

# DNP PROJECT ABSTRACTS

## ROOM 10

### Implementing Psychiatric Safety Planning in the Adult Emergency Setting to Decrease Re-Presentation

Julie Butchart

**Problem & Purpose:** In the previous year, of those who complete suicide, 31.1% were seen in the emergency department. This statistic presents an important opportunity for intervention within healthcare. The purpose of this quality improvement project was to improve discharge planning by implementing the Stanley Brown Safety Plan (SBSP) in the Psychiatric Emergency Service (PES) for patients who report suicidality before discharged.

**Methods:** This project implemented the SBSP within the adult PES of a large urban academic hospital. The process change was to measure the number of patients who have documentation related to the SBSP in their chart upon chart audit. The data collection process utilized a “student- developed” chart audit model based on an electronic medical record report that is composed of date, CSN of patient, staff member, and whether the SBSP or refusal of participation was documented. The structure measures were education of the staff and feedback provided to the staff based on weekly audits.

**Results:** Education of staff pre-implementation and individualized feedback provided had 100% compliance throughout the project. Patients who had documentation of SBSP or refusal to participate in their project in their chart was successful; demonstrated by weekly improvement throughout the project and project high of 82% in the last week. The compliance ranged from 29% to 82% with a median of 41.5, a mean of 53.8 and a standard deviation of 15.8. Re-presentation rates increased from 18% in the first month data was recorded to 34% in the last month of recorded data with a median of 29.6, a mean of 28.6 and a standard deviation of 4.7.

**Conclusion:** Clinical staff’s knowledge on safety planning improved after education training. The documentation score suggests that the standardized safety planning protocol was easy to use and implement as the standard of care. Findings highlighted the confounding variables that effected the safety planning protocol’s ability to prevent re-presentation. Standardizing the safety planning protocol and educating the clinical staff on safety planning not only improved the documentation but is essential to improving discharge planning for the suicidal patient.

# Utilization of Written Asthma Action Plan In a Pediatric Primary Care Setting

Grace Efunbajo

**Problem and Purpose:** Asthma is a common and potentially serious chronic disease that affects over 20 million adults and 6 million children in the United States. Pediatric standard of care supports providing an asthma action plan to asthma patients/families. The use of asthma action plans (AAP) has been associated with improved asthma patient outcomes. Studies have shown poor utilization of AAP by healthcare providers for promoting self-management and self-efficacy. The purpose of this DNP quality improvement project was to implement and evaluate the use of personalized written asthma action plans by healthcare providers in a pediatric primary care setting.

**Methods:** The project was implemented over a 13-week period beginning in September of 2019. Participants were existing and newly diagnosed asthma patients less than or equal to 21 years old who were receiving care for sick visits or annual physical examination. The conceptual framework of the project was based on Kurt Lewin's change theory. A 4-hour education and training on asthma and the importance of the AAP was given to the healthcare providers (a physician and nurse practitioner), the office manager, and supporting members of staff. Healthcare providers and medical assistants were equally trained on how to complete an asthma action plan. The change process included the use of a colored paper asthma action plan; medical assistants provided the AAP sheet with a completed demographic section of the tool before the medical provider completed the other sections.

**Results:** During the implementation period, data were collected on the number of AAP's completed by the healthcare providers. This information was aggregated through a chart audit of de-identified copies of completed AAP's. Run charts were used for data analysis. The clinic achieved 90% of AAP utilization rate, which surpassed the 60% goal of the project.

**Conclusion:** The implementation and utilization of a written asthma action plan and in-service training in a pediatric outpatient setting improves patient accessibility to a treatment plan by primary care healthcare providers. The use of an evidence-based AAP can enhance patient management of asthma by giving patients and caregivers a roadmap to asthma care.

## Postdischarge Nausea and Vomiting Risk Assessment in Breast and Gynecological Surgical Patients

Nicole D. Grass

**Problem & Purpose:** Postdischarge nausea and vomiting or retching occurs from the time of discharge from the post anesthesia care unit for patients who have undergone out-patient surgeries. At a large mid-Atlantic academic hospital, 40% of gynecological out-patient surgical patients had postdischarge nausea and vomiting. The purpose of this quality improvement project was to implement, and evaluate the effectiveness and staff compliance in the use of the Apfel Postdischarge Nausea and Vomiting Risk Assessment tool in order to improve postdischarge nausea and vomiting screening in the post anesthesia care unit.

