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SCHOOL OF NURSING

DOCTOR OF NURSING PRACTICE

**2020 PROJECTS**



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# DOCTOR OF NURSING PRACTICE PROJECTS

VANDERBILT UNIVERSITY



School of Nursing

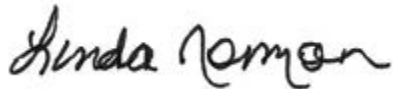
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## FOREWORD

Congratulations Doctor of Nursing Practice graduates!  
You have met the rigorous standards of this program and achieved individual scholarly accomplishments showcased in this booklet.

You chose the Vanderbilt University School of Nursing to learn, transform and apply knowledge in new ways and you have certainly reached those goals. The Institute of Medicine's landmark ***Future of Nursing*** report calls for significantly more doctorally educated nurses to advance health care and you are prepared to implement that recommendation. You are now well equipped to make meaningful contributions within your own community, your interest area and throughout the world of health care. We are proud of you, and look forward to the difference you will make.

Sincerely,



**LINDA NORMAN,**  
DSN, RN, FAAN  
Valere Potter Menefee Professor of Nursing  
Dean, Vanderbilt University School of Nursing



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## FROM THE DIRECTOR

The future of nursing is now as our 2020 DNP graduates lead interprofessional teams to create meaningful innovations that influence advanced nursing practice and healthcare.

The DNP projects of the 2020 graduates cross geographical and discipline boundaries to bridge gaps in evidence and practice. Self-described change experts, their impact on quality outcomes for patient-centric healthcare will be recognized across myriad organizations and settings nationally and globally.



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## Enhancing Self-Care Among Patients With Heart Failure

### PURPOSE

The purpose of the DNP project was to implement CardioSmart®, an educational program, to a group of 20 heart failure (HF) patients living in Las Vegas, Nevada to increase engagement in self-care. The expectation was that an increase in knowledge of HF would increase participants' engagement in self-care.

### METHODOLOGY

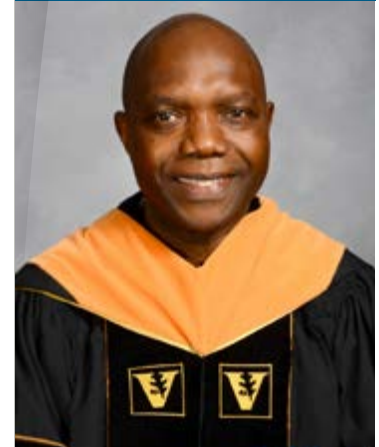
Patients were recruited from a house-call practice in Las Vegas. The project involved providing patients with one-on-one education on HF using CardioSmart® in their homes. CardioSmart® is an educational program to help patients with HF. The education included information about the causes and treatment of HF and lifestyle modifications including diet, weight monitoring, fluid intake, and salt consumption. Patients completed the self-care heart failure index version 6.2 (SCHFlv6.2) survey before and after the education was conducted in their homes to determine change in self-care as evidenced by their scores.

### RESULTS

The results indicated that there was an improvement in all patients' post SCHFlv6.2 scores as compared to pre scores. The scores increased in all the subscales of self-care: maintenance, management, and confidence. The largest mean of differences (MoD) was in the selfmanagement subscale of 28.638, followed by that of the self-confidence subscale of 19.209, and then the self-maintenance subscale of 13.02.

### IMPLICATIONS FOR PRACTICE

HF is a serious public health concern that afflicts over six million people in the US and results in over 300,000 deaths annually. Patients with HF are frequently readmitted, treated, discharged and then readmitted soon afterwards. Research have shown that patient-centered education is effective in increasing patients' self-care skills. The results of this DNP project demonstrate that education increased patients' engagement in self-care as demonstrated by the change in SCHFlv6.2 scores. This highlights the importance of the partnership of patients and practitioners to effectively manage HF.



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# Minimizing Interruptions: Improving the Efficiency Within a Trauma Advanced Practice Registered Nurse Team

## PURPOSE

The purpose of this quality improvement (QI) project was to increase trauma advanced practice registered nurses (APRNs) perception of patient safety and improve APRN job satisfaction by reducing workflow interruptions. The first project aim was to reduce the percentage of unnecessary workflow interruptions via pages by 20% through education and written reminders to RNs who provide care for trauma patients. An additional aim was to increase the utilization of a standardized trauma APRN patient rounding process from 0% to 50%.

## METHODOLOGY

The Model for Improvement guided this project. The development of an APRN standardized rounding process,

resource card, and education of the APRNs and RNs about the project resulted in improvement.

## RESULTS

Findings demonstrated that the overall unnecessary interruptions via pages improved by 36.2% from 47% baseline to 30% post-project intervention. The implementation of the standardized rounding process improved from 0% to 87%. The trauma APRN postimplementation survey responses also revealed a positive improvement in the outcomes of APRN perceived patient safety and job satisfaction.

## IMPLICATIONS FOR PRACTICE

The QI project found that increasing communication

during rounds by using a standardized rounding process with the inclusion of the RN can minimize interruptions and improve the efficiency of a trauma APRN team. The key to the success of the QI project that led to improved outcomes was the implementation of a standardized rounding process. Standardization is a key QI tool that can result in improvement. Education of the APRNs and RNs, along with reminder resource cards for the RNs, contributed to the success of the project. Further improvements could be demonstrated with the spread of this project by using the Model for Improvement methodology to minimize interruptions and improve patient safety and provider job satisfaction on other units in the hospital.

## Team-Based Care and Perinatal Opioid Use Disorder

### PURPOSE

Perinatal opioid use disorder (OUD) is a public health crisis that poses risks to mother and baby. Pregnant women with OUD require care that is tailored to their unique needs and treatment must address both the maternal and neonatal risks of perinatal OUD. The purpose of this project was to compare the maternal and fetal outcomes in a multidisciplinary obstetric-addiction clinic, to the outcomes of women who delivered in the same institution prior to the development of a team-based treatment program.

### METHODOLOGY

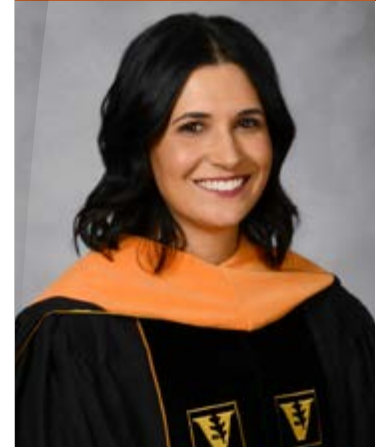
Pregnant women who received a consultation for opioid use disorder, were prescribed buprenorphine, and delivered at Vanderbilt University Medical Center in 2014 (N= 19) and 2017 (N=47) were retrospectively identified utilizing billing data. Clinical data was obtained through the electronic health record. Descriptive statistics were calculated to describe each group.

### RESULTS

After the implementation of team based care an increase in prenatal visit attendance, earlier entry to prenatal care and fewer relapses were observed. The results for infant outcomes demonstrated reduced morphine treatment for neonatal abstinence syndrome, shorter lengths of stay, increased breastfeeding, and higher rates of discharge into the mother's custody.

### IMPLICATIONS FOR PRACTICE

As the incidence of opioid use continues to rise in the United States, determining the most effective ways to treat women with OUD during pregnancy continues to be necessary. While this project demonstrated improved maternal and neonatal outcomes after the implementation of team based care, additional research is required to determine which interventions are most effective and also to assess patient acceptability of interventions.



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## Environmental Strategies to Decrease Neurodevelopmental Risk Factors in a Pediatric Cardiac Intensive Care Unit

### PURPOSE

Unlike neonatal intensive care units, neurodevelopmental care for neonates in a cardiac intensive care unit (CVICU) varies. Neonates in the CVICU are exposed to environmental situations that place their neurodevelopment at risk. Evidence suggests that CVICU staff feel they have uneducated on providing neurodevelopmental care. The aim of this quality improvement (QI) project was to improve neonatal neurodevelopmental support by nurses in a pediatric CVICU.

### METHODOLOGY

An evidence based educational program was developed on providing neurodevelopmental support through modifications of environmental risk factors specifically the acoustic and visual environments and safe guarding sleep. Author-developed questions and measures previously used in the literature were used to assess CVICU nurses' knowledge and perceptions about neonatal neurodevelopmental support and environmental risk factors pre and post education. All CVICU nurses (n=40) were eligible to participate.

### RESULTS

Pre-education results demonstrated that nurses

felt policies and practices related to acoustic and visual environments and sleep protection were not in place in the CVICU. Nurses also perceived their ability to address infants well-being related to the physical environment as inadequate. They reported not feeling confident in their ability to provide neurodevelopmental care. Post- education 100% of nurses who completed the survey (n=8) reported that the unit now had practices in place to address environmental risk factors. All nurses perceived improvement in their ability to address the infants well-being related neurodevelopmental environmental risk factors. The majority of nurses (87.5%) reported feeling confident in their ability to provide neurodevelopmental care.

### IMPLICATIONS FOR PRACTICE

Implementation of neurodevelopmental care in the CVICU is critical for neonates during their hospitalization. Modifying sound and light and bundling nursing care are feasible strategies that nurses can implement to reduce environmental risk factors. Project findings support the notion that education about neuroprotective strategies to reduce exposure to environmental hazards and promote neurodevelopmental care in the CVICU is an ideal starting place.

## Staff Perceptions of Delirium as a Precursor to Screening in a Pediatric Cardiac Intensive Care Unit

### PURPOSE

The purpose of this project was to evaluate the accuracy of bedside nurses' perceptions on the presentation of delirium in their patients and to pilot use of a validated pediatric delirium screening tool, the Cornell Assessment of Pediatric Delirium (CAPD), in the pediatric CICU setting.

### METHODOLOGY

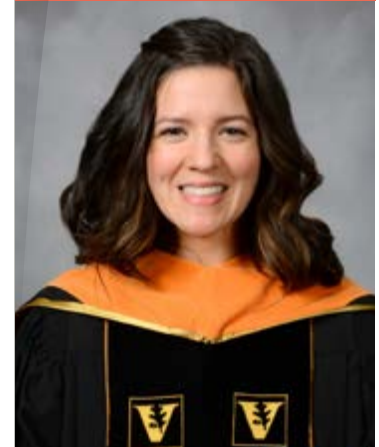
The Institute for Healthcare Improvement's Plan-Do-Study-Act model guided this project. The Plan phase involved project design and education development. In the Do phase, a questionnaire was administered to CICU bedside nurses seeking their subjective assessment of whether or not their patient experienced delirium. After baseline data collection, the nurses participated in prepared education sessions to discuss both pediatric delirium and the CAPD tool. Once education was complete, bedside nurses were again surveyed regarding their patients' experience of delirium, this time via a trial of the CAPD tool. In the Study phase, descriptive statistics revealed delirium prevalence as determined by both subjective assessment and via the CAPD tool.

### RESULTS

By subjective assessment, 3.9% of patients experienced delirium. Forty-one of 44 nurses (93%) participated in the delirium education sessions. By CAPD assessment, 24.7% of patients screened positive for delirium.

### IMPLICATIONS FOR PRACTICE

Delirium has devastating short- and long-term sequelae. Routine screening facilitates early detection and intervention, which arrests delirium progression and improves clinical trajectory. As a result of this project, participants have a better understanding and awareness of pediatric delirium. Future endeavors will be directed towards full implementation of routine delirium screening and delineation of pathways for delirium prevention and management.



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## Screening for Social Determinants of Health (SDOH): Efficacy of the Core 5 SDOH Screening Tool

### PURPOSE

The association of SDOH with health outcomes is widely accepted, yet more than two thirds of hospitals do not screen for social determinants. The purpose of this project was to implement the Core 5 screening tool and evaluate its efficacy and usability in identifying SDOH in a pre-surgical spine population.

### METHODOLOGY

This DNP quality improvement (QI) project used the Model for Improvement (MFI) as a systems improvement framework. The aim was to increase the use of the Core 5 tool from 0% to 90% over a six week period. Improvement was evaluated based on utilization of the Core 5 tool as a means to increasing recognition of social determinant factors. The PDSA cycle then served as a small test of change to decide if the screening process needed to be revised or adopted. A staff usability survey was also administered to understand the impacts on workflow and perceived staff benefits.

### RESULTS

Descriptive statistics were calculated for patient demographics of the patient population and those that identified SDOH factors. Five patients of those screened (N=52) reported SDOH factors related to housing, transportation and safety concerns. Staff rated tool usability at 4.4 out of 5 on a Likert scale with the lowest rating for patient comfort in completing the survey.

### IMPLICATIONS FOR PRACTICE

Future work should continue to evaluate the efficacy of this tool in other ambulatory and tertiary settings in identifying SDOH factors. Identification of a widely-accepted screening tool is foundational to creating evidence-based standards for managing patient SDOH and providing healthcare organizations with operationally clear steps for implementation.



## Evaluation of Staff Perceptions and Utilization of Trauma-Informed Care for Incarcerated Youth

### PURPOSE

Trauma-informed care (TIC) is being increasingly adopted when caring for incarcerated youth due to the proven positive impacts. However, security staff working with this population may not utilize this approach. The purpose of this project was to serve as a practice-based inquiry into the security staff's perceptions and utilization of trauma-informed care before and after an evidence-based educational intervention.

