fall prevention practices, however, after changes were implemented, the staff report fall prevention tools are now easier to access and showed an increase in their likeliness to implement. Although data showed an increase in falls, it was found that long-boarders during this time frame were directly related to this increase. In addition, high turnover for all staff, not just nursing, may have negatively impacted this project. Ongoing projects are completing the transition of phone relocation in patient rooms, completing the work with Epic to implement the ED specific documentation tool versus the tool currently in place, and using this documentation to implement fall bundles for patient according to level of risk.

Implications: Ensuring patient safety is essential, however, what inpatient units implement is not always appropriate for the ED. Using ED specific tools and strategies, including ED specific documentation for fall risk patients, is necessary to identify risks and prevent falls in the ED, as well as improve staff compliance with implementing safety measures.

Evolution of the ER: a visual mixed-methods examination of nurses' perspectives on evolving physical space in a hospital Emergency Department

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Purpose: The physical structure of emergency departments may impact quality and efficiency of health care and may contribute to patient safety and satisfaction. The physical space of emergency departments have changed significantly over recent years in both form and function, yet relatively few studies have examined nurses' perspectives on the impact of physical changes. Following a significant physical renovation and expansion of a midsize hospital and regional trauma center Emergency Department in 2019, this study aimed to examine nurses' perspectives on the impact of changes in the physical space on patient safety, quality of care, and work efficiency.

Design: The project was conducted using a mixed methods approach consisting of a novel questionnaire and semi-structured interviews using photo and video visual aids.

Setting: A mid-size regional medical and trauma center.

Sample: A convenience sample of 55 Emergency Department nurses.

Methods: The project was conducted using a mixed methods approach consisting of the following components:

1. Semi-structured interviews utilizing visual photo aids depicting physical changes to the ED space over time.

2. Structured questionnaire: The questionnaire was developed based on the literature and included 5 demographic questions and 14 questions examining impact of the renovation on work habits and environment using a 5-point Likert scale. Reliability testing showed Cronbach's alpha of .866 for the instrument.

Results: Forty-five nurses from the ED responded to the questionnaire (mean age 37.5, mean ED seniority 8.5 years). Ten experienced nurses were interviewed (mean age 43.7, mean seniority 16.7 years). The questionnaire indicated that nurses perceived that the new triage room and updated triage procedure improved their ability to identify patients' medical condition (mean 4.31, SD .85) and improved work-flow efficiency (mean 4.53, SD .69). Likewise, nurses reported that the integration of a new ambulatory wing into the main ED improved work collaboration (mean 4.07, SD .99) and efficiency (mean 4.2, SD .76). Nurses reported that the new physical structure contributed to the safety and comfort of the patient (average: 3.53, SD= .84), and improved quality of care (average: 3.89, SD= .84).

From the semi-structured interviews, three main themes were identified: (1) improved ability to identify and fulfill patients' medical needs (especially regarding the triage process), (2) improved patient safety (particularly fall-risk and changes in patient condition), (3) impact on work efficiency and communication between ED staff (both positive and negative effects).

Implications: The ED is a continuously developing entity, changing in real-time along with changing populations, patient acuity, demand and other internal and external factors. While ED workflow and capacity changes frequently, physical changes/renovations to the space are infrequent. Changes in the physical structure can impact efficiency in work procedures, patient safety, quality of care and cooperation between staff. However, it is important to consult and involve care teams in the design and implementation of renovations. Use of photos and video as visual aids for interviews in addition to a quantitative questionnaire was effective and is recommended for future projects/studies.

Hey! I need some help here, please!

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Purpose: Within Malaysia's local context, studies of nurses' experiences during a disaster are limited up to the year 2015. This study aimed to explore nurses' experiences of working in a disaster situation and identify factors that contribute to and hinder the nurses' response.

Design: This retrospective study utilized a qualitative approach using a constructivist grounded theory.

Setting: The nurses were recruited from nine public hospitals of the Ministry of Health across seven states in Peninsular Malaysia, between January and September 2016.

Sample: About thirty (30) Malaysian nurses; staff nurses and sisters were recruited for the study. They have been involved in disasters that occurred from the years 2005 until 2016. The disasters that they have been involved in were tsunamis, floods, landslides, fire, pandemics and mass casualty incidents. The study was carried out for 9 months, taking into consideration the use of a constructivist grounded theory approach that requires the implementation of an iterative process for data collection and data analysis besides the geographical location of disasters that happened scattered in Malaysia.

Methods: Semi-structured, in-depth one-on-one interviews utilizing a validated topic guide were used to gain rich data on the nurses' experiences, supported with field notes. The trustworthiness of the data has been ensured through prolonged engagement with the respondents, triangulation between data from interviews and field notes, the selection of purposive and followed by snowball sampling, and reflexivity that fits all elements needed in a qualitative study. In regards to the implementation of constructivist grounded theory, this study interviewed the nurses iteratively. The data from one respondent was collected and analyzed immediately before proceeding to the next respondent. The data was collected until it reached theoretical saturation where no more new subcategories emerged.

Results: 'Ensuring individual sustainability when in a hostile environment' was identified as the core category, overarching the three categories of 1) establishing competencies and responsibilities, 2) managing emotions and 3) getting support. These categories formed the foundation of a model named 'Being A Disaster Nurse'. The findings revealed that a concern of the nurses in this study was being unprepared for disaster response and thus restricting their performance in managing a disaster. Despite facing difficulties and with less preparation, they remained serving the disaster victims without fail and without thinking about their own health.

Implications: The study revealed a model of 'Being A Disaster Nurse' that can be served as the basis for preparing nurses for disasters. More research needs to be carried out about nurses' experiences responded during disasters. In regards to nursing education, more exposure should begin from the nursing school on the preparation of their nursing students. These findings can facilitate policy or practice that could assist not only nurses but other healthcare professionals in their preparedness prior to responding to a disaster. This finding also opens up opportunities for the researcher to bring back the long-lost specialty in nursing (disaster nursing) which was started by Rufaida Al-Aslami (the Muslim founder of nursing) in the 7th century and Florence Nightingale (the modern founder of nursing) in the 19th century.

How the Heck Does a PECC Improve Pediatric Readiness: A Quality Improvement Collaborative

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Aim: Having a designated pediatric emergency care coordinator (PECC)/champion has increased the weighted pediatric readiness score (wPRS) in EDs. High wPR's directly correlated to improved outcomes for pediatric patients, demonstrating a 4-fold lower mortality rate for children.The Pediatric emergency care coordinator Workforce Development Collaborative (PWDC) highlights the significant impact PECCs have on pediatric readiness and how quality improvement initiatives can improve outcomes. PWDC had two aims: By March 2021, 100% of participants in phase 1 will have identified at least one strategy to improve pediatric readiness within their organization. By June 30, 2022, 90% of participants in phase 2 will design and implement a quality improvement project that aligns with Pediatric Readiness.

Framework: The PWDC followed the Institute for Healthcare Improvement's (IHI) Model for Improvement. Participants were exposed to the IHI framework to guide improvement work. Learning sessions introduced concepts including; building your team, setting aims, creating key drivers, and how to begin making change. Phase two participants received coaching sessions and QI tools to help them develop an improvement project. Projects were from one of the following four areas: formalizing PECC role; securing pediatric equipment/supplies/medications; developing pediatric competencies; or developing a policy/protocol/pathway/decision support tool. PWDC team members worked with participants to define a measurement strategy and supported participants as they made iterative changes using rapid plan-study-do-act cycles.

Setting: The QI collaborative was open to individual interested in improving the quality of pediatric emergency care in the emergency department, prehospital setting, or their region.

Stakeholder Team: Subject matter experts in pediatric readiness and quality improvement methodology hosted and facilitated learning and coaching sessions. The initiative was led by an executive team of nurses, physicians, prehospital professionals and supported by a project manager.

Methods: Phase 1 explored pediatric readiness-focused areas through a QI lens and role-specific breakout sessions. Participants examined best practices that role specific PECCs from around the country. Survey reporting identified areas for improvement related to pediatric readiness. A personal dashboard tracked their progress.

Data analysis focused on the number of participants and their role, completion rate of the environmental scan, identification of gaps in their current state of pediatric readiness, and changes in knowledge of pediatric readiness and quality improvement methods. Phase two analysis focused on the percentage of participants that submitted project descriptions, smart aims, and change strategies.

Outcomes: 1491 participants registered for the collaborative and 1370 participants remained throughout phase one of the PWDC representing 610 EMS practitioners, 482 nurses or other healthcare professionals, 165 physicians or advanced practice providers, 79 EMSC State Partnership program team members, and 34 participants listed as other/unsure. Phase two had 135 participants. We continue evaluation of survey results and data.

Implications: The PWDC empowered pediatric champions from the nation and the emergency care continuum to drive pediatric readiness efforts through coaching, networking opportunities, quality improvement methodology and shared learning to drive the best evidence into practice. Predicted outcomes include increased knowledge of the seven domains of pediatric readiness, quality improvement science, and implementation of quality improvement practices through phase two projects.

Impact of a Call Back Initiative on Limited English Proficiency Patients in a Rural Community

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Aim: Comprehensive and clear communication is vital in any medical setting, especially in a busy, high acuity environment such as the Emergency Department (ED). Patients with Limited English Proficiency (LEP) have a disproportionally increased risk of receiving suboptimal care due to imprecise communication. To avoid such errors when treating patients with LEP, the use of language services is critical. Data supports that inadequate discharge practices with LEP patients increases the risk for adverse events after discharge. When compared to the rest of the US, Vermont's racial and ethnic minorities account for a small percentage of the population. However, there are many transient Vermonters here seasonally for work, school, or vacation. Our project seeks to improve care for patients with LEP following ED discharge.

Framework: SQUIRE

Setting: An academic teaching center, rural level 1 trauma center located in the Northeast serving a population of over one million people.

Stakeholder Team: Social Workers made phone calls to the patients and collected the data into RedCap. Clinical Research Coordinators analyzed the data. RN, physicians, and social workers developed the project idea and determined the method for implementation.

