Prophylactic Sacral Dressings and Skin Assessments in Acute Care Emergency Surgery Patients

Caroline Brown

Problem & Purpose: Hospital acquired pressure injuries (HAPIs) are a growing issue within the healthcare system. On average, 2.5 million people in the United States develop a HAPI. Annually, approximately $26.8 billion dollars is spent on treating HAPIs in the United States alone. Consequences of HAPIs include increased length of stay, decreased quality of life, increased morbidity and mortality, and decreased hospital reimbursement. The purpose of this quality improvement (QI) project is to decreased the incidence of HAPIs, in Acute Care Emergency Surgery (ACES) patients with Braden scores less than or equal to fourteen in the Surgical Intensive Care Unit (SICU) through the implementation of a prophylactic sacral dressing and nurse practitioner (NP) and registered nurse (RN) skin assessments.
Methods: The QI project took place over a ten-week period, from September 2, 2019 to November 10, 2019 and was implemented in three phases. Phase I included identification of unit skin champions and education pertaining to the Braden Scale and preventing HAPIs. Phase II included the implementation of a prophylactic sacral dressing and NP & RN skin assessments. Phase III included data collection and analysis. In order to help with implementation, Lewin's theory of planned change was utilized.
Results: Prior to implementation, there was a total of six HAPIs, with Braden scores ranging from eight to fourteen, with an average of twelve. Post implementation, there were a total of zero HAPIs, with Braden scores ranging from ten to fourteen, with an average of thirteen. 96% (n=61) of ACES patients who met criteria had a prophylactic sacral dressing applied. 100% of ACES patients who met criteria had a skin assessment completed and documented by RNs, while 35% (n=22) of ACES patients who met criteria had a skin assessment completed and documented by ACES NPs. Data collection form compliance was 44% (n=35).
Conclusion: Compliance rates among RNs and NPs varied in respect to the documentation, and completion of the data collection form. RNs had a higher compliance rate associated with skin assessment documentation in the electronic health record compared to NPs. There was a decrease in the incidence of HAPIs after implementation of a prophylactic sacral dressing and RN/NP skin assessments.

Mitigating Workplace Violence Utilizing the Broset Violence Checklist

Karen E. Doyle

Problem & Purpose: Workplace violence impacts all health care workers especially those working in behavioral health, emergency departments (EDs), and trauma centers. The Broset Violence Checklist (BVC) is an evidence-based, valid and reliable tool demonstrating high sensitivity and specificity with predicting potentially violent patients within a 24-hour period of assessment. The tool is available to nurses in the ED but is not widely used within the system due to a lack of procedure, education and monitoring of compliance.

Methods: A quality improvement project developed a procedure to increase the use of the BVC. ED nurses and security personnel were trained and compliance with utilization of the tool was measured. A pre/post implementation survey was conducted to determine perceptions of workplace violence. A daily report detailing the use compliance and the BVC scores of each patient was automatically distributed to the emergency department and security leadership. The outcome measures are: (a) 90% of adult patients > 18 years old seeking treatment in the ED will be assessed for potential violence using the BVC during the intake and triage process and (b) overall incidences of workplace violence are reduced. Data were analyzed using descriptive statistics.

Results: A convenience sample of 6,944 adults > 18 years old entered the ED in an academic acute care setting for evaluation and treatment in a 14-week period. Compliance with completion of the BVC pre-implementation was a mean of 74% and implementation of 67% ($u = 1355$, $p = 0.014$); 18 patients scored > 3 on the BVC ($u = 188$, $p = 0.68$).

Conclusion: This quality improvement project illustrates it is difficult to improve compliance based on education alone. Enforcement of compliance with the procedure and assessment tool needs to be hard wired into the workflow of nursing and security personnel. It remains essential that hospitals incorporate violence assessment tools and strategies in the ED setting. As part of routine care, ED staff can use screening tools such as the BVC to identify people at high risk of violence. These tools can offer appropriate behavioral interventions to those who screen high on the assessment tool.