### METHODOLOGY

This project involved administering a survey to security staff created to assess their perceptions of trauma-informed care and utilization of trauma-informed interventions on a daily basis. The survey items allowed for Likert scale responses, with perceptions ranging from 1-5 (very negative to very positive) and utilization ranging from 1-5 (never to always). In consideration of the survey responses and staff feedback, an educational presentation was developed, focusing on the evidence behind trauma-informed care for incarcerated youth. Finally, the survey was administered after the educational intervention, again surveying staff's perceptions of trauma-

informed care and self-reported utilization of TIC.

### RESULTS

Twelve respondents participated in the project and results indicated an improvement in both perception and utilization of TIC after the educational intervention. Perception improved from an average of 3.1 (neutral) to 3.7 (mostly positive); there was a small improvement in utilization, increasing from 3.8 to 3.9 (almost always). A greater positive change was seen with staff reported perceptions versus utilization.

### IMPLICATIONS FOR PRACTICE

This project was a unique first step in broadening the knowledge of understanding staff perceptions and utilization of trauma-informed care. Successful trauma-informed care relies heavily on staff's implementation of the model, therefore emphasizing the need for security staff support. This project adds to the understanding of the use of trauma-informed care within juvenile justice centers by highlighting security staff feedback and education as major factors in improving perception and utilization.



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# Patient Collection of Vaginal Swabs in the Emergency Department

## PURPOSE

Nurse practitioners and other clinicians working in emergency departments (ED) are often called upon to diagnose and treat vaginal infections. Offering self-collection as a method of obtaining vaginal specimens has the potential to decrease length of stay (LOS) and shorten time to definitive treatment for these patients. This project was intended to assess the impact of patient-collected vaginal swabs on LOS in one ED.

## METHODOLOGY

Self-collection of vaginal swabs was implemented in a community ED in western North Carolina. Post-implementation, data analysis focused on the LOS and the time to specimen collection. A comparison of this data was made between the self-collection group and patients who had clinician-

collected specimens. Additional analysis focused on rates of infection detection between the two groups of patients.

## RESULTS

Though the sample size was small (N=85), patients in the self-collection group had an average LOS 53 minutes shorter than those who had clinician-obtained specimens, resulting in a 21% reduction in LOS. Time to specimen collection time was reduced with patients who self-collected having an average time to specimen collection of 92 minutes compared to 203 minutes for patients who had clinician-obtained specimens, a 55% difference,  $p = 0.0197$ . In the clinician-obtained specimen group, 39% of the patients had a vaginal infection. Of the patient-collected group, 63% of the group was determined to have a vaginal infection.

## IMPLICATIONS FOR PRACTICE

Patient-collected vaginal swabs in this ED setting was associated with a reduction in overall LOS as well as a shorter time to specimen collection. In this data, vaginal infections were detected at higher rates among patient-collected samples than among clinician-obtained samples. This should give emergency clinicians a degree of confidence in this collection method as a reliable alternative to clinician-obtained specimens.

## Homebound Patient Admission Rates: Practice Considerations for Nurse Practitioner Home Visits

### PURPOSE

The purpose of this DNP quality improvement project was to decrease hospital utilization among homebound patients at a clinic in south east Florida by implementing bi-weekly nurse practitioner visits among the highest utilizers of hospital services. This was a change from the standard for the clinic which was one visit every three months for these homebound patients.

### METHODOLOGY

This quality improvement project used the Model for Improvement (MFI) which included the Plan-Do-Study-Act (PDSA) cycle. A project team was created at the clinic and objectives were set and predictions were made based on pre change data. Bi-weekly nurse practitioner visits were provided for six weeks to the homebound patients with the highest rates of hospital utilization. A pre and post intervention analysis of hospital visit frequency was conducted to determine if the implementation of bi-weekly nurse practitioner visits among homebound patients with high utilization of hospital services, decreased the rate of hospital use.

### RESULTS

Following successful implementation of the nurse practitioner visits the results indicated the ER utilization decreased from 10(100%) to 1(10%) and hospital admission decreased from 4(40%) to 1(10%) among the 10 homebound patients that met inclusion criteria.

### IMPLICATIONS FOR PRACTICE

The findings of this quality improvement project support that providing bi-weekly nurse practitioner visits among high utilizers of hospital services, such as homebound patients, can significantly reduce the incidents of hospital utilization.



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## Early Recognition of Sepsis by Utilizing Nurse Initiated Sepsis Bundle

### PURPOSE

The purpose of this project was to increase early recognition of sepsis by implementing an evidence-based nurse initiated sepsis bundle order set decreasing patient mortality for sepsis not present on admission from 34% to 0%.

### METHODOLOGY

For this DNP scholarly project, a quality improvement design, the Model for Improvement, was utilized to implement an evidence-based nurse initiated early alert sepsis bundle test of change, over a six week period on an inpatient medical oncology/renal nursing care unit. Key change elements of this project included: 1) implementation of an evidence-based nurse initiated early detection alert sepsis bundle by the inpatient medical oncology/renal nurses, 2) training inpatient medical oncology/renal nurses on the basics of sepsis

and early signs and symptoms of sepsis, and 3) creating and implementing the new evidence-based nurse initiated sepsis bundle patient order-set within the electronic medical record (EMR). The project data was collected utilizing reports within the EMR to compare sepsis alerts and utilization of the early detection alert bundle.

### RESULTS

Descriptive statistics were calculated to describe the data collected post implementation of the early detection alert bundle order-set. Beside nurse utilization of the order-set increased from 0% to 100% and the mortality rate was reduced to 0.0% by the end of the six-week test of change. The implementation of the evidenced nurse initiated early detection alert sepsis bundle increased the inpatient nurses' recognition of sepsis, ensured

the patients were treated timely and appropriately according to sepsis core measures by following evidenced based to improve clinical quality outcomes.

### IMPLICATIONS FOR PRACTICE

By implementing an evidence-based nurse initiated early detection alert sepsis bundle on a medical oncology/renal inpatient floor, nurses can readily identify patients who are exhibiting early signs and symptoms of sepsis and then implement appropriate treatment to prevent patient mortality. This project demonstrated that implementation of an evidence-based nurse initiated early detection alert sepsis bundle can lead to early detection of sepsis improving quality clinical patient outcomes as evidence by a 0.0% patient mortality rate at the end of the six week project.

## Effects of a Transcutaneous Bilirubin Screening Protocol in the Neonatal Intensive Care Unit

### PURPOSE

The purpose of this project was to evaluate the effect of a transcutaneous bilirubin (TcB) screening protocol, implemented at a regional level III Neonatal Intensive Care Unit (NICU) for infants born at > 30 weeks' gestational age, on the number of serum bilirubin levels obtained per infant, for the evaluation or management of hyperbilirubinemia. The quantity of serum bilirubin sampling in the first two weeks of life was evaluated prior to and following implementation of the TcB protocol to assess effect on frequency of serum bilirubin sampling.

### METHODOLOGY

The project design was a quality improvement project and utilized the Model for Improvement approach. Data

quantifying frequency of serum bilirubin sampling was obtained via retrospective chart review for a time period prior to and following TcB protocol implementation. In addition, data collection included demographic information and quality measures including peak bilirubin, length of hospital stay, and time under phototherapy.

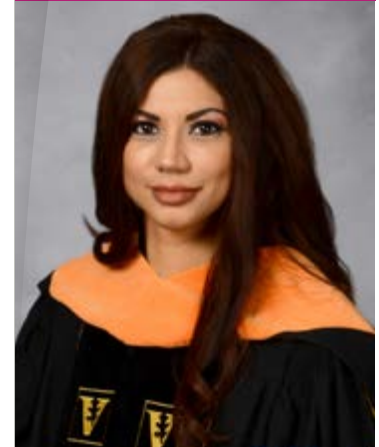
### RESULTS

Median serum bilirubin sampling in infants >30 weeks' gestational age was reduced by 50% after implementation of a TcB protocol. Subgroup analysis demonstrated the greatest effect in term infants with a 66% reduction in median serum bilirubin sampling, of which 45% were discharged without the need for serum bilirubin sampling. There was a statistically significant reduction

of serum bilirubin sampling after TcB protocol implementation,  $z = -2.839$ ,  $p = 0.005$ , with a medium effect size ( $r = 0.33$ ) without a statistically significant effect in quality measures.

### IMPLICATIONS FOR PRACTICE

The results of the project demonstrated that implementation of the TcB protocol in the NICU was useful in reducing serum bilirubin sampling in neonates > 30 weeks gestation. Dissemination of evidence regarding the effect of TcB screening protocols in the NICU that include protocol methodologies are needed to establish best practice guidelines and facilitate integration of TcB meters in all NICU's.



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# Effectiveness of Standardized Nurse Leader Rounding to Improve Patient Experience

## PURPOSE

The purpose of this project was to evaluate the effectiveness of a standardized nurse leader rounding tool to improve the patient experience over a six-month period for hospitalized patients in a 300-bed acute care hospital serving the communities in and around Petersburg, Virginia.

## METHODOLOGY

Because of its versatility, the Center for Disease Control and Prevention's (CDC) framework for program evaluation was selected to guide this retrospective program evaluation. Data collection consisted of HCAHPS, specifically overall rating scores, from prior year as well as pre, post, and intra implementation. Utilization of the standardized nurse leader rounding tool was also analyzed. Finally, leader satisfaction was analyzed using RedCap survey results.

## RESULTS

Compared to the prior year, the facility's overall rating decreased. Despite this deterioration in the facility's score, two of the four units included in the analysis showed marked improvements in their overall rating year over year. The most significant improvements resulted in a 35 percent increase in overall rating when comparing the same periods from 2018, moving them from the 2nd to 51st percentile ranking nationally.

## IMPLICATIONS FOR PRACTICE

The findings from this project suggest that using a standardized rounding tool may be an effective method for improving HCAHPS scores as the utilization of the tool was closely related to the overall rating from patients on several, but not all, units included in the analysis. With the complexities and time requirements for organizational change, ongoing program evaluation would be necessary to determine the true effectiveness of the standardized rounding tool.

## Utilizing Patient Reported Outcomes and Quality of Life Measures in the Management of Obesity

### PURPOSE

Tools that measure patient reported outcomes (PROs) and health-related quality of life (HRQOL) can facilitate comprehensive assessment of weight-related successes and challenges and support clinicians' understanding of a patient's weight loss journey beyond the number on the scale. This project aimed to implement the Obesity and Weight-Loss Quality of Life Measure (OWLQOL) and Patient-Reported Outcomes Measurement Information System (PROMIS) Global-10 surveys in a weight loss clinic to objectively measure the personal and unique effects of obesity and enhance clinical visits.

### METHODOLOGY

Participants completed OWLQOL and PROMIS Global-10

surveys and initial data was analyzed after four weeks. Three scores calculated from survey results (global physical health (GPH), global mental health (GMH), and OWLQOL) were primary outcome measures. A higher t score on the PROMIS GMH and GPH tools reflects better perceived mental and physical health. A higher adjusted score on the OWLQOL tool reflects lower burden of weight on quality of life. The association between outcome measures and body mass index (BMI) was examined using multiple linear regression analyses after controlling for potential confounding factors.

### RESULTS

114 patients completed the surveys (84% response rate). Patients who had a mental health history had lower scores

in all surveys compared to those without this history. Patients who used weight loss medications also had lower scores in all surveys compared to those not using pharmacotherapy. GPH and OWLQOL scores were negatively associated with BMI. OWLQOL scores were higher in those who lost more than 10% body weight compared to those who lost less weight. There was a significant difference in OWLQOL scores between new and return patients, with return patients having higher average scores.

### IMPLICATIONS FOR PRACTICE

These PROs and HRQOL surveys provided clinically relevant information and enhanced the clinical visit. They could be used to identify other trends and evaluate interventions over time.



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## Risk Prediction on Admission as a Framework for Proactive Rounding

### PURPOSE

The purpose of this quality improvement project was to bypass barriers preventing the activation of the rapid response team (RRT), and to implement a proactive rounding (PR) intensive care unit (ICU) registered nurse to evaluate all patients categorized as high-risk for a rapid response due to underlying active comorbid conditions.

### METHODOLOGY

A PRISM score was assigned to all new non-ICU patient 's upon admission. Those patients with a PRISM score of 1 or greater were identified with an increased risk of rapid response or unplanned ICU admission. Proactive rounding by an ICU RN was performed daily on those patients with PRISM score of 1 to evaluate indicators for clinical deterioration.

### RESULTS

Following the implementation of a proactive rounding ICU RN on patients high-risk for a rapid response unplanned ICU admissions decreased from 27.7% to 18.5%. The mean number decreased by 2 unplanned ICU admissions.

### IMPLICATIONS FOR PRACTICE

Timely identification of patient deterioration can prompt intervention and prevent unplanned ICU admissions. This proactive rounding model promotes timely identification of patient deterioration and can overcome barriers of requiring staff nurse activation of the rapid response team.

## Early Mobility Protocol Implementation in a Low Resource Intensive Care Unit

### PURPOSE

Prolonged bed rest is associated with a myriad of clinical complications in the critically ill patient population. Despite compelling evidence supporting early mobility, bedrest remains common practice in Intensive Care Units (ICUs) worldwide. Limited early mobility is largely due to a number of identified barriers including, but not limited to, patient sedation, delirium, inadequate equipment and lack of staff training. The purpose of this quality improvement project was to implement a nurse-driven early mobility protocol in the developing country of Guyana, in order to improve staff knowledge, attitudes and behaviors surrounding early mobility in critically ill patients.