Methods: We implemented a program to ensure patients with LEP were called within 72hrs of discharge from the ED. These calls were made by Social Workers with medical interpreters. Data, such as demographics, ED visit details, and follow-up were collected in REDCap from October 2020 to September 2021.During the calls, Social Workers inquired about the use of interpreter services, understanding of discharge instructions, medication access, follow-up appointments, primary care services, return ED visits, and community resources. Data analysis will be performed using the STATA software. Results from the call-back initiative will be analyzed and compared to an average of patients with 72-hour readmission to the emergency department over the previous 5 years.

Outcomes: We identified that 68% of after visit summaries were not translated upon discharge. Additionally, due to the call-back initiative, 21% of patients were assisted with access to follow up care and making future appointments. 20% of patients that were called received education regarding language line services. 72-hour readmission rates were 1.8% ($p < 0.001$) for patients with LEP who received a phone call from the call-back program. The average 72-hour readmission rate for the 5 years prior to the call-back program was 5.1%.

Implications: We conclude that implementation of a call-back program positively impacts LEP patients by reducing readmission rates and assisting patients with accessing community resources. Our results show that there are areas where future work in the ED discharge process can be done to improve communication with patients with LEP, especially increasing discharge paperwork translation. With the current staff size of our ED social work team, this program cannot be consistently offered. We are hoping that with the positive results from this project, we will be able to advocate for increased social work funding so that this project and similar ones can be implemented in the future. Improvements can be made to increase equitable access and health outcome.

Implementation of a Code Nurse in the Emergency Department

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Aim: The emergency room (ER) is a complex and fast-paced work environment with an increasing patient census and more complex diagnoses requiring numerous healthcare team members. This quality improvement (QI) aims to examine the efficacy of implementing a novel role such as a Code Nurse in preventing further deterioration and ensuring the best outcomes among critically ill patients.

Framework: The authors used PDCA (Plan-Do-Check-Act) to guide the project's planning and implementation. The project will utilize a code nurse responsible for monitoring quality metrics and reporting opportunities for education or process improvements to successfully meet reportable metrics to specific accrediting bodies to clinical nurse specialist (CNS), managers, and director.

Setting: The project site is a 443-bed non-academic hospital, a specialty center for Burn, Comprehensive Stroke, STEMI, and treats 90,000 patients a year.

Stakeholder Team:: The ER director, CNS, and stroke coordinator with staff input, developed the framework and job description of the code nurse. The CNS provided education to code nurses focused on caring for critically ill patients safely, reducing metric fallouts, and preventing delay of care. The ER director, CNS, and managers will monitor the process and outcomes.

Methods: The QI project is a quantitative study using a Code Nurse to improve patient outcomes in ER. The ER nursing leadership selected full-time expert nurses after an interview to cover the department 24 hours, 7 days a week. Criteria for selection include possession of ACLS, PALS, NIHSS, and certification in CEN, TNCC, or CCRN.

The code nurses received a didactic critical care review and a full-day rotation to ICU, IR, and cath lab. Their rotation's goal was to understand the ongoing care and potential complications that can occur when care in the ER is delayed.

The team developed a structured process to increase sepsis compliance with initiating bundles, reduce the time for door-to-cath lab, and decrease the time from door to Interventional Radiology (IR) for patients with stroke symptoms.

The project started in April 2022. The team monitored and examined the benefits of a code nurse by measuring the metrics from six prior and six months post-implementation.

Outcomes: The sepsis bundle compliance increased by 4.9% in 6 months of implementation (pre-73.7%; post-78.6%). The STEMI door-to-cath lab reached 100% compliance post-implementation (pre-50%; post-100%). For acute ischemic stroke patients, IV thrombolytics hospital arrival to treatment time improved, decreasing by 5 minutes (pre-53 minutes; post-48 minutes). Hospital arrival to IR for endovascular thrombectomy eligible patients increased by 9 minutes (pre-90 minutes; post-99 minutes) from January 2022 to October 2022.

Implications: Creating a Code Nurse position in ER is a patient-centered initiative that has shown significant improvement in patient outcomes. Code nurses are trained to respond to any critical event that occurs in the ER. As a result of exposure and repetition, they have refined their skills and have become more effective clinical experts at the bedside. We continue to analyze data every month and work to improve the scope of the code nurse.

Implementation of a Pediatric Emergency Drug Dosage Booklet

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Aim: Emergency Department (ED) nurses are uncomfortable with the administration of medications during pediatric emergencies. The current process of obtaining a pre-calculated, weight-based dosing tool is inefficient, and access is unclear. The purpose of this quality improvement project is to improve caregiver confidence with medication administration during pediatric emergencies through implementation of a pre-calculated, weight-based drug dosage tool.

Framework: This project was guided by the Kellogg Logic Model for project planning. The Donabedian Model was used to implement this project. Plan Do Study Act (PDSA) cycles were used to test change.

Setting: Midwest, urban, academic medical center ED with 75,000 patient visits per year. Pediatric patients (17 years and younger) account for 10% of total ED visits. Approximately 12 pediatric emergencies occur each year.

Stakeholder Team: The project leader constructed the pre-and-post-implementation survey, conducted staff education and facilitated simulations. The ED Pharmacist created the pre-calculated, weight-based, drug dosage booklet (Booklet). The ED Pharmacist and project leader completed Booklet revisions. The ED Director and Educator gave permission for simulations to be embedded in nurse education days.

Methods: The Booklet was created to be readily accessible for ED staff to use during pediatric emergencies to streamline the medication administration process and improve caregiver confidence.

A pre-and-post-survey was provided to ED nurses and pharmacy residents regarding confidence during pediatric emergencies. Simulation was used to measure provider confidence and observe medication administration pre-and post-Booklet implementation. A total of 32 one-hour pediatric simulations took place with 112 ED RN participants. During simulations, qualitative data was obtained. Medication errors during simulation were tracked. A questionnaire was provided to staff seeking Booklet feedback. The number of pediatric emergencies post implementation and booklet utilization were tracked.

Outcomes: The Booklet was utilized for 83% of pediatric emergencies. The feedback questionnaire showed 100% of staff felt the Booklet was readable, easy to use and locate.

Notable differences in the pre-and-post-confidence survey were the comfort level during pediatric emergencies, comfort level with medication administration, and awareness/access of drug dosing tools. Those somewhat comfortable during pediatric emergencies increased from 47% to 70%. Not at all comfortable decreased from 42.5% to 21.6%. Extremely comfortable improved from 15% to 24%. Not at all comfortable decreased from 25% to 13.5%.

Medication errors during simulation remained nearly unchanged when the Booklet was utilized. A medication error occurred in 88% of the first sixteen simulations (no Booklet) and in 81% (13/16) of the second sixteen simulations (with Booklet). The simulation scenario was written with an intentional request for an incorrect dose. Most nurses were hesitant to correct the provider even if they felt the dose was incorrect.

In 100% of simulations, at least one nurse expressed discomfort of pediatric emergencies, unsolicited. Likewise, in 100% of simulations, at least one nurse expressed new pediatric knowledge after the simulation.

Implications: Using an evidence-based, weight-based, pre-calculated, pediatric drug dosing booklet enhances provider confidence. Caregivers reported simulation activities as an effective means to test usefulness of tools and practice skills in a safe setting. When new processes are implemented, staff require time to practice and solidify the new procedure.

Implementation of Simulation-based Mock Drill Malignant Hyperthermia in an Acute Healthcare System

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Purpose: The purpose of this project is to develop and implement a simulation program to establish safe, effective, and efficient evidence-based care of Malignant Hyperthermia patients in an acute healthcare system. Joint Commission and Center for Medicaid and Medicare Services (CMS) standards require staff in procedural and recovery areas to be trained in the early identification and management of Malignant of Hyperthermia.

Method: This innovated education/program involved: Staff education, Simulation-based training, Pre and Post test, Debriefing, Outcome evaluation

• The regional educators reviewed the following: literature specific to simulation–based training for mock drill malignant hyperthermia. Guidelines in the assessment and management of malignant hyperthermia were obtained from MHAUS.

• The team established simulation-based training guidelines for mock drill MH and competencies to be evaluated.

Setting: Multiple, private, community hospitals in California belonging to one healthcare system. Departments that participated included: Perioperative, Emergency department, and Labor & Delivery. Procedural and recovery units were identified in several acute hospitals as training sites and were scheduled on a month-to-month basis of education planning. Staff participants included: physicians, staff RNs, OR Techs, RCP, Lead RNs, and educators.

Sample: Staff participants included: physicians, staff RNs, OR Techs, RCP, Lead RNs, and educators. Convenience sample of staff from various departments who were working were selected.

Methods: The mock code simulation was designed to enhance assessment and management skills of staff in the care of patient exhibiting signs and symptoms of Malignant Hyperthermia.

Participants were individually given a standardized pre-test of knowledge before education session and simulation. An education session was conducted followed by mock drill/simulation testing using a medium-fidelity human simulator. A Mock Drill Evaluation skills checklist was utilized to evaluate participants during simulation of Malignant Hyperthermia scenarios. A standardized 10-item multiple choice questions (pretest and posttest) were administered. Data analysis and interpretation were performed using paired t test.

Results: There were 31 staff members from ED, OR, and L&D that voluntarily participated in the simulation process. The pre-tests score consisted of a knowledge mean score of 6.97 and the post-tests with a knowledge mean score of 9.87 Data showed statistical significance at p=0.0001. A significant increase in knowledge were noted among staff members post simulation. Staff members rated increased self-confidence and overall experience with the mock code simulation.

Comments:

“I think we should continue to do this more often!!

“Great practice! Continue with more mock codes.”

“Great experience- need to have these mock codes more often.”

“Excellent – I really value doing this code.”

Implications: Mock Code MH Simulation can improve knowledge and skills acquisition of nurses, physicians, and techs in the ED, OR, or L & D in the Management of Malignant Hyperthermia

Implementing a multimodality, multidisciplinary approach to novice nurse success in the Emergency Department

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Aim: Historically the Emergency Department (ED) utilized a standardized approach to novice nurse (NN) orientation. Orientation included 12 weeks with a preceptor, bi-weekly meetings with the educator and completion of competencies. In late 2019, an analysis revealed deficiencies in the orientation process resulting in significant NN turnover and overall dissatisfaction. High NN turnover results in negative outcomes such as decreased staff morale, decreased quality patient care, and preceptor burn out. These outcomes have effects on operations and quality throughout the health system such as financial losses that can exceed $120K per NN and an increase in patient safety events.