**Methods:** After identification and recruitment of key stakeholders and unit champions, a force-field analysis, as part of Lewin's Change Theory, was completed to identify the driving and restraining forces. All post anesthesia care unit registered nurses received education on the risk assessment protocol utilizing the Apfel risk assessment tool. The Apfel risk assessment tool is validated to identify five independent risk factors for postdischarge nausea and vomiting in out-patient ambulatory surgical populations. Implementation of the tool with data collection occurred over eight weeks on all scheduled out-patient breast and gynecological surgical patients. Staff compliance was measured throughout implementation.

**Results:** In patients with at least three risk factors present, the Apfel tool correctly identified the risk for postdischarge nausea and vomiting in 68% of patients. In patients with four and five risk factors present, the tool correctly identified the risk for postdischarge nausea and vomiting in 88% and 100% of patients respectively. Compliance of the tool was high with the average compliance rate of 92% over the eight-week data collection period.

**Conclusion:** Data analysis demonstrated the Apfel tool adequately predicted the risk for postdischarge nausea and vomiting in out-patient surgical breast and gynecological patients. Lewin's change theory was successful in maintaining a high compliance rate throughout implementation. Additionally, this quality improvement project resulted in increased compliance of standing follow-up phone call policy. Sustainment of the intervention includes expansion to all out-patient surgical populations and implementation of a postdischarge nausea and vomiting prevention and management guideline.

# Implementation of Routine Point-of-Care Blood Lead Testing in Pregnant Women

Faith Lois Jimenez

**Problem & Purpose:** Elevated blood lead levels during pregnancy can lead to maternal and fetal complications. Lead can be transmitted from the mother to the fetus by crossing the placenta. Baltimore city is an “at risk” area for lead poisoning due to many houses built before 1950. Other risk factors for lead exposure include recent immigration to the United States and Black or Hispanic race/ethnicity. Currently, the Women’s Health Center (WHC) conducts a lead risk assessment but does not perform testing to identify blood lead levels in pregnant women. The purpose of this quality improvement (QI) project is to implement an evidence-based routine point-of-care blood lead testing (BLT) of all pregnant clients in the WHC to identify abnormal blood lead concentrations in pregnant women.

**Methods:** In order to achieve this, an external Lead Poisoning Prevention (LPP) team came to the WHC to administer BLT and lead counseling on pregnant women. The LPP team is comprised of community health workers trained and validated to conduct point-of-care BLT and education prior to this project. The project leader coordinated scheduling, space, and other logistics between the WHC and LPP. Data collected and analyzed include: (1) the number of pregnant women seen at the WHC; (2) the number of pregnant women who received BLT; (3) the number of pregnant women clients who have elevated blood lead levels and, (4) the number of pregnant women who received lead education and nutritional and environmental counseling.

**Results:** The LPP team came on inconsistent days and times to perform BLT at the WHC. 50% of pregnant women seen in the center received BLT for the specific days the LPP team came. Of those who received BLT, 12% of pregnant women had elevated blood lead levels ( $>5 \mu\text{g/dL}$ ). 100% of pregnant women who received BLT, received lead education and counseling (nutritional and environmental) from the LPP team.

**Conclusion:** Routine point-of-care BLT is easy and quick to perform. It is an evidenced-based blood lead testing system used widely to universally screen for abnormal blood lead levels of children. As a result, this testing can easily be implemented in other obstetric settings.

## Improving Safety in the Pediatric Emergency Department through Early Violence/Aggression Assessment

Margo E. Mancl

**Problem & Purpose:** The Pediatric Emergency Department (PED) setting is not exempt from workplace violence (WPV). Frontline staff in the PED have identified concerns around a rise in WPV incidents over the last few years. From January 1, 2018 through March 5, 2019, this PED saw 2,058 mental/behavioral health visits. Of mental/behavioral health focused visits, 79 visits (3.8%) resulted in coercion in the form of intramuscular antipsychotic or anxiolytic medication administration related to aggressive or violent behavior. The purpose of this project was to implement and evaluate the effectiveness of a violence risk assessment tool in a PED setting.

**Methods:** This quality improvement (QI) project involved training PED Psychiatric RNs in an urban, academic PED on the use of the Pediatric Violence/Aggression Assessment Tool (P-VAAT) to screen patients aged 8 years-17 years presenting with a chief complaint related to acute mental/behavioral health concerns. The P-VAAT score assisted the RNs to determine preventive or early intervention measures to implement in the interest of patient and staff safety.