### METHODOLOGY

A nurse driven early mobility protocol was implemented in a seven-bed mixed medical-surgical ICU. Pre and post intervention analysis of the participants was conducted in order to measure changes in staff knowledge, attitudes and behaviors regarding early mobility in the critically ill patient population. Data was collected utilizing the Patient Mobilization

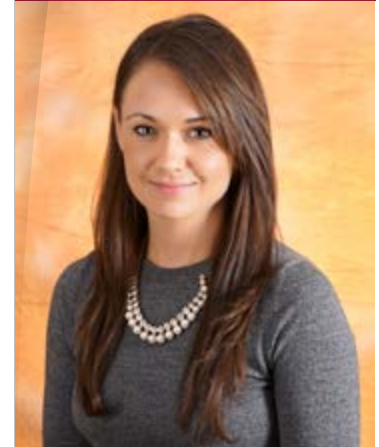
Attitudes & Beliefs Survey. Qualitative feedback was collected and analyzed throughout the implementation process.

### RESULTS

Survey results identified unique barriers to mobility in the ICU: inadequate equipment and unclear expectations on staff roles in the context of patient mobility. Despite barriers, ICU staff successfully implemented a nurse driven early mobility protocol. A patient who was ventilator dependent on bedrest for approximately 90 days was mobilized daily and ambulating greater than 100 feet after one week of implementation. Staff continued to demonstrate change in behaviors and attitudes towards early mobility 30 days after implementation.

### IMPLICATIONS FOR PRACTICE

To date, no available literature on early mobility in the critical care setting in Guyana. This project served as the first QI initiative targeting early mobility in critically ill patients at GPHC. The results of this project may be used to implement similar QI initiatives in other units within GPHC and at other healthcare facilities.



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# Adherence to Low Tidal Volume Ventilation in Acute Respiratory Distress Syndrome

## PURPOSE

Acute Respiratory Distress Syndrome (ARDS) is a disease characterized by severe hypoxemia associated with high mortality rates. It is difficult to identify and frequently under-diagnosed. Current management focuses on use of low tidal volume mechanical ventilation (LTVV). Previous studies demonstrate patients with ARDS do not consistently receive LTVV. This DNP project seeks to determine current rates and recognition of ARDS and use of LTVV at a single large academic medical center.

## METHODOLOGY

This retrospective cross-sectional chart review screened adults who received mechanical ventilation in 2018 to determine if they met the Berlin definition of ARDS. Of 189 initial charts reviewed, 41 patients met inclusion criteria. The primary outcomes evaluated were the diagnosis of ARDS in patients who met clinical criteria and the utilization of LTVV (tidal volume  $\leq$  6ml/kg predicted body weight [PBW]) in patients with ARDS. The secondary outcome was the utilization of LTVV on the higher end (tidal volume  $\leq$  8ml/kg PBW).

## RESULTS

Only ten patients (24.4%) of patients who met criteria were diagnosed with ARDS. 39% of patients received a tidal volume  $\leq$  6ml/kg PBW six hours after initiation of mechanical ventilation. 82.5% of patients received a tidal volume  $\leq$  8ml/kg PBW. 46.7% of patients with severe ARDS were diagnosed with ARDS and received tidal volume  $\leq$  6ml/kg PBW.

## IMPLICATIONS FOR PRACTICE

This quality improvement project suggests, despite practice guidelines recommending LTVV, utilization remains low. Additionally, ARDS continues to be under-recognized by clinicians. Future work is needed to develop interventions to improve recognition of ARDS and adherence to LTVV.

## A Review of Provider Compliance with the VTE Protocol in the Burn Unit

### PURPOSE

The purpose of this quality improvement project to determine the rate of provider adherence to the Vanderbilt Burn Center Venous Thromboembolism protocol and identify possible barriers to proper protocol utilization.

### METHODOLOGY

Using retrospective chart review, medical records for patients who met criteria for enoxaparin dose adjustment according to the protocol between May 1, 2018 – July 31, 2018 were analyzed. The medical record was further evaluated for any documented reasons for deviation from the VTE protocol.

### RESULTS

Out of 98 total patients admitted during the designated time frame, 12 patients met criteria for low molecular weight heparin (LMWH) monitoring. The protocol was utilized incorrectly 41.7% of the time. Three patients did not have a LMWH level checked at all, while 3 patients never reached the appropriate prophylactic range of 0.2-0.4 IU/mL during their hospitalization. One patient was not started on enoxaparin, despite

meeting the “very high-risk” criteria outlined in the protocol. Based on the documentation, the most commonly identified barrier to proper protocol utilization was clinician error.

### IMPLICATIONS FOR PRACTICE

The results of this project indicate that additional education is necessary to improve protocol utilization in the burn unit. Additionally, the burn unit may benefit from enhanced clinical decision support including an electronic advisor integrated into the VTE prophylaxis section of the computer order entry system.



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### Enhancing a Provider Electronic Feedback Tool to Improve Diabetes Diagnosis

#### PURPOSE

The purpose of this quality improvement project was to leverage and enhance an EBP electronic feedback process to communicate gaps in provider clinical documentation, thus closing-the-loop on unconfirmed diabetes diagnoses found in TruCare. The aim was to extract data from TruCare, a referral management application, and place this data on an electronic provider feedback tool to increase the number of patient's diagnosed with diabetes, enhance the provider's clinical documentation, and paint an accurate picture of the patient's clinical condition in real-time, thus closing the loop.

#### METHODOLOGY

The design for this Quality Improvement project was a

retrospective pre-post analysis utilizing clinical documentation data with a date of service from January 1, 2018, through December 31, 2018. During this time frame, all patient encounters were reviewed for gaps in provider clinical documentation. In addition, a gap analysis was performed to ensure the same diagnoses were not counted twice. The IOWA Model for EBP to Promote Quality Care was the framework that guided this project.

#### RESULTS

The total number of newly confirmed diagnoses was 1,264, of which 44 were diabetes diagnoses. The median age was 77 years old, and the youngest and oldest patients were female. The data showed that 55% of female patients were newly diagnosed with

diabetes, as opposed to 45% of male patients. Based on the data, 38% of male patients were newly diagnosed with diabetes with complications, much less than 62% of females. On the other hand, 60% of male patients were newly diagnosed with diabetes without complications, more than 40% of females.

#### IMPLICATIONS FOR PRACTICE

Providing feedback to PCPs about newly discovered clinical information in real-time helps paint an accurate picture of the patient's condition and improve patient outcomes. Improving patient outcomes leveraging informatics technology helps bridge the gap between two separate patient repositories and mitigates the risk for patient harm.

## The Implementation of the National Comprehensive Cancer Network’s (NCCN) Distress Thermometer in Patients with Hepatocellular Carcinoma

### PURPOSE

The National Comprehensive Cancer Center (NCCN) and the American College of Surgeons (ACOS) Commission on Cancer (COC) has recommended screening patients with cancer for distress since 1997 when the first Distress Management Guidelines were developed. An outpatient hepatology clinic identified that patients with a diagnosis of cancer were not being systematically screened for distress. Therefore, a quality improvement project piloted the systematic use of the NCCN DT in patients with liver cancer was initiated.

### METHODOLOGY

The project leader educated staff at the outpatient liver clinic on the NCCN Distress Management Guidelines and

the proposed implementation plan. Patients with liver cancer were identified the day prior to their clinic visit. The RN administered the DT tool when the patient arrived at clinic, after notification from the receptionists. The RN informed the clinician examining the patient of the results. The pilot project was implemented for approximately 5-weeks. Eligible patient charts were queried using the billing code C22.9 and for completion of the NCCN DT. Further, pertinent demographic information, stage of liver disease, and distress scores were analyzed for descriptive purposes.

### RESULTS

A total of 26 patients were eligible to receive the NCCN DT. Twenty-four (92.3%) patients

completed the distress survey. The range of DT scores was 0-10; the median DT score was 3.0 (IQR 1, 5) which corresponds to mild distress. The DT includes five domains, and 50% of the patients had complaints in more than one domain (Practical, Family, Emotional, Spiritual and Physical). Physical and emotional problems were the predominate domains where patient’s identified problems (n=15 and n=9 respectively).

### IMPLICATIONS FOR PRACTICE

The implementation using the PDSA model was executed successfully, with 92.3% of all eligible patients receiving distress screening. The outpatient liver clinic found the use of the DT meaningful and plan to continue to collect distress scores in their patients.



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# Twelve-Month Retention of the Experienced Nurse: An Orientation Program Evaluation

## PURPOSE

The purpose of this program evaluation was to determine whether a structured onboarding and orientation program decreased newly hired experienced RN turnover, as well as determining whether reciprocal decreases in labor costs were experienced at a small community hospital near a major metropolitan area. Finally, the evaluation would determine if there were improved perceptions of the program overall among nurse leaders and nurse preceptors.

## METHODOLOGY

The onboarding and orientation program was evaluated utilizing the Centers for Disease Control and Prevention's Evaluation Framework. This descriptive program evaluation determined the efficacy of the structured

program by reviewing trended focus group data, organizational turnover data, as well as financial statements at 90 and 180 days during the evaluation period.

## RESULTS

Upon evaluation of the program at 90 and 180 days, the turnover decreased from 42% in 2017, to 0% during the evaluation period for the newly hired, experienced RN. Zero nurses that were hired from August 1, 2019 through February 29, 2020, exited the organization in the 180-day period as compared to 2017 & 2018 when 77% of nurses left within the first 180 days of employment. Full time equivalent utilization was reduced by 5% and overtime percentage went from 4.1% to 2.5%. Finally, 100% of nurse leaders had an improved

perception of the program, preceptors felt the program was more organized, and new RN employees felt prepared to practice in their new environment.

## IMPLICATIONS FOR PRACTICE

The nursing shortage is a consistent topic in healthcare and retention of experienced staff is important to not only combat the shortage but also improve the quality of care patients receive. This program evaluation indicates that a structured orientation and onboarding program improves nursing retention as well as improves financial metrics while yielding positive perceptions from nurse leaders, nurse preceptors, and new employees.



## Evaluation of an Interdisciplinary Team Assessment Model for Diagnosing Autism Spectrum Disorder

### PURPOSE

With the prevalence of autism spectrum disorder (ASD) on the rise, there is an increased need for alternative diagnostic models designed to reduce wait time for an ASD diagnosis. The Developmental Medicine (DM) clinic at the Monroe Carell Jr. Children's Hospital at Vanderbilt implemented an interdisciplinary team (IT) assessment model in February of 2018. The purpose of this project was to determine the effectiveness of the IT model in reducing wait time for an ASD diagnosis as compared to the DM clinic's standard of care (SOC).

### METHODOLOGY

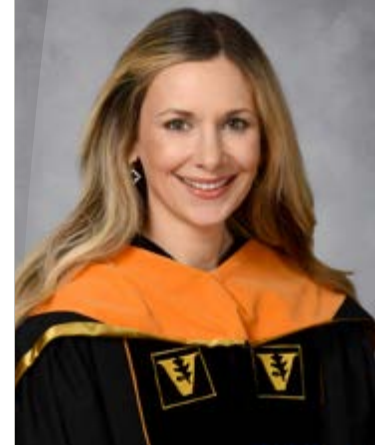
The project used a retrospective, descriptive study design. Included participants were children who completed assessments and were diagnosed with ASD in either the IT or SOC model between July and December of 2018. Retrospective data was gathered from electronic medical records and included demographic information, scheduling information, and diagnostic information. Data from both models were compared and analyzed using descriptive statistics.

### RESULTS

Results of the project found that the IT model successfully reduced wait time for an ASD diagnosis by 86% as compared to the DM clinic's SOC model. In the SOC model, the average wait time was 18 months, 2 days (n=20). In the IT model, the average wait time was 2 months, 15 days (n=20).

### IMPLICATIONS FOR PRACTICE

Healthcare providers in the DM clinic are committed to developing and implementing innovative assessment models that reduce wait time for an ASD diagnosis. The results of this project found that the IT model successfully reduced wait time for an ASD diagnosis. As such, results of the project provide evidence-based support for the continuation and potential expansion of the IT model with the DM clinic.



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## Improving Provider Documentation of Patient Education Regarding Hypertension in the Retail Clinic Setting



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### **PURPOSE**

This project sought to improve providers' understanding of current blood pressure guidelines to improve documentation of patient education within the plan of care.

### **METHODOLOGY**

A retrospective chart review of adult patients was conducted two weeks before and two weeks after a targeted educational session. Clinic providers served as the participants. The goal was to achieve 25% improvement in documentation coaching for any blood pressure >120/80 with a focus on lifestyle modifications. The Eighth Joint National Committee (JNC 8) guidelines for screening, diagnosing, and treating prehypertension and HTN, as well as the Merit-Based Incentive Payment System Quality Measure 317 for blood pressure screening and documentation were utilized as the standard of informing practice for this project during a lunch and learn.

### **RESULTS**

Improvement in documentation rose from 5% to 84% from pre to post intervention respectively. Additional improvement in coding as well as multidisciplinary team referrals, such as dietitian referrals, also increased.

### **IMPLICATIONS FOR PRACTICE**

The result of the evidence-based educational session with the providers significantly improved their understanding of the impact that hypertension has on population health and the importance of having meaningful conversations with patients. More research is needed to understand specific barriers that exist in the retail clinic setting.