The QI project goals were to decrease patient safety events, increase nurse retention, and improved confidence in their nursing practice.

Framework: The quality improvement (QI) project stemmed from PICOT methodology. The PICOT components included: novice nurses and implementation of a multimodality and multidisciplinary approach to improve retention and confidence. Rapid Plan-Do-Study-Act (PDSA) cycles were completed in order to implement each modality. The planning phase of the PDSA cycles included process mapping and analyzing of data collected.

Setting: A magnet designated facility and the primary academic partner for a local university. The regions only combined pediatric and adult level 1 trauma and academic medical center located in the southwest. The hospital ED averages over 87,000 visits annually.

Stakeholder Team: ED nursing leadership meet with unit educators to review previous orientation process and develop a new multimodality and multidisciplinary approach. The multidisciplinary team included key partners from nursing, pharmacy, emergency medicine providers and a variety of hospital resource staff.

Methods: In 2020, the Multimodality and Multidisciplinary Approach for Novice Nurse Success (MMANNS) was implemented. The MMANNS orientation is a program that includes 20 weeks with an experienced preceptor on the unit and bi-weekly check-ins between nursing educator, orientee and preceptor utilizing the independence rating scale. Additional requirements include attendance at emergency medicine resident grand rounds and monthly multidisciplinary lectures, completion of medication reviews, and 40 + hours of online learning modules. in 2022, with continued use of the PDSA cycle a process titled "The 5 P's" was implemented into the MMANNS orientation.

Outcomes: Novice Nurse turn-over rate continues to decrease from the original 53% to 16% post implementation of MMANNS and the 5 P's.

Use of the independence rating scale throughout the NN orientation demonstrates measurable growth in knowledge, skill, self-confidence and job satisfaction. Patient safety events, such as mislabeled labs and medication errors, have also shown a steady decrease.

Implications: MMANNS provides variety of learning environments for addressing learners' needs while improving peer communication and relationships. The recent completion of our first cohort of MANNS 5 P's orientation is anticipated to show an increase satisfaction with the orientation process, new framework and timeline for educational lectures.

Improving Patient Experience and Perception of Emergency Department Wait Times

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Objective: Multiple initiatives have been developed to improve throughput and patient flow within the Emergency Department, however patients are often unaware of ED constraints and efforts to provide quality care for them. Without effective communication between ED staff and patients, patient satisfaction and staff frustration will remain at sub-optimal levels. Patient perception and satisfaction have been shown to correlate with patient outcomes, however communication between ED staff and patients has been shown to be ineffective at our institution based on Press Ganey scores. The objective of this project was to increase patient satisfaction through improved communication with patients by triage clinical staff.

EBP Model: Our institution uses the Iowa Model Revised as an Evidence Based Practice Model.

Setting: This project took place in a teaching, urban level I trauma center in the Western United States.

Participants: Our department's Unit Practice Council (UPC) conceived and implemented this project. Based on a review of the available evidence, education was provided by UPC members to front-end nursing staff.

Methods: A review of the literature revealed that one of the most common factors affecting ED patient satisfaction is communication with providers and that patient satisfaction has been positively linked to patient outcomes, making this an important project to pursue for improving both the perception of our institution's service quality and actual patient outcomes. Furthermore, literature also suggested that it is both the actual wait times experienced and the perception of those wait times that are important factors in patient satisfaction.

To improve the perception of wait times in the ED triage environment, the UPC group sought to standardize communication provided by clinical staff. Communication coaching was provided to triage staff and the use of key phrases "The emergency department is unpredictable" and "I want to keep you informed" were encouraged. To prompt triage staff, these key phrases were posted near computers in the clinical triage space. A brochure was created to explain ED flow for patients and front end triage staff were encouraged to provide it to arriving patients.

Outcomes: In the first quarter post-implementation, non-significant improvements were seen in the Press Ganey scores for the three questions "Nurse Kept You Informed", "Courtesy of Nurses" and "Nurses' Attention to your Needs". In the second quarter post-implementation scores on all three questions had dropped to just below pre-implementation levels. This represents preliminary data as educational efforts are ongoing and survey data to determine usage of the key phrasing has not yet been collected.

Implications: Effective communication between ED triage clinicians and patients represents a best practice to improve patient safety in the ED environment. Ongoing data collection will help determine if standardized communication, including key phrasing in the ED triage environment serves to provide effective communication for patients in the waiting room as reported on Press Ganey surveys. Final data analysis will also include rates of patients that left without being seen or eloped and the number of security activations for aggressive patients as secondary outcomes reflecting a culture of safety at our institution.

Incident Command Preparedness Knowledge

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Purpose: We learned after September 11, 2001 that there are many challenges with our Incident Command Systems. After every mass casualty incident we continue to hear that our systems are not meeting the challenge, yet continue to develop mass casualty disaster drills that do not meet the actual training needs of the staff. The framework and process is there on paper, but the knowledge is not shared effectively with those on the ground where the rubber meets the road. The purpose of our study was to design an incident command disaster simulation to determine the working knowledge of inter-professional pre-licensed, and licensed health science students regarding the operation of the national incident command system.

Design: The instrument utilized was the Emergency Preparedness Information Questionnaire (EPIQ) to determine the knowledge of the participants related to the Incident Command System. The instrument provided a quantitative method to determine the respondents knowledge of the Incident Command System.

Setting: Participants were from six health science schools from a large academic setting. This also included participants from a neighboring university.

Sample: Participants were primarily female, less years as a healthcare provider and . Age range of years: 18 to 24 50.6%, 25-34 28.1%; 35-44 14.37%; 45-54 5%; 55-64 1.25%

Methods: Students were given an EPIQ pre-test questionnaire with 4 questions directly related to incident command systems and was followed by an on-line didactic content. Respondents then attended an all day mass casualty simulation followed by a debriefing. A post-test was then given with the same EPIQ questions to assess a change in knowledge acquisition.

Results: Per the data from 2021, utilizing the mean, an increase in understanding across all 4 questions of EPIQ questionnaire was achieved. The working data for 2022 shows a similar increase across all 4 questions.

Implications: Our research showed that there needs to be an increase in exposure of members of the health care team to the incident command system. This can be easily accomplished by developing more realistic scenarios that actually teach the incident command systems to all levels of the health science students. Based on this research, this process can be expanded throughout all the components of the health care team.

Incorporation of ACLS in the new grad Education

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Aim: New graduate nurses were coming out of orientation with their ACLS certification but without a clear understanding of what they were doing and why. We initiated a learning format, that while in orientation broke down different aspects of ACLS and allowed time to focus on rhythm identification, drug understanding, and hands on use of the equipment to increase comfort in code situations.

Framework: PDSA

Setting: Level 1 academic teaching facility in the Southeast.

Stakeholder Team: Nurse educators conducted the training while in new graduate orientation.

Methods: Historically ACLS has been a one day class that was taken within the first 6 months of being hired. When taking ACLS for the first time these nurses have had zero to minimal exposure in emergency code situations. After observing new grad nurses in these situations and their unfamiliarity with what to do, how to use the equipment, and being uncomfortable asking questions, it was decided to re-vamp the way ACLS is taught to new grads in the ED.

During the new grad nurses classroom time we broke ACLS up into segments to allow a certain rhythm to be better focused on. They have one week per month of classroom time.

During week 1 of class: Focus is shockable rhythms. During this time they learn what rhythms are shockable, how to identify them, medications used to treat, hands on practice with the Zoll, and code sheet documentation.

During week 2 of class: Focus is cardioversion. During this week they learn to identify rhythms that can be cardioverted, medications used to treat, and hands on practice with the Zoll.

During week 3 of class: Focus is on pacing. During this week they identify the rhythms that may need to be paced and how to determine if they are needing pacing or not, medications that can be used, and hands on with the Zoll.

During week 4 of class: We mix the rhythms together and give them practice with a mock code situation.

Throughout orientation, even when they are out of the classroom time, we also join some of the residents and pharmacy with mock code situations in the SIM lab. This allows new nurses to develop a relationship with other members of the ED team and allows them to be more comfortable speaking up in emergency situations.

Outcomes: Through the new process we have improved ACLS knowledge in the emergency department, skill performance, and have improved patient outcomes as evidenced by improved classroom pre and post-knowledge base tests. ACLS scores improved. In actual ACLS codes there was an improvement in the knowledge of rhythm identification and what medications should be used to treat. Physicians noticed that staff were better prepared in emergency situations.

Implications: Using the new ACLS education platform other emergency departments could experience increase comfort of staff with successfully implementing ACLS guidelines to improve patient outcomes. This new process requires little additional resources besides the educators time.

Increasing Sepsis Bundle Completion: Increasing Repeat Lactate Collection in the Emergency Department

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Aim: Sepsis is a leading cause of mortality in the United States. Despite advances and evidence-based Sepsis Bundles, mortalities remain a concern. Sepsis Bundles are only as efficient as compliance rates. This project aims for patients to receive complete Sepsis care correctly EVERY TIME for EVERY patient.

Framework: The project used Plan-Do-Study-Act (PDSA) framework.

Setting: The project setting is a single Emergency Department in an acute care, non-profit, Magnet-recognized hospital system in Pennsylvania. The 578-bed system has three emergency departments that see numbers greater than 100,000 annually.

Stakeholder Team: The project was approved by the Vice President of Patient Care Services. The project was developed with assistance from the Sepsis Committee and ED Medical Director. Gap analysis and data assistance was coordinated with nursing informatics, specifically a sepsis focused data analyst. Education was coordinated with the ED Educator. The ED manager assisted in delivery of the project. Emergency nurses and technical partners were educated and assisted in the implementation.