**Results:** Of 297 eligible patients, 152 were screened resulting in a 51.1% tool completion compliance rate. One hundred twenty eight patients scored as 'Low' risk, 12 scored as 'High' risk, and 12 as 'Moderate' risk. Of those that scored 'High,' five (41.7%) exhibited violent/aggressive behavior during their encounter. Of these five, four (80%) required a short-term physical hold with intramuscular anxiolytic/antipsychotic medication administration and one was placed in seclusion. Another patient in the 'High' group was de-escalated and cooperative taking oral anxiolytic/antipsychotic medication.

**Conclusion:** Observed and reported feedback through personal interactions with RNs support the ease of use and effectiveness of the Pediatric Violence/Aggression Assessment Tool (P-VAAT). RNs report early identification of risk for violence allows for better preparation and safety in potential outbursts. Opportunity exists to expand this QI project with a focus on the use of this tool to include medical patients.

## Implementation of a Violence Checklist to Reduce Seclusion/Restraint on Inpatient Psychiatry

Nakeia Newton

**Problem & Purpose:** The effective management of patient aggression and violence presents a significant challenge to inpatient psychiatry units, with seclusion and restraint (S&R) commonly utilized to manage these crisis situations. The purpose of this quality improvement (QI) project is to implement an aggression/violence screening tool on an adult acute psychiatry unit to promote the early identification and management of potential for patient aggression/violence.

**Methods:** The Brøset Violence Checklist (BVC) is an aggression/violence screening tool that assesses for six objective risk factors to establish the potential risk for patient aggression/violence. Staff nurses on a 15-bed high acuity inpatient psychiatry unit were trained on the use of the BVC and the least restrictive interventions to implement when a patient has been identified as at risk for aggression/violence. The BVC was to be completed on each patient admission on the unit over a 10-week period. Pre and post implementation surveys were conducted to assess the perception of staff nurses on their knowledge and skill set in the effective management of aggression/violence.

**Results:** During the implementation period, the project leader provided training to 100% of staff nurses (n=43) under the adult inpatient psychiatry service on the use of the BVC to assess for early manifestations of risk for aggression/violence. Staff nurses screened 43% (n=38) of new patient admissions during the project implementation period. Staff nurses reported feeling that a screening tool would be useful in assessing for patient aggression/violence both pre and post implementation.

**Conclusion:** Aggression/violence screening tools are an essential component in the effective management of patient aggression/violence and reducing S&R on inpatient psychiatry. Similarly, while this QI project was successful in implementing the BVC to aid in the early assessment of patients at risk for aggression/violence, future QI projects should assess the role that least restrictive interventions play in reducing patient aggression and S&R events.

# A Clinical Practice Guideline for Postoperative Screening Impairment: Preoperative Screening

Amanda L Rae

**Problem and Purpose:** Postoperative delirium (POD) and postoperative cognitive dysfunction (POCD) are cognitive impairments that may manifest following anesthesia administration. Incidence rates are reported as high as 50% in older adults undergoing orthopedic, cardiac, or emergency procedures. Postoperative cognitive impairments increase healthcare costs, length of hospital admissions, discharges to locations other than home, and one-year postoperative mortality rates. The purpose of this project was to develop a Clinical Practice Guideline (CPG) for a mid-sized community hospital in Baltimore, Maryland with high rates of orthopedic surgical procedures. The CPG outlined preoperative risk identification, intraoperative, and postoperative strategies to minimize postoperative cognitive impairments. This portion of the project focused on preoperative screening. Age, pre-existing cognitive impairment diagnoses, and standardized screening guided the identification of HIGH-RISK patients. The Mini-Cog<sup>®</sup> was the recommended screening tool due to its reliability, specificity, ease of use, and time effective administration.

**Methods:** Project proposal was approved as Non-Human Subjects Research by the University of Maryland, Institutional Review Board. Evidence was selected from a literature search reviewing articles published within the past 10 years and included meta-analysis, systematic reviews, randomized controlled trials, current professional organization recommendations, and prospective studies. Draft CPGs were revised based upon stakeholder responses on the Appraisal of Guidelines, Research and Evaluation II Instrument (AGREE II). The final CPG was presented to the anesthesia department and Practitioner Feedback Questionnaires (PFQs) were collected measuring project quality, acceptability, and applicability.

**Results:** The AGREE II tool demonstrated over 88% positive feedback across all 6 domains. PFQ responses by anesthesia providers present at the departmental presentation (n=13) were analyzed using descriptive statistics. *Quality* was rated highest at 88% positive, followed by *Acceptance* at 73%. *Applicability* was divided between positive (35%), neutral (38%), and negative (27%) responses. The results revealed responders' doubt for overall applicability of the CPG into clinical practice.