## A Guideline for Goals of Care Conversations with Adults with Heart Failure

### PURPOSE

Engaging in annual and ongoing goals of care (GOC) conversations between providers and patients with heart failure (HF) decreases patient symptom burden and the cost of caring, increases patient quality of life, and is recommended by the American College of Cardiology Foundation (ACCF) and the American Heart Association (AHA). The barriers to the initiation of GOC conversations are well documented in the current body of evidence. Despite recommendations, only 14% of patients seen in an ambulatory HF clinic had documented evidence of such conversations in the patient record. The purpose of this scholarly project was to develop and implement a guideline related to GOC

conversations and to serve as a tool for guiding the initiation of such conversations by providers working in the HF clinic, thereby increasing adherence to national recommendations.

### METHODOLOGY

Current ACCF/AHA recommendations and the current body of evidence served as the framework for guideline development. The guideline was developed collaboratively by the DNP student and the NP manager of the HF clinic. The guideline was implemented and adopted into practice among HF clinic providers following approval from the institution's policy and procedure management committee. Post-guideline implementation data was collected via routine chart audits in May and June of 2019.

### RESULTS

Prior to guideline implementation only 14% of patients had documentation of GOC conversations in the patient record. Post-guideline analysis revealed that 80% of patient charts contained documentation of GOC conversations. A total of 109 patient charts were then included in a Chi-square analysis that resulted in clinically significant results ( $p < 0.001$ ).

### IMPLICATIONS FOR PRACTICE

Targeting interventions to address known barriers to the initiation of GOC conversations resulted in increased provider knowledge and improved adherence to national guidelines and recommendations.



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## Implementation of a Non-Pharmacological Pain Management Protocol in the Postoperative Setting

### PURPOSE

Inadequately controlled postoperative pain is prevalent and confers increased risk of chronic pain. Although evidence-based guidelines for perioperative pain management recommend the use of non-pharmacological treatment modalities, these remain a significantly underutilized form of analgesia, with opioid therapy continuing to be used as the mainstay for pain control. The goal of this project was to create and implement a nonpharmacological pain management protocol that was offered to post-operative patients at the project site, an orthopedic specialty hospital. This protocol provided a way to routinely offer these patients non-pharmacological options for pain control as a standardized adjunct to medication therapy.

### METHODOLOGY

An evidence-based protocol for non-pharmacological analgesic techniques, consisting of cognitive behavioral therapies and music, was created and offered to post-operative patients by the project site's acute pain service over the course of four weeks. Demographic data for patients and providers were collected to characterize the

participants. The primary outcome was the rate of implementation of the protocol. At the end of the four-week period, collected data were reviewed to determine what percentage of patients were offered the protocol with a goal of at least 95%.

### RESULTS

Out of the 97 participants included in this project, 74 (76.4%) were offered the non-pharmacological pain management protocol during their hospital stay. The rate of post-operative patients who received the protocol increased from 0% to 76.3% after the four-week project implementation period.

### IMPLICATIONS FOR PRACTICE

Although the project's final implementation rate fell short of its initial goal, given that the previous rate of non-pharmacological treatment implementation was 0%, this still indicates a clinically significant increase in patients who were offered adjuncts to opioid-based therapy. Given the risks associated with inadequately controlled post-operative pain and opioid use, the results of this project support future and more widespread implementation of similar protocols in order to improve patient outcomes and elevate the overall standard of care.

## Nurses' Self-efficacy in Caring for Pediatric Oncology Patients Following Clinical Simulation Training

### PURPOSE

The purpose of this DNP quality improvement project was to evaluate general nurses' self-efficacy in caring for pediatric oncology patients before and after a combined didactic and clinical educational training program.

### METHODOLOGY

Nurses on the general pediatric inpatient unit of a large metropolitan hospital participated in a combined didactic and clinical simulation educational training program on nursing care for pediatric oncology patients. To formally assess nurses' self-efficacy, a questionnaire was developed to measure nurses' self-efficacy in the major components of nursing care for pediatric oncology patients and then validated by consensus

agreement among local, regional, and national content experts. Nurses' self-efficacy in caring for pediatric oncology patients was evaluated before and 6 months after the training using this questionnaire.

### RESULTS

Nearly all participants completed the 6-month survey with a response rate of 96.7% (58/60). There was a statistically significant improvement in nurses' overall self-efficacy in caring for pediatric oncology patients 6 months after the intervention on the paired sample t-test ( $t(57) = 9.603, p = .000$ ). Non-parametric Wilcoxon signed rank tests demonstrated statistically significant improvements ( $p < 0.01$ ) in nurses' self-efficacy for each of the major components of

pediatric oncology nursing care. These findings demonstrate the positive impact that the combined didactic and clinical simulation educational training program had on nurses' self-efficacy to care for this vulnerable patient population.

### IMPLICATIONS FOR PRACTICE

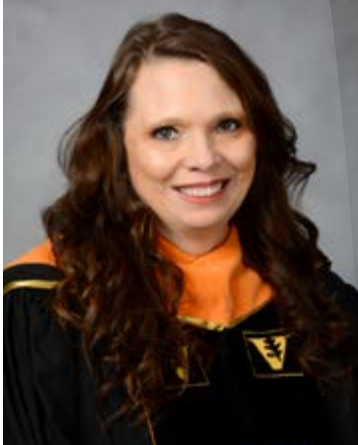
This DNP project is the first to evaluate general pediatric nurses' sense of self-efficacy in caring for children with cancer. Results showed that the use of a combined didactic and clinical simulation educational program produced a positive long-term impact on nurses' self-efficacy and their ability to provide safe and efficient nursing care to pediatric oncology patients. These results can be used to guide future educational, clinical training, and staff development programs for nurses.



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# The “Distraction-Free Zone”: Decreasing Medication Errors in the Acute Inpatient Units of a Critical Access Hospital

## PURPOSE

The “Distraction-Free Zone” is a quality improvement project focused on medication errors in a Medical-Surgical Unit (MSU) and an Intensive Care Unit (ICU) at a Critical Access Hospital (CAH). The causes of medication errors are complex and systemic, and distractions are a significant contributing factor at CAH. Self-reported variances on medication errors collected from the 17-inpatient bed and 6 observation bed MSU and six inpatient bed ICU Critical Access Hospital (CAH) was collected for 12 months, then reviewed to determine that by creating a distraction free environment medication errors would be minimized. The CAH units’ clinical leadership team reviewed data from 2018 and determined interruption-related (distraction) error rates on all medication administration tasks.

## METHODOLOGY

The MSU and ICU leadership designed an intervention, the “Distraction-Free Zone”, to reduce distractions during all medication phases of administration in order to reduce medication errors. By working as an interdisciplinary team,

tools to minimize the distractions during the preparation and administration of medication was implemented.

## RESULTS

Retrospective medication error rates prior to the implementation of the “Distraction-Free Zone” intervention were compared to medication error rates after implementation tracking for change over time. These data were described without further statistical analysis at this time. The analysis indicated that by providing an environment with minimal distractions, medication errors in the CAH were decreased by 50%, with an 80% decrease in missed antibiotics. This decrease in medication errors equated to an organizational savings of \$81,943.20.

## IMPLICATIONS FOR PRACTICE

The “Distraction-Free Zone” focused on the philosophy that errors are unavoidable but reducible with an improved system process. The “Distraction-Free Zone” intervention appears to be an effective way to reducing medication errors. Based on these results, further use and investigation are warranted.

## The Development of an Evidence-Based Protocol for Adult Acute Care Patients Taking Antithrombotic Medications Who Require Emergent and Non-emergent Lumbar Puncture

### PURPOSE

The purpose of this project was to perform an extensive literature review regarding the safety of lumbar puncture (LP) in the anticoagulated adult patient; identify interventions to decrease the risk of adverse events associated with LP in anticoagulated patients; develop an evidence-based protocol guiding the antithrombotic management in patients who have indications for LP; and provide education to healthcare professionals practicing in neurological critical care and stepdown units regarding the newly implemented LP practice protocols.

### METHODOLOGY

Registered nurses, physicians, and advanced practice

providers practicing in the neurological critical care and stepdown floors were offered six one-hour educational sessions. Educational content focused on the newly developed LP procedural protocol for patients taking antithrombotic medications. Participants were asked to participate in a pre-test and post-test to determine if the education was associated with a change in knowledge and confidence when caring for this patient population.

### RESULTS

A total of 43 participants completed all aspects of the project. The average score of the knowledge portion of the pre-test was 69%, and the average score on the post-test was 95%. The average confidence level on the pre-test

was 11.79 points out of 20 possible points, and the average confidence level on the post-test was 15.74 points. The data indicate that the project was associated with an increase in knowledge and confidence levels of participants.

### IMPLICATIONS FOR PRACTICE

This project was associated with improved healthcare provider knowledge and confidence on a newly implemented LP protocol for patients who are taking antithrombotic medications, however additional research is needed to determine if the implementation of a LP protocol has a significant impact on patient safety and adverse events.



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# Developing a Formal Postpartum Depression Screening Protocol: A Quality Improvement Project

## PURPOSE

The purpose of this quality improvement (QI) project was to implement a postpartum depression (PPD) screening protocol by educating providers and staff to increase compliance with use of the Edinburgh Postnatal Depression Scale (EPDS) at every visit during a 12-week period following delivery. The practice site where the DNP project took place sees 80-100 patients for their postpartum visit every month. Prior to the project, the practice site had no formal screening for PPD, which affects 15%-20% of mothers within the first 12 months after delivery.

## METHODOLOGY

This QI project was conducted over a six-week timeframe following a one-hour evidence based in-person education

session presented by the DNP student about the PPD screening protocol, the importance of the EPDS, how to score, and how to chart the score. The Plan-Do-Study-Act cycle and the Model for Improvement were used to measure the success of the new PPD screening protocol for the OB-Gyn practice site. A retrospective chart review was completed two weeks, four weeks, and six weeks following the in-person education session.

## RESULTS

An Excel spreadsheet was used to analyze data which included the number of patients who presented for a postpartum visit and the number of patients who were screened utilizing the EPDS. Prior to the education session, formal PPD screening was 0%. At the end of the six

weeks following the education, there was a 99% compliance rate for PPD screening.

## IMPLICATIONS FOR PRACTICE

This QI project effectively demonstrated how the implementation of a PPD screening protocol, with inclusion of in-person education, increased compliance of screening for PPD with use of the EPDS by providers and staff. Future implications for this project include implementing this PPD screening protocol for the other practice sites within the corporation and implementing an algorithm to improve patient outcomes.

## Evaluation of a Tiered Skills Acquisition Model for Orientation on New Graduate Nurses' Clinical Judgment

### PURPOSE

Poor clinical judgment contributes to sixty-five percent of errors among new graduate nurses (NGNs). The purpose of this project was to evaluate the effectiveness of using a tiered skills acquisition model (TSAM) for the orientation of new graduate nurses on a pediatric, general primary care unit and its influence on clinical judgment.

### METHODOLOGY

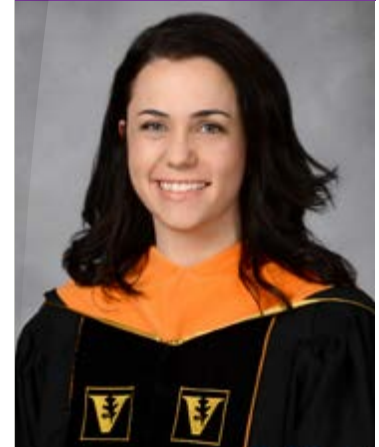
Data were collected on ten new graduate nurses during a simulation session using the Lasater Clinical Judgment Rubric (LCJR). An analysis of the LCJR scores for each new graduate nurse were calculated and compared to determine if the TSAM was effective in improving clinical judgment in new graduate nurses.

### RESULTS

An One-way ANOVA test showed there was no correlation identified indicating significant relationship ( $p = 0.79$ ) between using a TSAM for new graduate nurse orientation and a higher projection of clinical judgment ( $p > .05$ ). The data comparison of new graduate nurses in the primary nursing role included LCJR scores by developmental level/designation (overall score), phase (e.g. noticing, interpreting, responding, and reflecting), and unit orientation models.

### IMPLICATIONS FOR PRACTICE

While the use of a TSAM for new graduate nurse orientation has proven to provide positive outcomes, its impact on clinical judgment needs further evaluation. Modifications should be made to the structure of the TSAM orientation method to include objectives specific to clinical judgment to assess competency levels and instill best nursing practices before new graduate nurses autonomously provide patient care.



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# Implementing an Opioid Risk Assessment Tool in a Multidisciplinary Pain Management Practice

## PURPOSE

The purpose of this DNP project was to improve risk mitigation strategies in a multidisciplinary pain management practice. This was achieved with implementation of the Opioid Risk Tool (ORT) and evaluation of provider willingness to change prescribing practices through an educational in-service on current evidence-based clinical practice guidelines and recommendations.

## METHODOLOGY

This clinical inquiry project involved an educational in-service on risk mitigation strategies, the evaluation of provider willingness to change current prescribing practices, and implementation of the ORT into a multidisciplinary pain management practice. A total of four clinical providers participated in the project, including two medical doctors,

one physician assistant, and one nurse practitioner. Pre- and post-surveys were completed by each participant to assess their self-perceived knowledge of current practice guidelines and recommendations, as well as a post-survey to assess their willingness to change prescribing practices.