Nurse-Led Early Mobility in the Pediatric Intensive Care Unit

Christina Graham

Problem and Purpose: Poor mobilization associated with hospitalization can have a negative impact on pediatric critical care patients. Illness, exposure to medications, and confinement result in delirium, longer hospitalization, increased time on ventilation, and increased morbidity. Many of these patients require outpatient rehabilitation and suffer long-term consequences. An abundance of recent literature supports the benefit and safety of early mobilization in the pediatric critical care population. The purpose of the project was to implement a nurse driven early mobility assessment tool in the pediatric critical care unit (PICU) of a 5-bed medical-surgical PICU. The project aimed to determine how a standardized mobility assessment tool impacts the number and frequency of patients who are consulted and assessed by Physical Therapy (PT), as well as characterize how they are mobilized (passive range of motion (ROM), active ROM, and out of bed (OOB) activities).

Methods: This quality improvement project utilized a Nurse Led Early Mobility Algorithm to provide PICU staff with guidance in determining when it was clinically appropriate to mobilize patients. A mobilization flowsheet was added into the Electronic Health Record (EHR) to optimize nursing documentation and capture data.

Results: Forty-two patients were enrolled between September 17, 2019 and December 6, 2019 with an average length of stay (LOS) $\leq$2.5 days. All eligible patients were mobilized by PICU staff once per 12-hour shift. Sixty four percent (n=27) patients had PT consults entered in the EHR and 55% of patients were assessed by PT. Twenty one percent (n=14) of mobilization activities were categorized as passive, 69% (n=107) as active, and 21% (n=33) as out of bed activities. No adverse events occurred during mobilization activities.

Conclusion: Early mobilization in the PICU setting is feasible and can be safely implemented without adverse events as part of a larger initiative to decrease PICU delirium. Staff education can improve recognition of patient readiness for early mobilization and staff perception of the safety and risks associated with early mobility.

Detecting Pediatric Obstructive Sleep Apnea in the Primary Care Setting

Krystal M. Howell

Problem and Purpose: Obstructive Sleep Apnea (OSA) among the pediatric population is a largely unrecognized condition within primary care. The current clinical practice guidelines developed by the American Academy of Pediatrics (APA) recommends screening for snoring at all well child visits, yet half of all parents reports that their providers did not inquire about their child's sleep habits or provide screening questionnaires. Nearly all children who are diagnosed with OSA report a history of snoring. The lifelong implications of disruptive sleep patterns as a result of OSA include neurologic developmental delays, failure to thrive, behavioral disorders, cardiac dysfunction, and difficulties excelling in academics. 'I'M SLEEPY' questionnaire is a screening tool for pediatric OSA designed for use in the primary care setting and meets recommendations of the current clinical practice guideline.
Methods: This quality improvement project integrated the 'I'M SLEEPY' questionnaire over a twelve-week period into well child visits for children seven to twelve years of age at a small, outpatient clinic in southeast Unites States. The clinic staff was provided education on pediatric OSA as a clinical practice problem and use of the 'I'M SLEEPY' questionnaire. Questionnaires were provided to patients for completion. If positive, providers investigated further for signs of OSA and documented an action plan.
Results: 100% screening rate was achieved and maintained within six weeks of integrating the 'I'M SLEEPY' questionnaire into the clinic workflow. 100% of the positive screenings (n=8) had a documented action plan by the provider. The positive screening results were analyzed revealing that 87.5% of the patients reported snoring. Lastly, 25% of those who screened positive were referred for polysomnography testing as part of their action plan and formally diagnosed with pediatric OSA.
Conclusion: Integrating the 'I'M SLEEPY' questionnaire directly resulted in an increase in the detection of possible pediatric OSA. The questionnaire proved an effective tool in prompting further investigation by the provider. The 'IM SLEEPY' questionnaire is easily adopted into the primary care setting within minimal interruption to the clinic workflow.

Intraoperative and Postoperative Anesthesia Management of Postoperative Visual Loss in Robotic Surgeries