Methods: This project's PICOT in the Emergency Department patient population diagnosed with sepsis, severe sepsis, or septic shock; what is the effect of interventions of education, barrier identification, incentivization, and visual cueing on lactate recollection and sepsis bundle compliance compared with no interventions within an eight-week time-period? This aim was to improve staff education on repeat lactate and sepsis bundles, increase compliance with repeat lactate collection, and increase overall sepsis bundle compliance. The design of this project was retrospective review and pre and post analysis. Eight weeks before the intervention and eight weeks during the intervention were used to record and store the lactate collection and sepsis bundle compliance rates. Data was collected with concurrent reviews, chart reviews, and collaboration with a sepsis data analyst. Data included sepsis, severe sepsis, and septic shock patients over the age of 18 admitted through the emergency department and excluded patient transfers, direct admissions, and patients with sepsis diagnoses originating outside the Department. The interventions were (1) Fishbone diagramming to give staff a voice and participation in identifying barriers and solutions, (2) addressing educational deficits identified by the fishbone and literature by utilizing protocol materials and SSC materials, (3) reinforcing education with visual cue cards as reminders of process and protocol, (4) and creating morale with “Catch the lactate” positive reinforcement and incentive for rewarding re-collection.

Outcomes: Retrospectively repeat lactate collection rate for the site was 57% and overall sepsis bundle completion rate was 62%. Following implementation, repeat lactate collection rate climbed by 15.4% to 72.4%, and sepsis bundle compliance increased by 6.6% to 68.6% as well.

Implications: Evidence demonstrates the significance of compliance, including repeat lactate measures, as influences on improved patient outcomes. Initiatives such as this contribute to a culture of learning as well as reinforcing the collaborative practice of evaluating and implementing change. The internal Sepsis Committee views the data results of increased compliance as an overall improvement in Sepsis Bundle compliance. The sepsis committee is assessing current reassessment protocols and exploring interventions to continue the increase in compliance and expand this initiative to other emergency departments within the system.

Initiating Medication Assisted Therapy in the Emergency Department

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Objective: Drug overdoses from opioids is a significant public health issue that has affected every level of society. Data shows that 90,000 people died of drug overdoses from September 2019 to September 2020, the majority of those being from opioids (CDC, 2021). The Emergency Department has many options to provide patients to assist with harm prevention, get patients to opioid treatment programs, and assist patients during withdrawal using medications.

EBP Model: We used the John Hopkins EMP model for this project. We reviewed consensus statements from Health and Human Services, the Substance Abuse and Mental Health Services Administration, National Council for Behavioral Health, American Society of Addiction Medicine, American Psychiatric Association, and Centers for Disease Control for best practices related to initiating medication assisted therapy. We also performed a literature search and found qualitative and quantitative research that we could use for implementation in Health Affairs, Annals of Internal Medicine, and The Lancet journals. These provided us with Level 3 and 4 evidence to move forward.

Setting: Emergency Department in Northern California with 100,000+ visits per year, mixed adult and pediatric population.

Participants: Initially, ED Nurse leadership, ED Provider Leadership, Case Management, and Pharmacy met to discuss and create the program. We obtained grant funding from CA BRIDGE for a Substance Use Navigator (SUN) who we have now hired full time and her experience was vital to the implementation of the program. The Leadership teams worked on clinical education for nursing and Provider staff while Pharmacy worked on obtaining suboxone and the standing order required in our state. Providers also worked on obtaining the X Waiver to be able to prescribe during hours that weren't available at the local clinic.

Methods: Research articles and consensus statements is still emerging on this topic but early data shows that patients are more likely to stay off opioids when they attend counseling and have strong family and community support. Our community had the resources to support these patients which made it possible for the ED to start talking to patients about getting them into programs if they showed an interest. We had signage in the ED waiting room and triage rooms to help promote the program and gave the staff education about opioid use disorder to help reduce stigma. Each month we measure suboxone prescriptions, opioid use disorder diagnoses, and number of SUN encounters.

Outcomes: Our data shows increases in the number of SUN encounters, MAT administered and prescribed, and the number of patients diagnosed with substance use disorder which shows the need in our community. This year we are showing a higher average per month than the previous year.

Implications: This project was important in being part of the solution of the overdose crisis and help patients in the moment when they wanted information or were ready to get help for their opioid use disorder. Other EDs can implement this easily as some of the Provider prescribing requirements have become easier and there is more funding available from Government agencies.

Out-of-Network Transfer/Admission Notification Process Improves Door-to-Registration Time, Patient Repatriation, Through-put and Lost Revenue

Tracy Page, DNP, RN, PHN, District Director of Emergency Services, Palomar Medical Center, Santee, California

Aim: The current Out-of-Network Process has led to wasted time and resources, rework, delay with patient through-put, and ultimately a lack of revenue. The new process aims to standardize a notification process that eliminates this waste.

Framework: Lean Six Sigma

Setting: A 238-bed acute care hospital with a 72-bed emergency department in San Diego, California that has over 100,000 ED visits per year

Stakeholder Team: Melvin Russell (CNO), Thomas Siminski (ED Director), Joseph Parker (Transitions Officer), Sharon McGee (Manager of Case Management), Andrea Arriaga (Patient Access Supervisor), Donna Foley (NUS), Rocio Brown (NUS), Constanza Nider (NUS), Michelle Schafer (NUS)

Methods:

-Resource binder created by Unit Secretaries. All phone/fax numbers were validated/updated.

-Equal work distribution implemented for Unit Secretaries so that the majority of the calls were not going to one pod.

-Standard notification process to insurance plans created with defined timelines for actions.

-Scanners added to Unit Secretary workstations so that they can scan the notification into the chart.

-Standard documentation template implemented to ensure the correct information is captured in the chart to challenge denials if notification took place.

-Registration workstations moved to the emergency department lobby.

-Registration workflow changed so that full registration now takes place in the lobby before the patient goes back to a room.

-Number of Out-of-Network Denials and lost revenue measured pre- and post-intervention.

Door-to-registration times measured pre-and post-intervention.

Outcomes:: Decreased the number of insurance denials per month from an average of 15 to 10.

Decreased money lost from lack of notification from an average of $364,416 to $49,842.

Increased money reimbursed by $314,574 per month.

Decreased door-to-registration times from 120 minutes to 60 minutes.

Implications: This initiative Increased collaboration between the emergency department unit secretaries, case management, and the registration team. Using a standardized notification tool with defined timelines provided guidance and set expectations for repatriation.

Pediatric Emergency Department Triage Workflow Improvement

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Aim: Workflow inefficiencies identified by the Emergency Department (ED) nurses in the triage space led to concerns regarding confidentiality, infection prevention and nurses' cognitive burden, as well as patient and family dissatisfaction. The triage area is space constrained. The workflow did not scale effectively to increased patient volume and there was no reliable identification and throughput based on patient acuity. The aim of this project was to redesign and streamline the ED triage process to increase access to care, improve outcomes and enhance patient, family, and employee satisfaction.

Framework: Quality improvement project using Enterprise Project Management and DMAIC Lean Six Sigma methodology.

Setting: Pediatric level I trauma center located in the Northeast.

Stakeholder Team: A multidisciplinary group was developed with ED nurses, clinical assistants, patient experience representatives, family advisory council members, security, infection prevention and control, clinical informatics, the simulation team and the Enterprise Project Management Team.

Methods: The DMAIC Lean Six Sigma method was used to describe the current state, identify pain points, create a root cause analysis, brainstorm solutions and prioritize implementation. Direct current state observations were completed across varying shifts with varying patient volume. A tabletop brainstorming activity was completed with the support of the simulation team; a three-step redesign approach was created. Arrival to triage completion data were collected and a new arrival to screening completion data set was created.

Outcomes: Quick wins were identified and implemented. Floor markers for queued patients were placed to increase social distancing and promote visualization for the screener nurse. Paper charting was eliminated and an electronic screening form was implemented. Using the electronic screener acuity score, a workflow was implemented that supported throughput of patients based on acuity rather than arrival time. An electronic workflow for identifying the patient's location in triage was also initiated. Triage documentation was assessed and streamlined to avoid duplication. Since initiation of the electronic screener form, patient arrival to screener form completion has consistently been greater than 95% complete in less than 10 minutes. Since the triage documentation revision, the timing of triage documentation completion within 30 minutes has increased from 65% to 75%. Anecdotal feedback from ED staff and families included that the workflow changes improved communication, throughput, and satisfaction.

Implications: Creating a standardized triage workflow improves early detection of acute patient arrival, improves patient throughput and staff, patient, and family satisfaction. Adoption of electronic solutions has improved departmental communication and awareness of patients waiting to be seen. Implementation of an electronic screener form allows data collection of initial nursing assessment after patient arrival. Appropriate technology integration with workflow changes helped with early adoption and sustainability. Table-top simulation sessions helped participants visualize complex workflows. The use of a multidisciplinary team led to participatory brainstorming and acceptance of workflow changes. Future technological recommendations include electronic kiosk check-in and mobile phone texting to communicate with families. Future environmental changes to the triage and waiting room areas are recommended to segment the ED patient population by acuity to create a treatment space for low acuity patients and a safe waiting area for behavioral health patients.

Perceptions of Competence and Capability of Nurse Practitioners who work in an Emergency Department

Deborah L. McCrea, EdD, MSN, FNP-BC, CNS, CNE, CEN, CFRN, EMT-P, Assistant Professor, Dept. of Graduate Studies, UTHealth School of Nursing at Houston, Kingwood, Texas

Purpose: There are no national mandates which educational pathway a NP who works in an emergency care (EC) must complete to work. Employers can hire any NP. The research questions were: (1) Do educational pathways of FNPs who work in an EC affect perceptions of competence/capability? (2) Are perceptions affected by prior experiences working as RN and an NP in any specialty? (3) How do NPs perceive the complexity of their role during month 1 and 12. Competence is defined as unique aspects of practice and provides a model for entry into practice. Capability is the extent an individual can adapt to change and continue to improve even in a stressful turbulent environment. This research studied education pathways including: 1) On the job training only, 2) Academic ENP programs or 3) Fellowship ENP program.

Design: This was a non-experimental descriptive comparison study of FNP who work in EC.

Setting: A convenience online survey sample of FNPs who worked in an EC were recruited from professional NP organizations, social media sites and snowball sampling. Finally, the directors of ENP Academic and Fellowship programs were emailed to share the questionnaire with their graduates.

Sample: FNPs who currently worked in EC setting were included. Sample was 215 with 153 who were on-the-job training, 44 from Academic ENP programs and 18 ENP Fellows. Most were between 35-44, Caucasian, female and had a Master's degree. Most had worked in the EC as an RN greater than 5 years. Finally, 44% had worked in primary care as an NP prior to working in the EC.