## RESULTS

Descriptive statistics were calculated to determine participants' self-perceived knowledge of current clinical guidelines, pre- and post educational in-service presentation. After the in-service presentation, post survey results indicated a 12.5% increase in provider knowledge as compared to presurvey results. All participants indicated a willingness to change their prescribing practices based on the most

current evidence assimilated from the in-service.

## IMPLICATIONS FOR PRACTICE

The management of chronic pain with opioid therapy can be challenging due to its subjectivity and the growing opioid crisis in the United States. It is important for pain management practices to adopt prescribing protocols to include current evidence-based clinical practice guidelines and recommendations. This project shows that an educational in-service can improve providers' self-perceived knowledge and promote changes in prescribing practices. Additionally, this project demonstrates that the utilization of the ORT not only improves risk mitigation measures to identify patients with aberrant behaviors, but also aligns practices with the current standards of care in chronic pain management.

## Improving Clinician Workflow and Satisfaction When Caring for Sexual Assault Patients

### PURPOSE

The purpose of this program development and implementation project was to improve clinician workflow at Planned Parenthood of the Pacific Southwest (PPPSW) in order to better care for patients who have experienced sexual assault. This was to be done by strengthening warm handoff referral comfort and provider satisfaction with sexual assault care visits through the implementation of a clinician workflow checklist and community resource guide.

### METHODOLOGY

A pre- and post-intervention survey was administered via the online platform REDCap to 32 participating clinicians working for PPPSW in San Diego County during a six week implementation period in the fall of 2019. Surveys assessed

provider demographics as well as knowledge, comfort, stress, and satisfaction with sexual assault care visits in the current workflow. The non-demographic survey questions were based on a 5-point Likert scale of strong disagreement to strong agreement.

### RESULTS

Thirteen of the 32 participating clinicians utilized the workflow checklist and resource guide in clinical practice during the implementation period. Increases in provider satisfaction with workflow and increased comfort in providing trauma informed sexual assault care were observed between pre- and post-surveys. Sub-group analyses were conducted on the group who used the tool to compare newer clinicians (three or fewer years in

practice) with more experienced clinicians. Results showed even greater improvement in comfort and satisfaction with sexual assault care for newer clinicians after using the tool.

### IMPLICATIONS FOR PRACTICE

The findings of this project indicate that clinician tools such as a workflow checklist and community resource guide can improve clinician comfort with providing sexual assault care and improve clinician satisfaction with the workflow of these patient visits. This has the further potential to more consistently provide patients with high-quality trauma informed care experiences, which can positively impact their health outcomes and levels of empowerment as they navigate the healthcare system following a sexual assault.



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# Depression Screening for Adolescent Type 1 Diabetes Patients: A Quality Improvement Project

## PURPOSE

The American Diabetes Association recommends routine depression screening for all diabetic patients. The purpose of this quality improvement project was to implement routine depression symptom screening for adolescents with Type 1 Diabetes Mellitus (T1DM) in an outpatient specialty clinic, to improve adherence to current standards of care.

## METHODOLOGY

This project used the Plan Do Study Act (PDSA) format as a guide for this quality improvement methodology. Adolescent T1DM patients completed the Patient Health Questionnaire-9 (PHQ-9) during the implementation period. Descriptive statistics were used to evaluate the

rate of completed screens and number of mental health referrals made. Additionally, the total PHQ-9 scores and results of each individual question were evaluated.

## RESULTS

Thirty adolescents were screened, with a mean age of 16.4 years (range 14-18 years). The clinic screening rate improved during this project, going from an initial rate of 0% to 77% at project end. Ten percent of all patients had a positive depression symptom screen, and twenty percent were referred for mental health evaluation. Ten percent of screened patients indicated suicidal ideation but had a negative safety screen. A significant portion of patients (38 & 48%, respectively) indicated somatic symptoms

including fatigue and difficulty sleeping.

## IMPLICATIONS FOR PRACTICE

It is widely recognized that youth with T1DM and comorbid depression are at higher risk for adverse outcomes. Routine screening for depressive symptoms with appropriate follow up is currently recommended as standard of care. This quality improvement project adds to existing knowledge of depression screening implementation in a specialty setting. The results of this project offer many insights into our patient population that will enable us to improve the quality of care delivered. Additionally, it provided a platform for continuing quality improvement measures that will be useful for future endeavors.

## Comparison of Two Health Literacy Screening Instruments in an Integrated Multicultural Urban Clinic

### PURPOSE

Low health literacy is associated with poor health outcomes. Minorities, elderly and those with low educational attainment are at greatest risk for low health literacy. This quality improvement project was designed to identify which widely used health literacy measure is best suited for use in a multicultural integrated urban clinic.

### METHODOLOGY

The Rapid Estimate of Adult Literacy in Medicine-Short Form (REALM-SF) and the Newest Vital Sign (NVS) were administered to evaluate their usefulness in clinical practice based on the following criteria: length of time to administer and score, patients' ease of understanding the measures using survey with 5-point Likert

rating scale, and the measure's ability to distinguish inadequate from adequate health literacy.

### RESULTS

Study participants were predominantly African American (91%), female (66%), high school education or less (60%), and the average age of 45 years. The REALM-SF required less time for administration (15.3 seconds) compared to the NVS (134 seconds). The REALM-SF (24/30) was easier to understand than the NVS (15/30). African Americans and participants with high school or less level of education were likely to have low literacy scores on both measures. There were no statistically significant differences in scores by age or gender. There was moderate, positive correlation between REALM-SF and NVS scores

(Spearman's rank,  $r_s = 0.512$ ,  $n = 53$ ,  $p < 0.01$ ), but the NVS captured more participants with low health literacy.

### IMPLICATIONS FOR PRACTICE

While most patients at underserved communities are at risk for low health literacy, the NVS has greater sensitivity than the REALM-SF in identifying patients with low health literacy. The NVS can be used as a 6th vital sign to assess health literacy. This low health literacy score can alert healthcare providers to closely attend patient's understanding of their medical condition and tailor health information in a manner that increases understanding.



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# Comparison of Central Venous Access Devices and Complications Causing Removal

## PURPOSE

In immunocompromised hematopoietic stem cell transplant patients, there is a persisting problem with prevention of central venous catheter complications despite investigation and standardization of placement and recommendations for care. The purpose of this clinical inquiry project was to determine whether transition to Proline central venous catheters resulted in fewer central line complications in comparison to Hickman central venous catheters. The goal was to determine any significant difference in the incidence of complications and make clinical practice change in standardizing the device chosen.

## METHODOLOGY

Retrospective data analysis allowed for a quantitative approach to investigating patients

who required central venous access device implantation. The data included patients who have undergone hematopoietic stem cell transplant in the last three years, divided by 18 months of Hickman catheter use followed by transition to Proline devices. Descriptive statistics were calculated to describe the rate of central line complications of both devices throughout the designated time frames of 18 months pre- and post-transition of device.

## RESULTS

A sample of 32 pediatric patients underwent hematopoietic stem cell transplant for malignant (N=16) or nonmalignant (N=16) disease. Catheter complications requiring line removal occurred in 3 out of 15 (20%) Hickman device patients (Cohort 1) in comparison to 2 out of 18 (11%)

with Proline devices (Cohort 2). Of the three complications in Cohort 1, two (66%) were related to infection and one (33%) due to device malfunction. Both line removals in Cohort 2 were due to device malfunction.

## IMPLICATIONS FOR PRACTICE

Proline catheters for long-term access may lead to a decreased incidence of complications in comparison to Hickman catheters. Further research is indicated to provide recommendations for the optimal device. Recognition and consequent management of infection or mechanical complications may reduce morbidity and mortality, improving patient outcomes. The results demonstrate potential for improved patient safety outcomes, increased efficiency of treatment, and decreased costs in care.



## Oncology Nurse Navigator: National Comprehensive Cancer Network Distress Guideline Implementation & Evaluation

### PURPOSE

The aim of this DNP project was to implement the standardized National Comprehensive Cancer Network Clinical Practice Guideline for Oncology Distress Management (NCCN CPGO DM) instrument, an evidence-based clinical oncology guideline comprised of the Distress Thermometer (DT), accompanying Problem List (PL), and subsequent service referrals completed by the Oncology Nurse Navigators (ONN) to increase the screening of patients for psychosocial distress from 0% to 80% over a six-week period in a hematology/oncology clinic at a VA Medical Center.

### METHODOLOGY

This DNP project design is quality improvement (QI) using the Model for Improvement to

implement the evidence-based NCCN CPGO DM. The ONNs received education on the NCCN CPGO DM instrument and navigation of the electronic health record (her) template to document instrument results. The project data was collected utilizing an Excel spreadsheet to analyze the project results.

### RESULTS

Descriptive statistics were applied to illustrate the ONN patient visits, patients screened, DT scores, PL completion, and referrals. The ONNs completed a total of 83 screenings on patients diagnosed with cancer, from 0% - 100% of the distress screenings of patient visits was achieved at week 4. Of the 83 screenings 49% of the scores were 4 or greater requiring a referral and 48 interdisciplinary referrals were made by the ONN.

Providers comprised 38% of referrals, social work 19%, mental health 14%, palliative care 6%, and nutrition care 2%.

### IMPLICATIONS FOR PRACTICE

This DNP project provided a practice environment for the ONN to independently make referrals for cancer patient's distress management; to provide standardized, interdisciplinary collaborative, holistic care coordination; to ensure access to care; and to improve care delivery. This DNP project also met the VA organization's leadership deliverables operationalizing the NCCN CPGO DM instrument in templated format and documented implementation of the ACOS CoC standard.



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# Effectiveness of Provider Education on Atopic Dermatitis Management in Pediatric Primary Care

## PURPOSE

Atopic dermatitis (AD) is a chronic, inflammatory skin and multisystem disorder. The foundational problem that arises in AD management is inconsistency of modalities that health care providers use to treat pediatric patients. The purpose of this doctor-of-nursing practice project was to develop and present an educational module on AD management for health care providers at a pediatric primary care practice and evaluate impact on practice through surveys distributed before and after completion of the module.

## METHODOLOGY

After IRB review, an educational module on the management of AD in the primary care setting was presented to a convenience sample of health care providers

at an outpatient pediatric clinic. Participants completed a “Pre-Module Survey,” followed by the educational module. Participants completed a “Post-Module Survey” four weeks after the module. Descriptive statistics were utilized to determine whether the module resulted in an increase in provider confidence levels and/or a shift towards using more evidence-based practice in AD management.

## RESULTS

Six participants, including four physicians, a nurse practitioner (NP), and a physician assistant (PA), with pediatric practice experience ranging from six to 29 years completed the surveys and attended the module. The mean of scores on the “Pre-Module Survey” was 57% (SD=0.05)

compared to the mean scores of the “Post-Module Survey” which was 65% (SD=0.05). There was an 8% increase in average scores across the six participants. The “Post-Module Survey” results indicated that APPs significantly increased encouraging patient follow-up and that physicians significantly increased using the “finger-tip unit” in AD management.

## IMPLICATIONS FOR PRACTICE

An educational module on management of AD can increase confidence levels of providers and impact clinical practice to reflect evidence-based practice. Future such projects implemented on a regular basis in the primary care setting have the potential to improve AD management, with the goal to ultimately improve patient outcomes.

## Supporting Sexual and Gender Minority Patients in the Emergency Department: A Cultural Competency Initiative

### PURPOSE

Access to respectful and inclusive medical care is crucial for the physical and psychological wellbeing of every individual. The purpose of this quality improvement (QI) project was to improve the knowledge, clinical preparedness and cultural competence among healthcare providers in caring for sexual and gender minority (SGM) patients in the emergency department.

### METHODOLOGY

The QI project consisted of an educational program based on the Process of Cultural Competence in The Delivery of Healthcare Services theoretical framework. The program consisted of a PowerPoint presentation about SGM terminology, discrimination,

health inequity, and ways to improve cultural competency among emergency healthcare providers in SGM care. Specifically, the program included SGM related YouTube videos and three case studies. The participants completed the Lesbian, Gay, Bisexual and Transgender Development of Clinical Skills Scale (LGBT-DOCCSS) survey before and after the educational program.

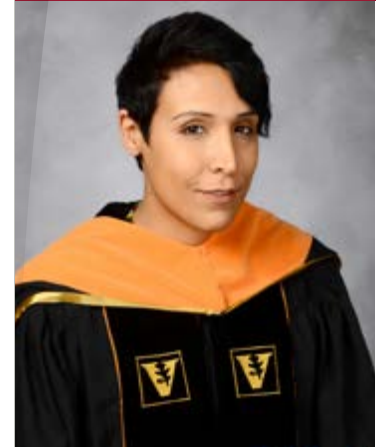
### RESULTS

The total number of participants in the program was 14 healthcare providers with a 100% response rate. Descriptive statistics were calculated to describe the pre- and postintervention data based on the LGBT-DOCCSS tool. There was a 16.7 % improvement in the mean score of the post-intervention survey group.

Marked improvements were seen in all the subscales of the LGBT-DOCCSS, including 26.5 % in knowledge, 6.7 % in attitude and 25.7 % in clinical preparedness.

### IMPLICATIONS FOR PRACTICE

Post intervention survey data revealed that providers who attended the educational session had a noticeably improved mean scores in the areas of knowledge, attitude and clinical preparedness in caring for SGM patients. It is thought that this improvement in knowledge, attitude and clinical preparedness will translate in providing a more inclusive and culturally competent care to patients who identify as SGM in the ED.