**Conclusion:** CPG guidance emphasized high-risk patient identification as the first step in reducing postoperative cognitive impairments. This CPG may be perceived among providers as difficult to apply in clinical practice; however, key stakeholders demonstrated approval in both the quality of content and overall acceptance of this CPG.

# The Effect of Pre-Procedural Video Education on Patients Undergoing Cardiac Catheterization

Lisa Stanley

**Problem & Purpose:** Nearly half of adult Americans demonstrate poor health literacy and have difficulty understanding health information. Utilizing video in education supports multiple learning styles, promoting better learning outcomes. The standard of care for patients receiving cardiac catheterization is providing outpatient education prior to the procedure date. Evidence has shown that pre-procedural video-based education improves patient satisfaction. Using video in the Cardiac Preparation and Recovery Unit benefits patients by providing audiovisual education the day of cardiac catheterization. Standardizing a process to utilize these videos and increasing the number of patients they are played for, may improve patient satisfaction.

**Methods:** At the start of implementation, the Cardiac Preparation and Recovery Unit was added to the medical center patient education video viewing system for data tracking and reporting. The pre-procedure checklist in the electronic health record was edited to include the education method provided to the patient, allowing staff to document that video education occurred during admission. Staff received a resource sheet on the process of playing, documenting, and tracking the videos. Monthly staff meetings were attended to provide updates on project progress. Follow up phone call surveys were completed by a patient care coordinator then audited for videos played, benefit, and overall patient satisfaction. Using Microsoft Excel<sup>®</sup> software, an independent t-test was performed to determine statistical significance ( $p < 0.05$ ) of patient satisfaction between patients who watched the pre-procedural video and those who did not.

**Results:** The median percentage of videos played per week increased from 0% during the pre-implementation phase to 64.5% during the implementation phase. 100% of total patients who watched the video ( $n=38$ ) found it beneficial. Combining pre-implementation and implementation patient satisfaction scores, total satisfaction scores of patients who watched the video ( $n=38$ ) was not statistically significant ( $p=0.46$ ) from scores of patients who did not ( $n=89$ ).

**Conclusions:** 100% of cardiac catheterization patients reported that the video-based education was beneficial, even though patient satisfaction was not statistically significant when associated with pre-procedural video-based education. In settings within the organization where non-emergent surgical procedures are conducted, it is recommended that the staff utilize pre-procedural videos for patient education.



## Bathtime Shenanigans: Implementing Evidence-Based Bathing Practices

Keiara D. Williams

**Problem & Purpose:** Bathing practices vary among neonatal intensive care units (NICU), despite guidelines set forth by the Association of Women’s Health, Obstetrics and Neonatal Nurses (AWHONN). Bathing should be done in an effort to allow for optimal outcomes in the neonate, paying particular attention to the needs of premature infant, while attempting to minimize negative physiologic effects due to the stress of bathing. The purpose of this project is to implement evidence-based bathing practices in a level IV NICU, where practices vary.

Through utilizing the Neonatal Skin Care Guidelines, by AWHONN, the goal is to reduce signs of neonatal stress including vital sign changes and behavioral signs of distress during bathing.

**Methods:** The population consists of neonates ranging in age from 24 to 40 weeks’ gestation in a 52 bed NICU located in the Mid-Atlantic region. The implementation period occurred over a twelve week period in the fall which included identification of unit-based champions, staff education, competency assessment, and development of resources and reminders for staff.

Algorithms were created for staff to follow based on AWHONN’s guidelines, which determine inclusion and exclusion criteria for swaddled versus sponge bathing. Documentation on bedside charts included the age of the infant, the type of bath given, and measures of tolerance to bath assessed by pain/sedation scores and patient temperature 15 minutes post bath.

**Results:** There were several facilitators and barriers to overcome during the implementation of this project. The support of unit leadership and “champions” on all shifts helped to facilitate implementation of this project. However, decreased education penetrance to the staff and limited documentation, impeded some of the success. There were no negative effects of hypothermia or increased pain/sedation scores when the infants were swaddle bathed. Although, limited, there were some apparent trends in the data that suggests evidence-based bathing practices are needed on this unit.

**Conclusion:** Evidence-based bathing practices help to reduce negative outcomes in the neonatal population. Implementing a practice change within a large unit with over 160 staff requires continuing education to enforce the strategies set forth by AWHONN to cement the new strategies for sustainability and accountability into practice.