Kesiah Louis

Problem & Purpose: Postoperative vision loss (POVL) associated with robotic surgeries occurs at a rate of 1.9 events per 10,000 cases. Patients who have suffered from this event experience an increased hospital stay of 8.6 days as oppose to the standard 4.1 days. In addition, those that suffer ocular complications experience increased cost expenditures of $49,532 from $22,697. Currently there is no standard of care in place at this level II trauma center in Baltimore, MD. Although the occurrence of this event is rare, this clinical practice guideline (CPG) was developed to effectively care for patients undergoing robotic surgery to prevent POVL.
Methods: Development of the CPG was a collaborative effort amongst an expert panel that consisted of a chief anesthesiologist, a chief certified registered nurse anesthetist, a clinical site representative, and 2 Doctors of Nursing practice (DNP) students. A thorough evidence review was conducted, and an initial CPG was drafted. The draft CPG was presented to the expert panel where the AGREE II tool was used to evaluate the quality of the CPG. Modifications were made based on AGREE II tool feedback. The final CPG was presented to anesthesia providers during grand rounds where practitioner feedback questionnaires (PFQ) were disseminated. PFQ results were reviewed and analyzed.
Results: Each domain of the AGREE II tool received scores of higher than 85% with an overall average of 92% after modifications were made. Of the 25 PFQs received, 100% response rate was obtained from the three questions analyzed. Questions 8, 16, and 23 were analyzed and each received scores of 68%, 80%, and 76% respectively, strongly agreeing to adapt the CPG into practice.
Conclusion: The CPG is a culmination of evidence-based practice recommendations to be utilized throughout the perioperative period for patients undergoing robotic surgeries. Based on the results obtained from the AGREE II tool and PFQ, the CPG was accepted by the anesthesia department. Use of this CPG provides education on POVL as well facilitates positive patient outcomes for this patient population.

A Standardized Discharge Protocol for Heart Failure Patients to Reduce Hospital Readmissions

Misbah Naureen

Problem & Purpose: Heart failure (HF) is an incurable chronic condition and a leading cause of hospitalizations and readmissions. Nurses and other healthcare professionals on a cardiac progressive care unit (CPCU) in a large academic center have provided patients with discharge education for managing HF, based on individual knowledge. But inconsistent patient education can lead to poor self-care and increased readmission rates. The purpose of this project was to implement a standardized discharge protocol, based upon HF care guidelines, for all adult patients admitted to CPCU with a diagnosis of HF to improve the discharge process and reduce 30-day hospital readmission rates.
Methods*:* This quality improvement project was conducted over a 14-week period. The first three weeks were dedicated to educating staff nurses. A pre- and post-test was used to assess change in nurses' knowledge of HF management. The standardized HF discharge protocol was implemented over 10 weeks. An audit tool measured weekly compliance. A system usability scale (SUS) was used to evaluate the ease of the use of the standardized HF discharge protocol.
Results: Nurses' knowledge significantly improved after education (pre-mean 76.5%, post-mean 93.7%, $p<0.001$). All nurses administered the discharge protocol by week 6, and 100% of the patients received the discharge protocol by week 6. Readmission rates for department of cardiology three months prior to the intervention (July, August, and September 2019) were 13.9%, 10.2%, and 13.1%, respectively. The readmission rate for October was 10.2%. The average SUS score was 86.7 (range 70-100), a grade "A" rating.
Conclusion: Nurses' knowledge improved significantly after education on HF and its management. The SUS score suggests that the standardized education protocol was easy to use and implement. Although it is too early to make any definitive conclusion, the readmission rate a month into implementation (October 2019) was 10.2%, lower than that of the previous month (September 2019) 13.1%. A standardized, evidence-based discharge process and HF patient education can positively impact HF self-management after discharge, thus improving quality of life and reducing hospital length of stay and 30-day readmission rates.

Evidence-Based Policy Toolkit Supporting Full Practice Authority f or Veterans Affairs Nurse Anesthetists

Mariyam I. Popoola

Problem & Purpose: The Department of Veterans Affairs Office of Inspector General's audit of the Veterans Health Administration for the fiscal year 2015 determined approximately 80% of newly enrolled veterans seeking care waited more than 30 days, and 53% of newly enrolled veterans seeking care finished their first appointment greater than 30 days over the established eligibility date. To address veteran's access to care issues, the VA finalized a rule, RIN 2900-AP44, granting full practice authority to three roles of the VA's advanced practice registered nurses but excluded certified registered nurse anesthetists (CRNAs). The purpose of implementing this evidence-based health policy toolkit was to provide resources on how to amend the current rule, RIN 2900-AP44, to include CRNAs.
Methods: The health policy toolkit along with the evaluation survey was implemented via SurveyMonkey. Data was also collected via SurveyMonkey.
Results: The survey revealed that most participants, 83.3%, strongly agree granting CRNAs full practice authority will decrease delays in patient access to anesthesia care in the VA vs. 16.7% who strongly disagree. The survey also revealed 83.3% of participants strongly agree and 16.7% agree the health policy toolkit is needed and will likely be supported by a vast majority of VA CRNAs in Maryland.
Conclusion: Data analysis demonstrates there is a need for the health policy toolkit, and granting CRNAs full practice authority would decrease delays in patient access to anesthesia care in the Veterans Health Administration.