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## Implementation of Standardized Rounding Tool to Improve Spontaneous Awakening and Breathing Trials

### PURPOSE

The purpose of this project was to improve multidisciplinary communication and coordinate spontaneous awakening trials (SATs) with spontaneous breathing trials (SBTs) in a medical intensive care unit (MICU) by incorporating a rounding tool into daily multidisciplinary rounds. The goal of the project was to decrease the ICU length of stay (LOS) for all MICU patients and the duration of mechanical ventilation (MV) for intubated patients.

### METHODOLOGY

MICU physicians, nurse practitioners, respiratory therapists, and registered nurses were educated on how to conduct a coordinated SAT and SBT and incorporate the results into a rounding tool. The rounding tool was then integrated into multidisciplinary patient rounds for a period of four months. Aggregated patient data from the four-month project implementation phase were compared to historical patient data collected for two months prior to project implementation.

### RESULTS

A total of 613 adult patients (n=613) were managed in the MICU during the two-month pre-intervention phase, and 1,271 patients were managed in the MICU during the four-month intervention phase. The average ICU LOS for patients in the pre-intervention group was 3.71 days, and the average ICU LOS in the intervention group was 2.38 days, reflecting an average reduction ICU LOS by 0.89 days.

A total of 41 adult patients (n=41) required MV during the two-month pre-intervention phase, and 96 patients (n=96) required MV during the four-month intervention phase. The average MV duration was 6.06 days in the pre-intervention group, and the average MV duration group was 3.25 days in the intervention, reflecting an average reduction of MV duration by 2.81 days.

### IMPLICATIONS FOR PRACTICE

A standardized rounding tool with an emphasis on the coordinated SAT and SBT process reduced ICU LOS and MV duration. Future research is needed to determine if use of a rounding tool is associated with changes in patient morbidity and mortality.

## Improving the Transmission of Hospital Records for Post- Hospitalization Outpatient Follow-up

### PURPOSE

Problem Statement: Lapses in patient care result when the post-hospitalization documentation is not available to the outpatient provider at the time the patient is being seen for post-hospitalization appointment. The purpose of this pilot quality improvement (QI) project was to facilitate outpatient continuity of care by improving the transmission of hospital records to the outpatient provider prior to the patient's hospital follow-up appointment. Key elements of the QI included implementing a training and a process improvement initiative for the clinic staff.

### METHODOLOGY

The project was designed using a retrospective chart review for baseline data, a failure mode effects analysis (FMEA) to identify break downs in the process, a clinical staff training on telephone triage, appointment scheduling, and medical record retrieval.

### RESULTS

Of the 131 total patients scheduled for PHFA, 122 patients (93.1%), had records received and scanned onto chart prior to the PHFA, while nine (6.8%) did not. In contrast, for the three weeks prior to the project, 94 patients were scheduled for PHFA. During that period, hospital records were received for 56 patients (59.6%) prior to the PHFA, while 38 (40.4%) did not. The pre-intervention Risk Priority Number (RPN) for hospital notes requested and not obtained was 240 out of a total 585, the level of greatest risk. Lastly, the overall RPN for this process decreased from 585 to 282, demonstrating a 48% decline on overall risk in the entire process.

### IMPLICATIONS FOR PRACTICE

This pilot study suggests that increasing the transmission of hospital records to the outpatient provider can improve inter-provider communication. Optimized communication between the inpatient and outpatient providers ensures that the patient receive the proper treatment and management, decreases patient risk, and maintains safety and continuity of care.



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# Ultrasound guided intravenous education in the Neonatal ICU: A simulation evaluation

### PURPOSE

The use of ultrasound guided imagery to obtain peripheral intravenous access (USGIV) is a technique that can be used to increase IV success rates, decrease central venous catheter use, decrease time to treatment initiation, reduce cost, and improve patient satisfaction., However, the only current programs to teach nurses this skill focus on adult emergency department patients. In order to remedy this knowledge gap, an USGIV program aimed at the specific needs of the NICU nurse was developed and implemented.

### METHODOLOGY

Twelve NICU nurses were trained in USGIV using a four hour didactic and simulation based program. Participants first took a pretest assessing baseline knowledge of USGIV access. After didactic training, nurses worked at stations focused on USGIV access. The participants then completed a post-test and a simulation based test requiring at least 80% successful USGIV attempts on a mannequin.

### RESULTS

The pre-test to post-test scores increased by an average of 25% demonstrating increased knowledge. All of the participants (n=12) successfully demonstrated proficiency by completing at least 80% of attempted USGIVs on a mannequin. Participants were required to successfully start 5 USGIVs in the NICU with a trained proctor prior to independent practice.

### IMPLICATIONS FOR PRACTICE

This study demonstrated that NICU nurses can be successfully trained in USGIV and the skill can be tailored to specific departments. After this program, participants successfully integrated USGIV into their practice.

## Acute Kidney Injury in Trauma

### PURPOSE

The purpose of the quality improvement project was to improve the screening of trauma patients who are at risk for developing acute kidney injury (AKI) and identify patients who have AKI in the surgical intensive care unit (SICU) using the Kidney Disease Improving Global Outcome (KDIGO) clinical practice guideline for risk assessment and risk stratification.

### METHODOLOGY

Physicians and nurses were educated about the KDIGO guideline. Data were collected on trauma patients meeting the inclusion criteria and admitted to the SICU to determine compliance with serum creatinine (SCr) and urine output (UOP) measurements for screening and stratifying patient risk for AKI. Descriptive

statistics were used to analyze the data and compare outcomes from pre-and post-intervention group.

### RESULTS

All patients in the pre-intervention (n=19) and post-intervention (n=20) group had SCr measured within 48 hours of admission and serially. The improved frequency of measurement was likely due to integration of baseline and serial SCr measurements in the electronic health record (EHR) before project implementation. Improvements in the accuracy of UOP measurements was indicated by the increased in the number patients with measured hourly UOP from zero to 90 percent (n=18), the increased in hourly UOP measurements from every 12 hours to every four hours indicates that patients UOP are being monitored more

frequently. The improvements may have contributed to the providers' ability to detect and stratify early onset of AKI. The short project time-frame made establishing AKI prevalence and identification of associated risk factors problematic.

### IMPLICATIONS FOR PRACTICE

Acute kidney injury is a significant complication of severe trauma and has been independently associated with increased morbidity and mortality and increased hospital stay. Implementing a systematic approach to screening and early detection of AKI in trauma patients with known susceptibilities to AKI is crucial in improving the clinical process for preventing AKI.



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## Promoting Nurse Manager Professional Well-being



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#### **PURPOSE**

Healthcare delivery is increasingly complex, fast-paced, and ever-changing, and within this environment, the nurse manager provides leadership that is pivotal for healthcare organizations. While the nurse manager role is crucial, it is also highly stressful and can lead to burnout which in turn can influence the nurse managers' job satisfaction, leadership effectiveness, and the desire to remain in that role.

#### **METHODOLOGY**

A quality improvement project was initiated in a free standing, Magnet designated children's hospital after identifying no clear organizational strategy to support professional wellbeing of nurse managers. The purpose of this project was to assess what specific organizational strategies supported the professional well-being of the acute care nurse manager, and what new strategies or tactics could be initiated to advance their professional well-being.

#### **RESULTS**

A subjective pre-assessment questionnaire, using the attributes of the domains in a Healthy Workplace framework, was administered to 14 nurse managers. These results were stratified and yielded opportunities for priority focus. A Lean problem-solving event with 14 nurse managers and other inter-professional leaders, was conducted over a concentrated threeday period. The outcome of the event provided an organizational action plan to enhance support for the nurse manager.

#### **IMPLICATIONS FOR PRACTICE**

Promoting nurse manager engagement and well-being through organizational resources is a compelling strategy for the Chief Nurse Executive and other healthcare leaders. This small pilot can be used in other settings and with other teams to assess gaps and implement strategies to provide organizational support for professional well-being.

## Factors Influencing the Job Satisfaction of Advanced Practice Providers

### PURPOSE

The purpose of this DNP project was to look at the job satisfaction of nurse practitioners and physician assistants, as well as the factors that influence the satisfaction. Nurse Practitioners and Physician Assistants are valuable members of the healthcare team who provide excellent care including shorter lengths of stay, cost savings, improved patient outcomes, improved access to care and better patient satisfaction. This group of providers is the most rapidly growing healthcare providers.

### METHODOLOGY

Data was collected electronically using the Misener Nurse Practitioner Job Satisfaction Survey. This validated 44-item Likert scale tool looks at the intrinsic and extrinsic factors that affect job satisfaction and has been used in other studies. A link to the survey was emailed to the Nurse Practitioners and Physician Assistants working at a large healthcare system in northeast Georgia. Overall job satisfaction as well as the top five dissatisfiers and top five satisfiers were explored.

### RESULTS

The overall job satisfaction was halfway between minimally satisfied and satisfied. The top five

satisfiers were the level of autonomy, the challenge in daily work, the sense of accomplishment, the quality of care delivered and the amount of time spent in direct patient care- all of which are intrinsic factors. The top five dissatisfiers were compensation given beyond normal duties, input into organizational policy, amount of monetary bonus, time off to serve on professional committees and recognition by superiors. All but one of the dissatisfiers are extrinsic factors.

### IMPLICATIONS FOR PRACTICE

Continuously looking into the satisfaction and ensuring that the Advanced Practice Providers are satisfied with their current role has a positive impact on all aspects of healthcare, such as increased retention, cost savings and improved patient outcomes. Having a structured leadership specifically for these providers facilitates avenues to improve satisfaction by having a liaison and communicator between administration and providers, advocating for Advanced Practice Providers' compensation, assisting these providers in having a voice regarding organizational policy, and ensuring these providers have what they need to provide optimal care and are practicing to the fullest extent of their licensure and certification.



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# Patient Activation and ESRD: The Impact of Patient Activation on Dialysis Modality Choice

## PURPOSE

Patient activation (PA), the ability, motivation, and self-confidence of patients to manage their own health, has been studied among a various chronic illnesses. It has been shown that higher PA is associated with improved outcomes. For end stage renal disease (ESRD), there is a paucity of evidence regarding the use of PA to enhance care. This pilot project was completed to expand the knowledge on the associations between patient activation and dialysis modalities including those with CKD approaching dialysis and ESRD on dialysis.

## METHODOLOGY

The Patient Activation Measure (PAM-13®) survey was disseminated in paper form to a convenience sample (n = 94),

73% (n = 69) with ESRD and 27% (n=25) with CKD 4 or 5 at their clinic visit or during their HD treatment session. Data collection was comprised of demographic characteristics of the participants, PAM-13® total scores, and corresponding level of activation.

## RESULTS

For CKD participants, there was no significant difference in mean PAM scores between dialysis modality choice: home dialysis (M =57.24, SD = 20.31), in-center HD (M = 56.60, SD = 12.24), and conservative management (M = 56.60, SD = 12.24). Statistical analysis was limited by sample size. In patients with ESRD, rank mean PAM scores were compared. A Mann-Whitney test determined that the home dialysis group had a significantly higher PAM score (M = 73.84,

SD = 15.79) compared to in-center HD group (M = 61.02, SD = 18.11), U = 585, p = .008.

## IMPLICATIONS FOR PRACTICE

This project found that there were significant differences in PA between dialysis modalities for ESRD participants. The significantly higher PAM scores of the ESRD group utilizing home dialysis modalities suggest that the home dialysis model of care may improve PA. As a modifiable concept, future projects focused on interventions to improve PA may provide the greatest usable benefit to directly improve dialysis education and overall outcomes.

## Developing Guidelines for Modifying Nursing Documentation in the Electronic Health Record

### PURPOSE

According to Higgins et al. (2017), nurses spend an average of 25% of their workday on electronic health record (EHR) activities. In order to satisfy regulatory requirements and various hospital initiatives, organizations are besieged with requests to modify the EHR, often to add fields that result in additional documentation for the registered nurse (RN). Rarely do organizations evaluate requests for additional documentation in the EHR. The purpose of this project was to address the burden of nursing documentation by using input from nursing informatics leaders, evidence from the literature, and clinical practice to develop recommendations that can contribute to the creation of a national standard for healthcare organizations to use when considering requests for modifications to documentation by RNs in the EHR.

### METHODOLOGY

This clinical inquiry project focused on an evaluation of guiding principles used by healthcare organizations to manage the entry, removal, and modification of nursing documentation components within the EHR. Healthcare organizations were informally asked to share their evaluative processes

for approving requests to modify EHR content. Using email communication, each organization submitted a list of their responses for review and synthesis with the literature.

### RESULTS

The project findings led to a collection of responses and the development of recommended guiding principles that healthcare organizations can use to evaluate requests for modifying RN documentation within the EHR. The recommended guidelines will consider content changes that: *support regulatory requirements, reduce duplication, support patient care requirements, support patient safety, support accurate patient billing, incorporate improved clinical efficiency, support improved patient satisfaction, support policy requirements, support evidence-based content, support professional standards recommendations, and align with strategic initiative.*

### IMPLICATIONS FOR PRACTICE

The recommendations developed during this project can be used by healthcare organizations to help evaluate requests for changes to EHR content, minimizing the current documentation burden.