Methods: Participants were asked demographic questions, educational pathway, experience, complexity of role, and then given three instruments, the Survey of Competency, Capability and Complex Adaptive Systems Model. The first used the ENA ENP competencies and asked perceptions of competence at month 1 and 12 employment. The 2nd used the AAENP ENP Practice Standards and asked about perceptions of capability. The 3rd assessed perception of complexity of tasks and environment at month 1 and 12. An online survey with MANOVA was used to answer research questions 1 and 2. Wilcoxon signed-rank test was used for research question 3.

Results: A MANOVA revealed statistically significant differences among the educational pathways on three competence subscales. No statistical difference was found on the combined capability subscales. However, no statistical difference was found on the combined capability subscales. On years practicing as an NP, MANOVA showed that NPs with more years practicing as an NP in any settings reported statistically significant higher scores compared to those with fewer years on the combined competence.

Implications: Educational pathways affect competence but not in a clear pattern. RN experience does not affect perceptions of capability. Years as an NP affects perceptions of competence/capability the most. Perceptions of complexity of tasks/environments tend to decrease over 12 month. The ENP is a unique role working in turbulent environment. Employers need to understand certification and scope of practice. All new FNPs struggle the first year of clinical practice. Educators/employers must develop educationally sound competence to capability “Onboarding Processes."

Quick Response Codes for Just-In-Time Education in High-Risk, Low-Frequency Procedures in the Emergency Department - A Educational Quality Improvement Project.

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Aim: The number of pathologies presented to an Emergency Department (ED) is vast. A single nurse can treat a minor ankle sprain, acute myocardial infarction, and penetrating chest trauma in the same hour. This wide scope of nursing practice requires a large knowledge base. Unfortunately, rapid staff turnover leads to novice nurses caring for this population. The aim of this educational quality improvement project (EQIP) was to deliver convenient and quick just-in-time (JIT) education for high-risk, low-frequency procedures using Quick Response (QR) Code technology, increasing nursing competence and confidence in these procedures.

Framework: Model for Improvement (PDSA)

Setting: Teaching, Urban level III trauma center located in metro Detroit

Stakeholder Team: ED Education team, ED nurses, ED Providers, ED leadership, ED medics, ED technicians.

Methods: Just-in-time education is critical in the delivery of effective, safe healthcare. However, the processes for review can be time consuming, difficult to access, and underutilized. Literature review found that JIT education for high-risk, low-frequency procedures could be done using QR technology. This quality improvement occurred over 5 phases.

Phase one was conducting an educational gap analysis through polling ED staff. Three topics piloted this study, 1) supplies and the process of transvenous cardiac pacing, 2) supplies and process of setting up and monitoring arterial lines, 3) supplies and process for setting up and monitoring chest tubes.

Phase two was creating education. It was decided that short (10 slides or less) Google Slideshows with pictures and written step-by-step instructions would be used. Slides were developed using hospital protocols, manufacturer recommendations, and expert input. The last slide contained videos and references from the manufacturer and hospital policy.

Phase three was creating a public open access google account where the Google Slides would be published to and the QR codes linked. Any person could now scan the QR code and the Slideshow display on their smartphone. Large printouts of the QR codes were posted next to the location of the equipment.

Finally, phase four disseminated this resource via huddles emails, and flyers at key locations in the department (bathroom, breakroom, and med-room). Lastly, multiple PDSA cycles were completed refining the information and layout of the slides per staff feedback.

A mixed method nursing confidence scale (C-scale) was given to nurses that accessed the QR code. Qualitative questions were added to the C-scale to provide staff suggestions for further PDSA cycles. Data analysis of the measured outcomes will be performed through SPSS software.

Outcomes: Anticipated preliminary data analysis shows that utilization of QR code technology for JIT improves nursing competence and confidence.

Implications: This EQIP increased competence and confidence in ED nursing staff when performing high-risk, low-frequency procedures. Increased competence and confidence is directly related to increased staff morale, patient outcomes, and reduced staff turnover. It is recommended that QR code use be expanded to all high-risk, low-frequency procedures. Continual PDSA cycles should be performed and tailored to staff needs. This technology increases procedure competence and encourages best practices. The outcomes and implications above are anticipatory. Data analysis will be done when data collection is complete.

Response Team Approach to Reducing Workplace Violence

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Aim: Emergency department nurses, physicians, and patients are at risk for workplace violence occurrences. Researchers suggest having a response team to reduce the occurrences and improve safety1. Having a team to respond to escalating behavioral events provides a consistent approach to reducing the occurrences and increasing safety. The purpose of the quality improvement project was to design, implement, and evaluate the effectiveness of a behavioral emergency response team (BERT) in the emergency department to reduce workplace violence occurrences and increase the perception of safety. The purpose of the project was to design, implement, and evaluate the effectiveness of a behavioral emergency response team in the emergency department to reduce the number of workplace violence occurrences by 25% and increase the perception of safety of the emergency department nurses, physicians, and technicians by 10%.

Framework: PDSA

Setting: The quality improvement project was implemented in an inner-city not-for-profit hospital in central South Carolina. The hospital has 296 inpatient beds, 35 emergency department beds, and a locked five-bed unit for behavioral health patients. The emergency department is one of 10 within the 11 campuses in the healthcare company. Annual emergency department visits for fiscal year (FY) 2020 were 21,19112, FY2021 were 33,09013. There were 85 team members employed in the emergency department at the project site, including registered nurses, licensed practical nurses, patient support technicians, physicians, and physician assistants.

Stakeholder Team: Nurse Director conducted the staff training, survey process, and data analysis. The CNO provided permission for a quality improvement project to be implemented. Security and Behavioral Assessment and Referral Team were part of the behavioral emergency response team created.

Methods: A quality improvement design was utilized. The BERT protocol was created using evidenced-based protocols effective in reducing the number of workplace violence occurrences. Emergency nurses, patient support technicians, security, and behavioral assessment and referral team were trained in the BERT protocol. Workplace violence occurrences data were collected from March 2022 to November 2022. Post-BERT debriefs were conducted, and real-time education was provided after implementation. Survey data were collected to evaluate the perception of the safety of the emergency department team to evaluate the effectiveness of the BERT protocol.

Outcomes: The number of workplace violence occurrences reported decreased 100% post-implementation BERT protocol. The perception of safety increased 36.5% post-implementation (2.1628 pre-implementation, 2.9524 post-implementation). Additionally, an increase in the awareness to report workplace violence occurrences resulted from education and implementation of BERT protocol.

Implications: The forty-three participants pre-implementation and twenty-one participants post-implementation reported an increased perception of safety. Implementation of BERT was effective in reducing assaults against the emergency department team and increasing the perception of safety.

Saving Time and Lives with a Blood Fridge

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Aim: Previous process for critical patients within the emergency department (ED) requiring immediate blood transfusions had a potential for a delay in care due to the location in relation to the blood bank. Due to increased census growth and staffing shortages within blood bank department, implementation and utilization of a blood fridge became inevitable. Receiving blood products from the blood bank and beginning transfusion could average 10 minutes or more.

The development of a process that allows staff to quickly remove blood from a blood refrigerator and to safely administer in a timely manner has the potential to improve patient outcomes. Our aim is to improve the efficiency in which critical patients receive blood products within the emergency department (ED).

Framework: The PDSA cycle was utilized in development of an implementation for the process change. A multidisciplinary team was formed to include nursing staff from Emergency Services, nursing leadership, Emergency and Trauma services providers, and blood bank staff. Discussions included locations of fridges, development of nursing and physician procedures, and electronic documentation. Initial meetings with key stake holders occurred weekly to review utilization and opportunities for education and improvement.

Setting: A magnet designated facility and the primary academic partner for a local university. The regions only combined pediatric and adult level 1 trauma and academic medical center located in the southwest. The hospital ED averages over 87,000 visits annually.

Stakeholder Team: A multidisciplinary team was formed to include nursing staff from Emergency Services, nursing leadership, Emergency and Trauma services providers, and blood bank staff.

The group also met with the electronic charting development team and discussed needs for the orders being placed as well as nursing staff to successfully chart administration of blood.

Methods: Our multidisciplinary team held discussions on current process for delivery and administration incomparison to ideal state. From these discussions the standard operating procedure (SOP) was outlined. Next steps included plans for education of staff, notification of all departments involved, and meeting with our electronic charting development team to make changes to the system. Quick charting of administration was immediately created in order to meet go live date with plans for optimization at a later time. We also created order sets for nursing and physician group to be able to utilize. For education, the nursing staff was given the opportunity to practice using the blood fridge with electronic charting and provided with a training video for reference.

Outcomes: Placement and usage of fridges in high acuity areas has decreased blood bank's need to individually prepare units for patients and respond in person. Implementation of this process has decreased over utilization of whole blood and shown to decrease time taken to administer. We successfully limited our use of paper documentation and implemented the process being recorded in the electronic health record.

Implications: While decreasing delay times, we have also alleviated the demand on blood bank staff to respond in person to various patient scenarios amid staffing shortages. We have also seen a decrease in blood products waste with the implementation of unit fridges.

Starting Early: Stopping Sepsis at the ED Door

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Objective: With an understanding that the hospital's reported CMS SEP-1 quality measure score was below target goal and that a majority of patient cases with an associated ICD-10 code related to sepsis have treatment started in the ED, a nurse-led evidence-based practice (EBP) project was initiated with goals identified to improve the prompt recognition and rapid institution of resuscitative sepsis bundle component measures and to improve SEP-1 compliance.

EBP Model: Recognizing the model's association with quality improvement and promotion of quality patient care delivery, the Iowa Model of EBP was utilized.

Setting: The study setting is a suburban Level II trauma center located in the Midwest.

Participants: The ED Outcomes Manager teamed with a facility Quality leader, ED Clinical Practice Specialist, Critical Care Clinical Practice Specialist, Rapid Response RNs, and Inpatient Outcomes Manager to define the quality improvement need and conduct the literature search. The ED Outcomes Manager teamed with the ED Clinical Practice Specialist to disseminate education and reminders to ED nursing and provider staff. ED Clinical Shift Coordinators reviewed key project updates and process expectations at shift huddles.