Perioperative Anesthesia Management of Surgical Patients with Cardiac Implantable Electronic Devices

Oluwanife Solomon-Adenola

Problem & Purpose: Currently, in the United States, there are approximately 3 million patients with Cardiovascular Implantable Electronic Devices (CIEDs). Annually, more than 1 million CIEDs are implanted and 2% of patients with CIEDs undergo cardiac/non-cardiac surgical procedures. With the increase in surgical patients with CIEDs, CIED variations and CIED risk of complications, anesthesia providers must have current knowledge about preoperative and postoperative management of this patient population. The purpose of this Doctor of Nursing Practice (DNP) project was to develop an evidence-based clinical practice guideline (CPG) for standardizing the preoperative and postoperative anesthesia management of surgical patients with CIEDs at a large, teaching, level two trauma hospital in Baltimore, Maryland. Currently, there is no existing evidence-based practice for anesthesia management of these patient populations at this facility which provided an educational opportunity to improve patient safety.
Methods: An expert panel was convened and included two Certified Registered Nurse Anesthetists (CRNAs), one anesthesiologist, an interventional cardiologist, and a chief information officer. A comprehensive review of literature was conducted. The Appraisal of Guidelines for Research & Evaluation II (AGREE II) Tool was utilized by the expert panels to assess the quality of the CPG. After the dissemination of the CPG via an educational PowerPoint presentation to anesthesia providers at Grand Rounds, the practitioner feedback questionnaire (PFQ) was completed. The PFQ is a 3-point Likert-scale used to assess the accuracy and transparency of the development of the CPG.
Results: The domain scores of the AGREE II tool ranged from 70 to 100%. The domain "*Editorial Independence*" rated highest with a score of 100%. The domain "*Stakeholder Involvement*" rated lowest with a score of 70% and "*Applicability*" with a score of 81%. 80% of anesthesia providers (n=30) completed PFQ. Overall, 94% of the anesthesia providers agreed that the guideline should be approved for practice and it would be applied in their practice.
Conclusion: This CPG impacted the knowledge deficit among anesthesia providers at this facility to increase awareness and improve patient safety of surgical patients with CIEDs. Even though this CPG was designed based on the need of this institution's anesthesia providers, stakeholders permitted the application and usability of this CPG at other sister hospitals under this facility's health system.

Screening for Depression in a Rural Primary Care Setting

Jacquelyn C. Wallander

Problem and Purpose: The United States Preventative Services Taskforce recommends depression screening in the general adult population. Patients with untreated depression have higher morbidity rates in many diagnosis groups. Detecting and managing depression allows patients to better self-manage chronic diseases and contributes to an overall sense of improved well-being. In a private primary care setting a practice gap existed in which patients were not routinely screened for depression. The purpose of this quality improvement project was to implement a screening process for adults in a primary care practice to detect depression symptoms and offer treatment if indicated.

Methods: The primary aim of this quality improvement project was to implement a depression screening process for adults in a primary care practice using the Patient Health Questionnaire-9 (PHQ-9), a validated depression screening instrument. Primary outcomes measured: provider compliance in obtaining depression screenings and calculating the percentage of patients identified with depression. Eligible patients were aged 18-64 being seen for an annual exam with two Nurse Practitioners (NP). The NPs were provided PHQ-9 education and weekly reminders to complete the screening. During each patient annual exam, the patient was provided a copy of the PHQ-9. The NP reviewed results and treated when indicated. Charts were audited weekly for: provider compliance and depression classification.

Results: Depression screening compliance was 67%, (n=30/45) and 30% of patients screened (n=9/30) were diagnosed with depression. All depressed patients were offered treatment. 20% were new depression diagnoses (n=6/30) and 10% had a history of depression (n=3/30). 13% (n=4/30) of patients were provided referrals to psychotherapy and 7% (n=2/30) were started on a medication for depression. The majority of the positive depression screenings (67%, n=6/9) were detected as mild.

Conclusion: Depression screening using the PHQ-9 instrument is an effective way to detect depression. This will reduce the untreated depression rates in the United States and connect patients to proper treatment. Once depression is managed, patients are able to better self-manage chronic diseases. Implementation of the PHQ-9 into the provider workflow will increase depression screening compliance. As a result of this project, the primary care practice is building the PHQ-9 instrument into the electronic health record to facilitate provider compliance.