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# Transition of Care Model for Patients Presenting to the Emergency Department with Venous Thromboembolism

## PURPOSE

The purpose of this project was to implement an electronic health record (EHR) tool to facilitate a transition of care model (TCM) for adult patients presenting to the emergency department (ED) with low-risk venous thromboembolism (VTE). Goals included increasing appropriate ED discharges for patients admitted to the ED with the diagnosis of a low-risk VTE; improving patient follow-up with healthcare providers; and decreasing hospital readmission rates for patients with low-risk VTE.

## METHODOLOGY

ED healthcare providers were provided education on the TCM and the EHR tool for patients presenting to the ED with a low-risk VTE. The EHR tool

was used when evaluating patients, discharging patients, and establishing a follow-up appointment with the vascular medicine nurse practitioner (NP). Project data collected from January through March 2020 were compared to retrospective data to determine if the TCM was associated with a change patient outcome measures.

## RESULTS

Nine (n=9) patients low-risk VTE patients were enrolled in the TCM project. Of the patients enrolled, six were discharged from the ED, and three were admitted for <48 hours. In the retrospective cohort (n=38), 18.4%(n=7) patients followed up with a healthcare provider in 7 days. In the intervention cohort, 77.8% (n=7) followed up with the NP within 7 days.

In the retrospective cohort, 26.3% (n=10) of patients were readmitted to the hospital within two weeks of their initial presentation for VTE. In the intervention cohort, 11.1% (n=1) were readmitted to the hospital within two weeks.

## IMPLICATIONS FOR PRACTICE

A TCM for adult patients with low-risk VTE was associated with increased continuity of care, decreased unnecessary hospital admissions, and decreased hospital readmissions. Tools within the EHR assisted with discharging low-risk VTE patients from the ED setting and facilitating TCM processes. Additional research is still needed to determine if TCMs are effective at reducing mortality and long-term morbidity rates associated with VTE.

## Identifying Opioid Misuse: Comparing Provider-Administered and Self- Administered Measures of the Current Opioid Misuse Measure (COMM)

### PURPOSE

The purpose of this project was to compare risk-assessment scores of provideradministered and self-administered measures of the Current Opioid Misuse Measure (COMM) and determine if one is more likely to predict opioid misuse among chronic pain patients.

### METHODOLOGY

Using a clinical inquiry project design, COMM scores were compared to urine drug screen (UDS) results to identify opioid misuse. Participants who were randomly selected completed a UDS, self and provider-administered COMM, demographic information, and a postimplementation survey. At completion, UDS results were obtained by a retrospective chart review.

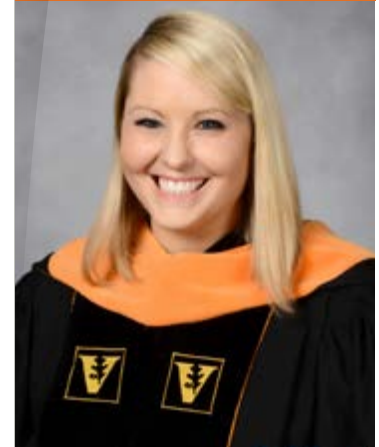
### RESULTS

One hundred patients participated in this project. The provider-administered COMM scores were significantly associated with predicting UDS results. Participants with a higher provider-administered COMM score, had 27% higher odds

of an abnormal UDS result compared to those with a lower score (OR =1.27, 95% CI= 1.13-1.44, p-value <0.001). Self-administered COMM scores were not significantly associated with predicting UDS results (OR=1.02, 95% CI=0.90-1.15, p-value 0.753). A negative correlation between education level and both COMM scores were found.

### IMPLICATIONS FOR PRACTICE

Health care providers should determine potential opioid misuse among chronic pain patients who use opioids long-term. A difference between self-administered and provider-administered COMM scores may indicate that patients underestimate their current opioid misuse. Use of the provider-administered COMM may eliminate the barriers to complete the self-administered COMM, such as education levels on comprehensibility and readability.



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# A Comprehensive Evaluation of Handoff to Improve Continuity of Care in LTAC Patients

## PURPOSE

The purpose of this DNP project was to evaluate the adoption and perceptions of an electronic handoff tool (IPASS) for provider communication across transitions of care and identify barriers of use in a longterm acute care (LTAC) hospital located just outside of Boston, MA.

## METHODOLOGY

Data were collected from 27 returned surveys from providers employed at Spaulding Hospital for Continuing Medical Care Cambridge in Massachusetts. The survey addressed three key areas: provider's perception and opinion of handoff communication methods, handoff utilization habits, and existing barriers to use.

## RESULTS

Descriptive statistics were utilized to analyze provider's survey response data. Notably, the utilization of a handoff tool was deemed important to clinical practice by 81% of participants. Further, 92% of providers endorsed that having a standardized process would allow better care of patients. The two biggest barriers to IPASS use were a "lack of standardization

of handoff method" followed by the "time requirement." This information resulted in specific handoff recommendations in an effort to improve continuity of care in hospitalized LTAC patients.

## IMPLICATIONS FOR PRACTICE

It is known that when communication in healthcare fails, patients are at risk. The Joint Commission has attributed communication failures with delays in treatment, inappropriate treatments, increased length of stay, increased financial burden, failed discharges resulting in readmissions, and overall dissatisfaction. In combination or individually, any of these miscommunication failures perpetuate fragmented care. Establishing a standardized process for handoff communication can potentially reduce or prevent various potential adverse events.



## Using the SVEST to Guide Implementation of a Peer Support Program for Second Victims

### PURPOSE

Coined in 2000 by Dr. Albert Wu, the term second victim refers to a healthcare professional who feels emotionally distraught after an adverse event. The purpose of this project was to use the Second Victim Experience and Support Tool (SVEST) to assist in planning how to best implement a peer support program named RISE (Resilience in Stressful Events) at a Midwestern Academic Medical Center and to evaluate the program's effectiveness.

### METHODOLOGY

A modified version of the SVEST was sent to all 290 nurses employed by the facility, including 36 original questions and seven additional questions related to demographics, desired forms of support, and familiarity with the second victim phenomenon. Responses were gathered from 60 nurses at the facility.

### RESULTS

Nurse respondents overall reported limited second victim responses, below that of estimates of national prevalence. Quantitative and qualitative data showed that no particular support

options were of greater significance in helping after involvement in an adverse event. Discussing the event with colleagues was noted as helpful to relieve distress and provide reassurance of clinical competence. Overall, respondents reported that administration is understanding of the needs that employees may have after involvement in an adverse event and that the organization offers a variety of resources.

### IMPLICATIONS FOR PRACTICE

Administering a survey such as the SVEST before implementation of a support program can prove invaluable in determining the experiences of current staff and how to best meet their needs in the future in relation to potential responses to adverse events. Nurses at the institution surveyed displayed resilience in the face of adversity and felt supported by hospital leaders. Counseling and peer support were noted among respondents as being the most valuable resources they desired from the RISE program.



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# Updates to the Laboratory Screening Process for Overweight and Obese Pediatric Patients: A Quality Improvement Project

## PURPOSE

The United States weight epidemic continues to be of increasing concern for health care professionals across the country. Rates of both overweight and obesity in the pediatric population are noticeably escalating on a yearly basis. However, clinicians at a federally qualified health center were not utilizing evidence-based practice guidelines recommending periodic laboratory screening for metabolic and endocrine abnormalities. The purpose of this project was to implement an evidence-based algorithm to increase the number of overweight and obese pediatric patients who received lipid, liver enzyme, and glucose laboratory screenings to 50% or higher.

## METHODOLOGY

Seven full-time clinicians were educated on implementation of a manual evidence-based algorithm over a two-week timeframe. The algorithm guided providers in determining choice and timing of appropriate laboratory screenings based on patient age and body mass index. At the conclusion of the implementation period, a randomized chart review was performed and

the data were compared to the findings of a pre-implementation chart review.

## RESULTS

Post-intervention data revealed that lipid, liver enzyme, and glucose laboratory screenings were ordered at a rate of at least two times the frequency they were in the baseline chart review. The project aim was met as each laboratory screening had exceeded the 50% threshold goal, with lipid screenings at 71.4%, liver enzyme screenings at 55.5%, and glucose screenings at 66.6%. These results demonstrate clinically significant improvements to the laboratory screening process.

## IMPLICATIONS FOR PRACTICE

Implementation of evidence-based practice is crucial to patient care. Integrating the algorithm improved laboratory screening for overweight and obese pediatric patients and allowed clinicians to seamlessly utilize best practice standards. The project results are promising and clinicians will be encouraged to continue offering high-quality evidence-based obesity care.

## Improving Primary Care Provider Adherence to Quality Measures for Type 2 Diabetes Mellitus

### PURPOSE

This scholarly project aimed to modify the workflow in a primary care clinic to improve provider assessment and documentation of evidence-based quality measures for diabetes using an existing standardized checklist developed by a Blue Cross Blue Shield (BCBS) insurance for patients who receive diabetes services in this clinic.

### METHODOLOGY

Thirty charts were reviewed as a needs assessment to evaluate use of a diabetes checklist, which revealed only 10% of charts included a checklist. A root-cause analysis was completed to determine potential reasons the checklist was underutilized. Modifications of the clinic's workflow were planned and meetings were completed with the six providers

in the clinic to evaluate current practices and train the providers regarding changes in workflow processes. Workflow changes included ease-of-access to quality checklists, patient recall, appointment reminders, flagging of BCBS charts, and frequent verbal and written provider reminders. Another chart review was performed for all patients with diabetes and BCBS insurance who attended a clinic visit during the six-week implementation period. Data analysis included completion of the diabetes checklist and analysis of results for diabetes quality measures, including A1C, foot exams, retinal exams, blood pressure, LDL, and tobacco use.

### RESULTS

Ninety charts were reviewed after the implementation, and 66 out of 90 (73%) contained

a completed quality assurance checklist ( $X^2 = 36.93$ ,  $p < .01$ ), which is a robust improvement compared to the needs assessment. We reject the null hypothesis that implementation of a standardized workflow will not improve the rate of provider documentation of diabetes quality measures.

### IMPLICATIONS FOR PRACTICE

Checklists can be a valuable tool for documenting quality measures for diabetes. Provider training and enhanced workflow may promote assessment and documentation of important evidence-based quality measures for patients with diabetes. This project focused on use of checklist with one group of patients, but provider adherence to quality measures should be ensured for all patients.



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### Nurse Integrated Rounds

#### PURPOSE

The purpose of this quality improvement project was to decrease errors, omissions, and patient care delays by improving the bedside nurses presence, engagement, teamwork and collaboration with the medical team through the implementation of a standardized communication tool.

#### METHODOLOGY

The Model for Improvement was used as a guide for evaluating the project. The project focused on decreasing medication errors, decreasing patient care delays, and improving communication with the multidisciplinary team. Prior to implementation, a survey was disseminated to evaluate bedside nurses' level of engagement during multidisciplinary patient rounds. In addition, harm event reports were reviewed and categorized as baseline data. A communication tool was created to standardize patient care information exchange between the bedside nurses and the medical team. The impact of nurse integrated rounds was measured by evaluating existing event report harm data and internal survey responses with comparative analysis post implementation.

#### RESULTS

Prior to implementation of nurse integrated rounds, reported delays and medical errors reached the patient due to miscommunication between providers and the nursing staff. After implementation of nurse integrated rounds, there was an 80% reduction in harm events in two months. Improvement in the bedside nurses' engagement and how the medical team perceived their input during multidisciplinary rounds increased to 82%.

#### IMPLICATIONS FOR PRACTICE

The results of this project demonstrate the importance of communication and collaboration with multidisciplinary teams. Ensuring that teams are working together is imperative for quality outcomes and positive patient and family experiences.

## Leadership Mentoring Pilot for Nursing Supervisors

### PURPOSE

The purpose of this quality improvement project was to describe whether a formal classroom leadership mentor pilot of nursing supervisors can develop the leaders' self-perceived competencies and improve the intent to stay in their role.

### METHODOLOGY

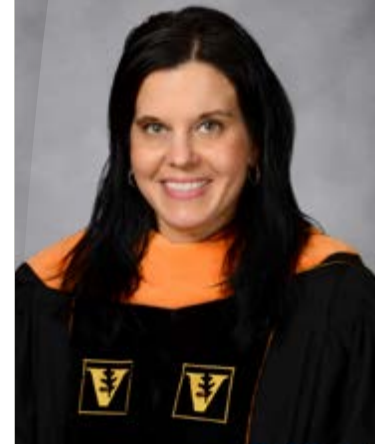
A pilot study using a formal classroom setting for 12 nursing supervisors with varying levels of experience in an acute care hospital. A pre and post-test of knowledge were completed using the *American Organization for Nursing Leadership (AONL) manager self-assessment tools and the Nurse Manager Leadership Domain Framework*.

### RESULTS

Descriptive statistics demonstrate positive outcomes of the program using a paired T-test with pre and post-test results. Qualitative comments suggest this pilot program can be useful and meaningful to the nursing supervisor position. A paired samples t-test was conducted to evaluate the impact of the intervention on each of the domains in the Nurse Leader Competencies Assessment. There was an increase in The Science domain from Time 1 (M = 2.79, SD = 0.74) to Time 2 (M = 4.00, SD = 0.29),  $t(11) = -8.840$ ,  $p = .000$  (two-tailed). The mean increase in The Science domain scores was 1.20 with a 95% confidence interval ranging from -1.51 to -.908. The eta squared statistic (.87) indicated a large effect size.