Methods: Using the Iowa Model of EBP, the nurse-led project reviewed past ED SEP-1 data noting an average compliance rate of 60% to metric requirements. A literature review conducted confirmed the EBP guidance of completing sepsis bundle component tasks within 1 hour of sepsis time zero recognition aligns with optimal patient outcomes. The project multidisciplinary team created the ED Sepsis Responder process to improve SEP-1 compliance. The process included a checklist, page alert, ED internal announcement, admission handoff tool, and case feedback. Staff received process education and reminders. This new practice differs from general nursing practice with enhanced teamwork, tools, and communication to ensure SEP-1 criteria success.

Outcomes: The EBP process changes initiated in the ED were a proven success. Baseline severe sepsis/septic shock mortality rate was 18% and improved to 14% (22.2% change). Sepsis bundle tasks initiated in the ED (lactate level, blood cultures, antibiotics started, fluid resuscitation) improved to a compliance rate of 77% from a baseline compliance rate of 60% (28.3% change). Overall compliance with the hospital's publicly reported SEP-1 quality measure score improved from 48% to 60% (25% improvement) with outperformance of national and state benchmarks noted. Staff feedback received regarding the process change reflected improvements in teamwork, communication, and awareness of critical clinical criteria.

Implications: This project initiative supports autonomous nursing practice, multidisciplinary teamwork, and quality patient care delivery. Progression to sepsis may occur at any point during a patient's hospitalization. Early recognition and timely initiation of clinical interventions upon presentation to the ED for care allows for increased likelihood of survival and optimal patient outcomes. The recognized success of this project promoted the adoption of this process in other areas of the patient care continuum.

Team Leadership and MCI simulation

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Aim: Health science students rarely have knowledge of disaster preparedness, and most do not feel prepared to work during a disaster. After Sept 11, more schools added disaster management to curriculums. However, no national mandate exists for this to be added to curriculums. A health science university system developed and implemented several Mass Casualty Incident (MCI) Interprofessional education (IPE) simulations utilizing a team leadership framework to organize this massive event between six schools and many community agencies to produce a very realistic MCI simulation.

Framework: This poster will present our seven years of experiences of preparing and implementing a MCI realistic simulation to Interprofessional health science students by utilizing a PDSA framework to show how Hill's Model of Team Leadership was used to plan the event. Our observations will be described utilizing our pretest and posttest data.

Setting: A health science university with 6 schools, EMS and social worker students all participated in a day long IPE MCI simulation. Faculty, staff, clinical practitioners, disaster experts came together to plan this large event. The students were given online didactic content followed by attendance at the simulation at the fire training academy.

Stakeholder Team:

MD- Faculty, emergency MD, EMS dept ,expert in disaster mgmt.

MD- Faculty, director IPE

FNP/ENP/Faculty: obtained grant funding

FNP/ENP/Faculty: coordinator of MCI simulation

Capt of Fire Academy: helped plan scenario

Admin Assistant of Fire Academy- helped plan scenario

other disaster experts- Medical examiner office, SWAT team to add active shooter to MCI

Methods: Utilized Hill's Team Leadership Model to plan event. Grant funding was secured. Met monthly then every week before the event. A flyer was sent to stakeholders to advertise. Invitations sent using Qualtrics, followed by a pretest given to students, and a link to Canvas Course to learn online content was given. Students then attended the MCI simulation. After the event, a debriefing and posttest was given

Outcomes: The MCI simulation in 2022 was the 7th MCI event. Over the years, we have grown.

Plan: This event started out as a small event with just ENP students.

Do: Over the 7 years, we realized more students needed this training.

Study: The first 5 MCIs gathered no formal research. We expanded the leadership team to capture more disaster experts to make more realistic.

Act: Our faculty found disaster knowledge instruments to start formally studying knowledge acquisition. We concluded from our statistics this project is very much wanted and needed by health science center students. We also found that online didactic content followed by live simulation aids in the achievement of this new knowledge and will be displayed in our poster.

Implications: Health science professionals know little about the Disaster System. Our finding reinforces that most of our participants, who are prelicensure students, have almost no knowledge of disaster management. Our findings will assist educators to understand knowledge gaps so revisions can be made to enhance learning at an actual MCI training event. This can also be directly translated to hospital leadership to encourage them to also set up more disaster simulations.

The Impact of Burnout in Emergency Department Nurses and Intent to Leave Employment

Robin Page, DPN, RN, Registered Nurse, Old Dominion University, Chesapeake, Virginia; **Kathie Zimbro**, PhD, RN, PhD, RN, Nurse Scientist, Sentara Healthcare, Moyock, North Carolina; **Carolyn Rutledge**, PhD, FNP-BC, FAAN, Associate Dean of Nursing, Old Dominion University

Purpose: The purpose of this study was to examine the relationship between burnout in emergency department nurses and intent to leave employment.

Design: This study used a descriptive correlational research design. In this study, an anonymous on-line survey was used to explore the relationships between personal characteristics, professional characteristics, burnout, and intent to leave current employment

Setting: An anonymous survey link was distributed to nurses currently working in the ED using social media, MTurk, and a level II trauma center in Northern, Virginia.

Sample: Registered nurses of all ages and genders currently working in the ED within the United States were eligible to participate in the anonymous online survey. Nurses who did not meet inclusion criteria or chose not to complete the survey were excluded. Incomplete surveys were also excluded.

Methods: This descriptive correlational research study used a single survey. The survey included demographic questions on personal and professional characteristics, the Maslach Burnout Inventory-Human Services Survey for Medical Personnel (MBI-HSS-MP) to assess participant's degree of burnout, and the Turnover Intention Scale (TIS-6) to measure the extent to which an employee intends to leave their place of employment.

Results: When controlling for predictor variables, years of experience, emotional exhaustion, and depersonalization significantly influenced ED nurses' intent to leave employment. Respondents with 5+ years of experience had almost 2 times the odds of leaving. Likewise, respondents with emotional exhaustion and depersonalization scores above the median had almost 2 times the odds of leaving.

Implications: Operationally, these findings signify the risk for losing experienced staff and being left with novice staff to manage patient care in the ED. Nurse leaders may want to focus on and closely examine the components of the emotional exhaustion and depersonalization scales to better support staff and mitigate feelings of burnout and intent to leave employment.

The Little ER That Could: Improving Throughput in a Satellite ER

Susan Higgins, MSN, RN, CEN, Project Manager, Quality and Patient Safety, Overlook Medical Center, Highland Park, New Jersey

Aim: Our 20-bed satellite emergency department sees approximately 30,000 patients per year. It is not unusual to see over 100 patients a day. With limited space, it is crucial that flow is efficient. When throughput backs up, patients often wait hours to be brought in. Not only does this add to patients' frustration, but can also result in adverse events and poor outcomes. We wanted to see if decreasing the time from patient disposition to ED departure, a nurse-driven metric, also decreased the number of patients who left without being seen (LWBS). The goal of the project was that in a six month period at least 50% of nursing staff would have an average discharge of 15 minutes or less.

Framework: Using a PDSA model, we used a combination of education, motivation and coaching for process improvement. Tuckman's Theory of Team Development was utilized to foster teamwork, cooperation, and trust among staff and providers.

Setting: A 20-bed satellite ED in an urban/suburban area. It see approximately 30,000 patient visits/year.

Stakeholder Team: The assistant nurse manager provided coaching, motivation and collected and posted data. The manager communicated our progress with senior hospital leadership weekly. The nurse educator conducted staff education including read and sign module and discussions at our unit based council.

Methods: The time measured was from the provider's disposition to discharge the patient until the patient physically left the department, "disposition to discharge." A discharge report was run weekly and the data was used to find the average and median times for each nurse. Average discharge times were posted weekly and the nurse with the lowest average time won a small goodie bag and had their name and picture featured in our "Week in Review". Monthly LWBS times were tracked and shared with staff and leadership. We also tracked our Press Ganey "Likelihood to Recommend" percentile as a balancing measure.

Outcomes: The average disposition to discharge time fell from 34.2% to 20.7%, a decrease of 39.5%. We did not meet our goal of at least 50% of nurses discharging in less than 15 minutes, we saw an overall improvement. In January, 27.7% of nurses had discharge times between 16 and 30 minutes, 61% took between 30 to 60 minutes and 5.5% took longer than 60 minutes. After January, no nurse took longer than 60 minutes and by March no nurse had an average time longer than 30 minutes. Our Press Ganey percentile score went from 16% in January with a LWBS rate of 3.8% to a percentile score of 80% in May with a LWBS rate of 1.28%.

Implications: Regardless of size or scope, any initiative will fare better when stakeholders agree on goals, aims, and expectations. Improving emergency department throughput is an evolving process, requiring collaboration and commitment. Fostering teamwork among staff with differing roles, priorities, and levels of experience is not easy, but can be accomplished when everyone focuses on the most important goal, providing a safer and more agreeable experience for the patient.

The Use of a Hospital-Wide Surge Plan to Decrease Emergency Department Overcrowding

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Aim: This hospital is challenged by the highest ED patient visits to inpatient bed ratio in San Diego County, and possibly the whole state. This has led to an inability to absorb new admitted patients into the hospital and results in significant boarding of admitted patients in the ED. At times this has led to 15 hours or higher of ED boarding per admitted patient, with little inpatient awareness or communication of the ED's conditions. The aim of this project was to create a hospital-wide response to ED overcrowding.
Framework: Lean Six Sigma
Setting: This hospital is a Level II Trauma Center located in the north county region of San Diego. When the Palomar Medical Center Escondido (PMCE) opened in 2012, there were approximately 58,000 ED visits per year with 286 inpatient beds. In 2022, ED visits increased to over 100,000, and the inpatient bed number decreased to 228 (36 Critical Care, 36 IMC, 96 Telemetry, 60 Medical/Surgical). The remaining beds were reclassified for Women's and Children's services. The emergency department has 72 licensed beds and 2-trauma bays.
Stakeholder Team:
Melvin Russell, Chief Nursing Executive
Jami Piearson, Regulatory Director
Tricia Kassab, Vice President of Quality and Patient Safety
Ryan Fearn-Gomez, Director of Clinical Operations
Bruce Friedberg, Emergency Department Medical Director
Thomas Siminski, Director of the Emergency Department
Tracy Page, District Director of Emergency Services
Methods: A surge plan was created, with the purpose of establishing a hospital-wide approach to handle an increase in demand for patient care services when faced with limited resources and bed capacity, and to mitigate and manage issues affecting patient flow, staffing, and productivity throughout patient care areas. Palomar Health uses the National Emergency Department Overcrowding Score (NEDOCS), a nationally validated measurement of emergency department and hospital overcrowding, as the objective measure of emergency department and hospital overcrowding. Levels of overcrowding are determined by a "score" which is calculated using statistically significant variables. NEDOCS has been shown as an accurate measure in discriminating between busy and crowded ED conditions.
Outcomes: We implemented 6 Code Delta Pages between 11/18/2022 - 12/2/2022. Inpatient leaders responded after each page to a meeting 30 minutes later with discharges that they could produce within 30 and 60 minutes from the meeting. In 5 of the 6 cases, we were able to reduce the NEDOCS score, decrease ED waiting room and ambulance offload times, and obtain early discharges to decrease emergency department overcrowding
Implications: Emergency Department overcrowding is really a symptom of hospital-wide overcrowding. To provide the best possible care to our community, this problem must be solved by the hospital as a whole. By planning ahead for these situations using pre-defined triggers, clear communication across the whole facility and set responses to levels of overcrowding, we are better able to care for our patients in times of surge.

Triaging Perinatal Patients in the Emergency Department: Advancement of Care Through a Nursing Algorithm

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Aim: The aim of this quality improvement initiative was to decrease door-to-proper-bed-placement time for perinatal patients in an Emergency Department (ED). Safe perinatal care in the ED requires accurate triage and bed placement decisions. In 2019, ED nurses identified variability in timing and accuracy of perinatal nursing assessments and triaging, resulting in sub optimal bed placement and care delivery.

Framework: The Plan-Do-Study-Act (PDSA) approach guided this initiative.

Setting: Level 3 Trauma Center in a Midwestern teaching hospital.

Stakeholder Team: Administrative Directors, ED and Perinatal Services: convened team, set timeline, approved final algorithm
Clinical Operations Managers, ED and Perinatal: identified interunit barriers to communication and trust, provided resources, contributed leader perspectives, developed policies
Clinical Nurses: developed algorithm based on clinical expertise, planned testing cycles
Perinatal and ED providers: offered medical perspectives
Data Analyst: retrieved and trended project data
Information Technologist: designed communication options

Methods: An interprofessional team designed an assessment-and-activation algorithm for triaging perinatal patients and assigning bed placement to ensure timely, optimal care. The team identified key assessments for three obstetrical (OB) categories of perinatal patients in the ED, specifically OB-1, OB-2, or OB Alert. OB-1 patients were too unstable for transport to L&D, typically related to trauma, seizures, or imminent delivery. An L&D team came to ED to assist in care. OB-2 patients were over 20 weeks pregnant or less than six weeks postpartum, acutely symptomatic for complications, or in active labor. If stable, an RN escorted the patient directly to L&D. OB Alert patients were 20 weeks pregnant or less, stable, or with non-perinatal complaints. OB Alert patients remained in the ED with an OB provider consulting. Step by step, the team reviewed outcome data and evolved the algorithm. In successive cycles, the team developed guidelines for interunit phone communication and later adopted an alarm button that alerted L&D of OB-1 patients in the ED. Integration of the algorithm with existing protocols and policies followed. Unit leaders introduced the algorithm to staff via principles of implementation science. ED nurses completed mandatory education on perinatal assessment and complications. L&D nurses trained on providing care in the ED. Unlicensed staff completed role-appropriate education.

Outcomes: The primary outcome was time in minutes from door-to-proper-bed-placement in the ED or L&D. After four quarters, door-to-proper-bed placement time decreased by 16% and by 31% in the eighth quarter. Audits revealed nurses quickly adopted the algorithm, with all qualified patients receiving algorithm-driven care within one month.

Implications: Interprofessional development of an algorithm following the PDSA framework improved timely, accurate bed placement for perinatal ED patients. Lessons learned included the importance of (a) collaboration across continua of care, (b) integration of technology for communication and data management, (c) the team's quick review of data and agreement on testing cycles, (d) tailored education for staff competencies, and (e) education for nurses floating to the ED during the pandemic. Leaders can replicate the algorithm and design process in diverse ED settings where professionals commit to adopt a standardized, efficient triage process for perinatal patients.

Use of Pediatric Early Warning Score to Prevent Undertriage in Pediatric Patients

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Aim: Ensuring patients are prioritized to appropriate care levels is a critical component to patient outcomes in the emergency department setting. Nurses are the first point of contact for care and are key to successful sorting and subsequent prioritization of arriving patients. The Emergency Severity Index is the recommended five-level triage scale used by nurses to appropriately triage patients. Despite the use of this validated tool, over and under triage can still occur, potentially resulting in increased wait times, reduced hospital performance indicators, and increased morbidity and mortality.

In 2019, we undertook a quality improvement initiative to address inaccurately triaged pediatric patients in our mixed population Emergency Department. To improve triage accuracy, we added the modified Pediatric Early Warning Score to triage assessments for pediatric patients.

Framework: Our project team went through two PDSA cycles to address accuracy of triage.

Setting: Mixed population Emergency Department, Level II Trauma Center and teaching hospital in a suburban setting.

Stakeholder Team: Emergency Department Clinical Coordinator identified the opportunity to improve triage accuracy of pediatric patients. They brought this to the leadership team and support was obtained. The Clinical Coordinator partnered with the Clinical Nurse Specialist to research pediatric specific risk assessments, develop an implementation plan, and conduct ongoing chart assessments for triage accuracy. Clinical Coordinator and Clinical Nurse Specialist partnered with scholarly faculty and statistician to determine clinical significance of data and subsequent project presentation.

Methods: Aimed to improve the triage accuracy of pediatric patients ten years old and under. We educated and implemented a paper based modified Pediatric Early Warning Score tool to assist with triage. After 6 months, triage accuracy was evaluated, and no improvement was appreciated. Following this first PDSA cycle, we implemented the modified Pediatric Early Warning Score as a required triage assessment for every pediatric patient. For analysis, we included all admitted or transferred patients ten years and under with the exception of patients arriving with the chief complaint of a mental health problem or overdose.

Outcomes: We included two and a half years of data including 100 patients (including 35 patients pre-implementation and 65 patients post-implementation) showed a statistically significant increase in triage accuracy to 92.5% exceeding the target goal of 85%. Our pre-implementation triage accuracy was 48.6%.

Implications: The modified Pediatric Early Warning Score was a simple yet effective triage tool to add as an adjuvant to the Emergency Severity Index for triage accuracy. We are currently exploring conducting a more robust research study of the applicability of using the modified Pediatric Early Warning Score in a mixed-population emergency department. We found this is the existing gap in the literature as the majority of research was on the modified Pediatric Early Warning Score in pediatric specific settings only. We feel this is an opportunity for other mixed population Emergency Departments to improve care of the pediatric patient. Since embedding the modified Pediatric Early Warning Score into the Electronic Health Record and establishing ongoing education for onboarding new hires, this process has been quite stable with little intervention required.

Using Innovative Technology to Reduce Blood Culture Contamination Rate

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Aim: In 2018, this Emergency Department's (ED) Blood Culture Contamination (BCC) rate was 4.92% with 176 identified contaminated blood cultures costing the hospital an estimated $823,504.00. The purpose of this quality improvement project was to decrease BCC rates and thereby decrease unnecessary hospital and patient cost.

Framework: The IHI model for improvement was used for this project.

Setting: This study was performed at an urban Level 1 trauma center in the South.

Stakeholder Team: The Assistant Manager and the bedside RN identified the issue and developed an action plan. The educator coordinated the development of education to staff. The bedside RN and educator performed hands-on education with staff. The Quality Medical director assisted with compliance and tracking. The Quality Assistant Manager provided 1:1 staff feedback on performance.

Methods: Contaminated blood cultures fail to offer clear direction to providers in determining a patient's plan of care and lead to unnecessary antibiotics, antibiotic resistance, increased lengths of stay, and increased costs. Values indicate that a false-positive blood culture can cost $4,679 expenditure to both hospital and patient (Economic health care costs of blood culture contamination: A systematic review, 2019). A thorough review of evidence-based best practices and available innovative technology was conducted. Based on that review, the ED team implemented the use of specimen diversion device technology to reduce the rate of blood culture contamination. In addition to one-on-one education of the diversion device, dedicated leader rounding and online module education on proper blood culture collection technique was also conducted. Following implementation, individual contamination rates were tracked. One-on-one accountability and follow-up were conducted with those who continued to have contamination results. This follow-up consisted of practice feedback, diversion device use and proper collection technique.

Outcomes: Through robust staff education and specimen diversion device implementation BCC rates for the ED decreased from 4.92% to 2.85%. Reflecting a hospital cost reduction of $322, 851. The ED has maintained success within departmental goals over the course of 1 year. Increase in contamination rates were noted during peak waves of COVID. It is unclear if the addition of isolation precautions was a factor in this increase. An increase in contamination rates was noted during a period when individual contamination rate tracking was delayed due. Once resumed, a decrease in contamination rates occurred. Indicating a positive correlation to practice feedback and better performance.

Implications: The use of innovative technology in combination with 1:1 staff feedback has proven to be an effective intervention in improving blood culture contamination rates.

Utilization of the Behavioral Activity Rating Scale in Reducing Emergency Department Violence, Restraint use, Length of Stay, and Haldol Administration.

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Objective: Over two thirds of Emergency Department (ED) nurses report being hit or kicked. This violence leads to increased staff injuries, burnout, and high utilization of psychotropic medications i.e., Haldol for behavior control. The Behavioral Activity Rating Scale (BARS) is designed to measure behavioral activity in acutely agitated patients with psychosis to delineate intervention and promote better outcomes. The objective of this quality improvement project was to apply and evaluate the BARS model in reducing ED violence, restraint use, ED length of stay (LOS), and the utilization of psychotropic medications i.e., Haldol for behavior control.

EBP Model: Iowa Model for Evidence Based Practice

Setting: Teaching, Urban level III trauma center located in metro Detroit

Participants: ED Registered Nurses, ED Physicians, and ED mental health patients

Methods: Workplace violence has reached epidemic proportions. Seventy percent of ED nurses report being assaulted. Unfortunately, that number is probably higher due to underreporting. Furthermore, psychiatric patients exhibit the most violent behaviors. Our ED healthcare workers are in exceptional danger. The BARS measures behavioral activity in acutely agitated patients with psychosis to delineate intervention to prevent poor outcomes.

In this quantitative pre-post comparison EBP study, a nurse driven protocol was developed using the BARS assessment. Preliminary data was gathered one year prior to implementation and one year post implementation. The BARS protocol stated that all mental health patients receive a BARS assessment at their initial assessment in the ED and every four hours. Each BARS assessment (1-7) was linked to a recommended medical intervention. Interventions became more invasive as BARS increased and gave the provider three options for treatment (Zyprexa, Geodon, Ativan). Daily or weekly audits were performed for compliance purposes.

Outcome measurements were completed in four phases. The first phase compared the number of violent reports logged into the Event Reporting System (ERS) for one-year pre and post implementation. The second phase consisted of auditing the number of behavioral restraints utilized for one-year pre and post protocol. Third phase measured the average mental health patient's LOS in the ED, one-year pre and post protocol. Finally, the fourth phase audited the Pyxis dispensing system for Haldol usage, one-year pre and post protocol implementation.

Outcomes: Anticipated preliminary analysis shows that the utilization of the BARS protocol has decreased ED violence, restraint use, length of stay in the ED, and the utilization of psychotropic medications i.e., Haldol in the emergency department.

Implications: This study directly affects ED staff and patients. The BARS assessment and nurse driven protocol reduced ED violence, restraint use, LOS, and the utilization of Haldol. Reduction in violence led to fewer work-related injuries. Furthermore, throughput increased in the ED. It is recommended that further studies are conducted to evaluate the BARS assessment and nurse driven protocol on a larger scale. It is also recommended ED's adopt a BARS assessment tool and protocol to decrease ED violence, restraint use, length of stay in the ED, and Haldol use in their ED. The outcomes and implications above are anticipatory. Data analysis will be done when data collection is complete.

Utilizing Rapid Cycle Deliberate Practice in ED Simulation Scenarios

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Aim: The aim of this project was to trial the use of Rapid Cycle Deliberate Practice (RCDP) in an aim to provide more effective, engaging simulation trainings for ED nurses.

Framework: We used a PDSA framework.

Setting: Our ED is a 21-bed unit that is a community and teaching hybrid on the West Coast.

Stakeholder Team: This project included the Clinical Nurse Educator (CNE) who researched simulation methods, created and ran the simulations, and who conducted and collated pre and post surveys.

Methods: Per staff request and the Joint Commission initiative to better obstetric care in the ED, specifically to hemorrhage and eclampsia, we researched simulation training best practices in relation to these education topics. The CNE conducted a literature review and found the RCDP method. Per Johns Hopkins University, RCDP "is an innovative cognitive framework that uses simulation as the instructional tool, as well as the components of deliberate practice, mastery learning, and crisis resource management, to improve healthcare team performance during low-volume, high-risk, time-sensitive patient events". Compared to other simulation methods in which the learning takes place during the debriefing, RCDP provides real-time feedback to learners with repetitive practice of the correct actions. Thus, learners truly master skills with repetition compared to a one-time simulation. For the low-volume, high-risk situations of this population, RCDP offers an effective method of training.

After deciding to use RCDP, the CNE met with ED staff and the labor and delivery educator to assist in creating two realistic ED patient scenarios- a precipitous delivery leading to hemorrhage and a post-partum, pre-eclamptic patient who then seizes. The CNE divided each scenario into multiple parts, as RCDP requires, to master each specific skill prior to moving onto the next portion.

The CNE held 11 simulation sessions with 53 nurses attending in total. Pre and post surveys of the skills and education topics were completed by staff as well as an overall satisfaction survey of the educational offering.

Outcomes: As a result of utilizing the RCDP method of simulation- 94% of nurses found the simulation session extremely helpful; 91% found the format of RCDP extremely relevant and useful to their practice; 98% felt RCDP definitely and most definitely helps retain the information and skills presented; 100% of staff were satisfied or very satisfied with the quality of the offering; 100% agree or strongly agree they anticipate a change in their behavior/practice as a result of the training; 100% agreed or strongly agreed the offering empowered them to improve their practice; and 98% believed the training will contribute to improved outcomes for OB patients. In addition, there were very positive survey results regarding the specific education topics and equipment covered. All nurses reported feeling confident in the different topics and equipment in the post survey compared to the pre.

Implications: Based on the pre and post skill and simulation surveys, it is clear staff found RCDP as an effective, engaging learning method. Our ED plans to utilize this method of training again, and we recommend other EDs also incorporate RCDP into their educational offerings.

Vroom, Vroom!! Improving Door to ECG Times in a Large, High-volume Emergency Department

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Aim: Obtaining an ECG within 10 minutes of arrival to diagnose STEMI is critical to early identification, intervention and best patient outcomes.

This ED saw an increase in Door to ECG (DTE) times related to additional infection prevention screenings and increase in patient volume. Median DTE times were as high as 12 minutes. Compliance for ECGs being completed under 10 minutes was as low as 45%.

The aim of this quality improvement project was to improve door to ECG times.

Framework: This project utilized the IHI Model for Improvement and PDSA cycles.

Setting: Urban Level I Academic Medical Center

Stakeholder Team: The project team was multi-disciplinary and included bedside nursing staff, ED Nursing Leadership (Assistant Nurse Manager, Clinical Nurse Specialist), Physicians (Quality and Safety Medical Directors), and a Quality and Patient Safety Advisor.

Physician and Nursing leaders facilitated project meetings to ensure forward movement of initiatives. Provided departmental leadership support to ensure challenges and barriers to change were addressed.

The CNS and Assistant Nurse Manager led the implementation of initiative. Created and delivered education to staff. Monitor data daily/weekly/monthly. Report out to divisional executives and leadership.

Bedside nursing staff were experts on day to day practice challenges/barriers to success. Championed improvement initiatives while on shift. Presented quality improvement work at shared governance meetings.

Quality and Patient Safety Advisor facilitated the PDSA cycle review process.

Methods: Median DTE times were as high as 12 minutes. Compliance for ECGs being completed under 10 minutes was as low as 45%. This large, high-volume, chest pain accredited, academic medical center initiated a quality improvement project to improve these metrics in June 2022. Project involved rapid cycle changes that included staff re-positioning in our ED entrance, reestablishing role responsibilities back to pre-pandemic standards, and daily communication to staff on previous days metrics. PIVOT Nurse/Medic role to assist with early screening and recognition of patients needing an ECG based on established criteria was used. At the implementation of this project, that PIVOT role location and responsibility was shifted back to pre-pandemic expectations. Development of a recognition and reward program for the weekly fastest ECG staff performers. Weekly fastest champions are recognized through email, posting in Triage, and digital boards. Weekly high performers receive a lapel pin to recognize their achievement.

Outcomes: Since implementation of this project in June 2022, this ED has seen a statistically significant improvement in DTE times. Median DTE times have been consistently at 7 minutes since this implementation of this project. Compliance for arrival to ECG completed under 10 minutes has increased from 45% to 77% in just 7 months. Current fasted ECG time is 2 minutes. All of these improvements have been during a time of increasing and record patient volume for this organization.

Implications: Key to successes are staff engagement and motivation to be a high performer. Reward and recognition was a great motivator for staff engagement in a friendly competition. Identification, re-education, and re-establishment of specific role responsibilities to allow for early intervention.

Yellow Does NOT Mean Proceed with Caution

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Aim: The purpose of implementing "Code Yellow" in the Emergency Department (ED) was to standardize the response for behavioral events, provide a mechanism for tracking these events, and provide early recognition and awareness of patients who have had prior behavioral health needs.

Framework: A formal framework was not utilized for this project, however, the PDSA cycle most closely coincides with the process used during the development of this project.

Setting: We are a busy, teaching, urban Level I trauma center located in the Midwest.

Stakeholder Team: Bedside nursing identified a problem and created a project with subsequent education of the project and data analysis. The physician team educated our provider colleagues and were consulted during project planning for input on how to best facilitate communication between staff during a response. Our Clinical Nurse Specialist was the liaison between bedside staff, physician staff, and assisted with brainstorming and problem solving. Our Psychiatric Liaison Services Manger assisted with educating the psychiatric staff.

Methods: Our goal was to create a program that streamlined the process of notification to the interprofessional team that assistance is needed in relation to a behavioral event. Initially, there was no process in place that easily and quickly notified staff of a need for help, requiring bedside staff to notify each team member individually. This was a time-consuming process that compromised staff safety. Therefore, a modified version of this facility's inpatient behavioral response team (BRT) was created for the ED. This approach allows bedside staff to initiate a Code Yellow when a patient is exhibiting unsafe behaviors toward themselves or others, for example: attempting to elope, verbal or physical threats, or any other form of escalating behavior. This promotes rapid evaluation by the interprofessional team followed by individualized interventions to ensure staff and patient safety. This project was led by an ED bedside nurse in collaboration with ED and psychiatric leadership. Education was then provided to all stakeholders including nursing, providers, psychiatry, pharmacy, and police. Data is analyzed monthly with findings disseminated to the Behavioral Response Team Committee and Workplace Violence Prevention Committee.

Outcomes: Beginning in August 2022, findings demonstrate that 64.1% of patients who present to the ED and meet requirements for a Code Yellow receive medication to assist with behavior management, 25.6% require restraint application, 48.7% are discharged from the ED, 20.5% are admitted to inpatient psychiatric care or sent to rehab, 30.7% are admitted for acute medical treatment, and 7.6% require more than one Code Yellow activation while in the ED. We continue to educate staff regarding utilization and documentation of Code Yellow criteria and interventions.

Implications: Code Yellow is a no-cost, easily adaptable program that allows for various interventions to increase staff and patient safety in real-time while also capturing data on individuals who may require behavioral intervention in the future. We plan to expand this project to create criteria for placement of an identifier within the patient chart that alerts staff to the potential of behavioral events.

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