### IMPLICATIONS FOR PRACTICE

Financially the cost of replacing, training, and onboarding new leaders is significant to the organization as well as the downstream effects of reimbursement on quality performance and disengagement of staff and other leaders. To deter the cost of turnover and improve intent to stay, hospitals need to have a formal mentor program for nurse leaders. This pilot program supports prior research and evidence.



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# Development and Implementation of a Trauma Team Education Programme at Georgetown (Guyana) Public Hospital Corporation

## PURPOSE

The purpose of this DNP quality improvement project was to address the disparities outlined by the World Health Organization's Global Emergency and Trauma Initiative by implementing an evidenced-based trauma team training course to improve team dynamics and patient outcomes within the Georgetown Public Hospital Corporation Accident & Emergency in Georgetown, Guyana.

## METHODOLOGY

Volunteer accident and emergency nursing and physician participants received this training. The Team Emergency Assessment Measure (TEAM) tool was used for pre- and post-education data collection to capture data on leadership, teamwork, task management, and overall performance.

## RESULTS

TEAM scores (95% CI [7.8, 10.6]  $M = 9.2$ ,  $SD = 6.52$ ) improved following project implementation, supporting utilization of a structured educational module to improve team dynamics. Data also demonstrated that the education initiative improved domain scores evaluated within

the TEAM observation scores. A paired two-sample t-test showed a statistically significant improvement in primary outcomes post-education implementation ( $M = 25.08, 34.3$ ,  $SD = 10.9, 7.1$ ,  $\rho = < 0.001$ ).

## IMPLICATIONS FOR PRACTICE

Ninety-percent of all injury deaths occur in low- and middle-income countries where trauma mortality is inversely proportional to income status; accounting for 9% of all global mortality and is the fifth leading cause of death worldwide. Global Burden of Disease data estimates that more than two-million patients per year would survive with implementation of initiatives to improve trauma team dynamics and may lead to improved communication, reduced medical errors, and improved trauma patient care. The outcome of this DNP-led quality improvement project demonstrated that TEAM tool scores improved after implementing a focused trauma team training education at Georgetown Public Hospital Corporation. Results of the project suggest that teams who receive trauma team education may ultimately experience enhanced team dynamics and improved patient care.

## Emergency Department Sepsis Alert: Quality Improvement Effort to Reduce Time Between Triage and Treatment Interventions

### PURPOSE

The purpose of this quality improvement project is to evaluate the impact of utilizing a triage-based sepsis screening tool, the Modified Early Warning System (MEWS), to decrease the length of time from triage to initiating timely treatment interventions for adult patients with sepsis in the emergency department (ED).

### METHODOLOGY

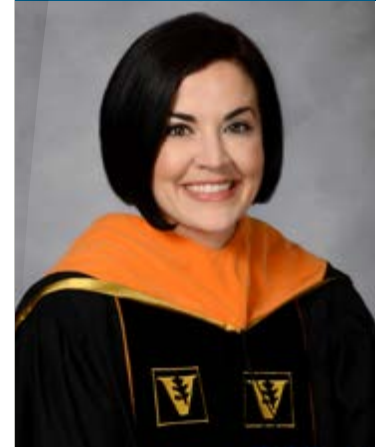
A non-experimental design was used to collect data through a retrospective chart review for adult ED patients diagnosed with sepsis. Purposive sampling was used to create two independent sample groups representing a pre-screening time frame and post-screening time frame. Data was compared from these two separate time periods (a) pre-MEWS – before utilizing triage screening tool and (b) post-MEWS – after implementing triage screening tool. The primary outcomes for analysis and comparison were the time from triage to (1) initiating fluids resuscitation (2) obtaining lactate measurement levels (3) and initiating antibiotic(s).

### RESULTS

All three of the measured outcomes demonstrated a decrease in the length of time in the post-MEWS group. In particular, the length of time between triage to initiating fluid resuscitation demonstrated statistical significance with a 27-minute reduction in the post-MEWS group.

### IMPLICATIONS FOR PRACTICE

Sepsis is associated with high mortality and morbidity rates. Evidence supports early recognition and early initiation of treatment in patients with sepsis is key to improving their outcome. Utilizing the MEWS tool as a triage-based sepsis screening tool decreases the length of the time from triage to implementation of treatment interventions in sepsis patients.



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## Abbreviated Cognitive Behavioral Therapy for Insomnia at the Vanderbilt University Medical Center Sleep Clinic

### PURPOSE

Insomnia is a common sleep disorder that presents at the Vanderbilt University Medical Center (VUMC) sleep clinic. The purpose of this project was to increase patient access to cognitive behavioral therapy for insomnia (CBTi) at the clinic. It is difficult for patients to obtain access to this treatment due to obstacles including access to CBTi providers, insurance coverage, time commitment and willingness to try behavioral treatment.

### METHODOLOGY

In this project, the doctorate of nursing practice (DNP) student introduced an abbreviated form of cognitive behavioral therapy treatment for insomnia (ACBTi) to groups of two to three insomnia patients at the VUMC sleep clinic. The Pittsburgh Sleep Quality Index (PSQI) along with qualitative feedback was collected from patients pre-treatment and two weeks post-treatment. In addition, the need for ACBTi from sleep clinic providers was evaluated both before and after the ACBTi treatment.

### RESULTS

The results of this project showed that providers perceive a need for ACBTi at the clinic and that they had patients who would benefit from ACBTi. While, there was no significant change in PSQI scores pre-treatment and two weeks post-treatment, 80% of participants perceived that ACBTi was slightly or very helpful in improving sleep quality and duration. Sleep clinic providers also perceived a need for additional ACBTi sessions at the sleep clinic after the project was completed.

### IMPLICATIONS FOR PRACTICE

These results provide a promising basis to continue evaluating ACBTi treatment at the clinic as additional data is needed to support the use of ACBTi in treating insomnia.

## Inpatient Nurse Screen Time: An Analysis of Electronic Health Record Time Per Shift

### PURPOSE

Nurses express concerns about spending too much time interfacing with the EHR. These perceptions are linked to burnout with reports that nurses are leaving the profession. Data is limited in the literature that quantifies time spent in the EHR. This clinical inquiry quantified the time inpatient nurses spent interacting with an EHR per 12-hour shift at six intervals over twenty months post EHR implementation at a large academic medical center. Whether the interaction time increased or decreased over time was assessed. EHR components most utilized by nurses were identified.

### METHODOLOGY

Data from four inpatient units (an adult and pediatric intensive care unit and medical/surgical unit) was examined. The amount of time inpatient staff nurses actively engaged with the EHR was analyzed from 13,566 12-hour shifts during six 21-day periods.

### RESULTS

The median EHR time per 12-hour shift was 161 minutes (Q1: 32-130 minutes, Q2: 130-161 minutes, Q3: 161-196 minutes, Q4:195-396 minutes) for all four units. Twenty-five percent of nurses spent 27-55% (Q4) of a 12-hour shift interacting with the EHR while 25% spent only 4-18% (Q1). EHR interaction was greatest with flowsheets (34%-64% per shift).

### IMPLICATIONS FOR PRACTICE

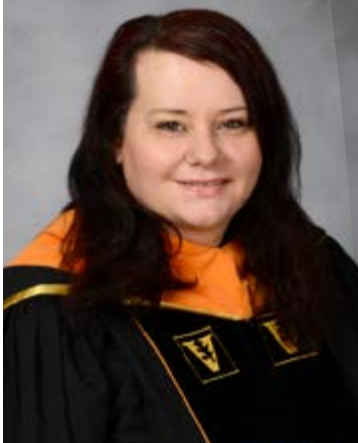
Findings contribute to understanding nursing interaction time with an EHR over multiple time-periods extending beyond the first-year post-implementation of a new EHR. While the median minutes calculated (22% of a shift) is consistent with the literature, extremely wide variability in interaction time was observed.



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## Patient Identified Factors Impacting Completion of an Intensive Outpatient Substance Abuse Program

### PURPOSE

The purpose of this quality improvement project was to identify factors that are related to patients dropping out of the initial 90 days of a SAIOP program. The aim was to understand the factors that patients report to guide better treatment strategies to enable each patient to achieve sustained recovery, completing 270 days of outpatient treatment.

### METHODOLOGY

Two groups of patients were interviewed: those who dropped out of the program within the first 30 days and those that dropped out between day 31 and 89. A telephone interview was conducted with 20 of the 40 identified patients eligible for inclusion. The interview consisted of two questions concerning

their personal experience and factors that contributed to them withdrawing from the SAIOP, and what suggestions they offered to help them stay in treatment.

### RESULTS

Contact was made with 20 patients over a thirty day period. The questions addressed two issues for treatment to understand drop-out specific for this clinic. The first question responses revealed: 10 (50%) patients had transportation issues, four (20%) patients stated that finances made it difficult to continue, three (15%) reported conflict with staff, one (5%) reported no factors, and one (5%) reported a lack of social support from home. The second question asked patients how the program could

improve to decrease drop-out rates. Suggestions included more education regarding programs outside of the SAIOP, provide transportation, more one-on-one counseling for patients, more discussions during class about recovery/addiction, better snacks/drinks, weekend classes, improve negative staff attitudes, increased medication support.

### IMPLICATIONS FOR PRACTICE

The project generated a list of suggestions for program improvement. This information will be helpful in the management of patients in this clinic and hopefully changes can be implemented to improve the quality of care and life of each patient.

## Screening for Anxiety and Depression in Adolescents with New or Relapsed Cancer

### PURPOSE

The purpose of this project was to identify pediatric oncology patients with symptoms of anxiety and depression by screening for these disorders at the time of a new cancer diagnosis or relapsed cancer diagnosis. The goal was to determine if implementation of a standardized, evidence-based screening measure for anxiety and depression would yield earlier detection of symptoms as compared to not using screening measures.

### METHODOLOGY

This project followed a quality improvement design to evaluate current practice performance and develop systematic efforts in order to improve patient outcomes. The intervention implemented screening recommendations into practice

at an inpatient pediatric hospital setting in the adolescent population with a recent new or relapsed diagnosis of cancer. The Patient Reported Outcomes Measurement Information Scale (PROMIS®) for anxiety and depression assessed for clinically significant symptoms; the patient scores determined if consultation with child and adolescent psychiatry was indicated.

### RESULTS

The number of consultations to psychiatry during the intervention phase (Group 2) were compared to the number of consultations to psychiatry during the same time frame one year prior (Group 1), using the same population inclusion criteria. It was found that the number of patients identified to have anxiety or depression

increased from 26.3% (n1=5) in Group 1 when no screens were used to 55% (n2=11) in Group 2 when screening measures were implemented.

### IMPLICATIONS FOR PRACTICE

The use of brief, evidence-based measures improves the identification of anxiety and depression in the adolescent oncology population, which allows for earlier intervention to promote better patient outcomes.



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# Improving the Use of Virtual Reality for Acute Pain Management in the Emergency Department: An Evidence-Based Practice Approach

## PURPOSE

Virtual reality (VR) technology has been shown to effectively decrease the perception of pain when used as an adjunct or substitute for pharmaceutical management. This project focused on increasing use of VR in a small, suburban emergency department (ED) through the implementation of an evidence-based practice protocol and subsequent education of clinical staff.

## METHODOLOGY

In this quality improvement project, ED clinical staff were educated on an evidence-based VR technology protocol for adult patients with acute pain. Education was achieved through an online learning module, and an adapted pre-test and post-test assessed the participants' change in perceived knowledge and confidence before and after completing the learning module. After completing the learning module, pre-test, and post-test, participants had an opportunity to reinforce their knowledge through a hands-on check-off on the VR device. Usage data from the VR device was evaluated from both pre-education and post-education periods.

## RESULTS

Twenty-six participants completed the learning module. Analysis of each of the individual items on the pre-test and post-test was performed using comparative trend analysis. Participants perceived knowledge and confidence improved significantly ( $p \leq 0.05$ ) on all items. There was also a 55% increase in VR usage time when the pre-intervention period was compared to the post-intervention period.

## IMPLICATIONS FOR PRACTICE

This project showed that evidence-based VR education on a VR technology practice protocol increased participants' perceived knowledge and confidence in their ability to utilize VR for acute pain management in an ED setting. The participants' increase in perceived knowledge and confidence subsequently had a positive association with increased VR technology use in the ED. This project supports VR technology usage as a sustainable, safe, and cost-effective approach for acute pain management in the ED.

## Increasing Human Papillomavirus Immunization Rates at a Multi-Specialty Medical Clinic

### PURPOSE

A quality improvement project to increase the immunization rate at one multi-specialty medical clinic.

### METHODOLOGY

The research supports the importance of the provider influence and recommendation on whether the patient or the parent will agree to receive the HPV immunization. Two provider education interventions occurred on separate dates, to an audience of 17 Internal and Family Medicine physicians, 8 Nurse Practitioners (NPs) and 18 Pediatricians.

### RESULTS

The Internal and Family Medicine department and the Pediatrics department each doubled the administration rate of the HPV vaccination between pre- and post-intervention.

### IMPLICATIONS FOR PRACTICE

Provider education is necessary to improve clinical weaknesses, initiating the idea that provider education may potentiate an increase in vaccines. One educational intervention has the potential to improve immunization rates in a practice.



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# Monitoring Cognitive Function in Patients at Risk for Ongoing Cognitive Disturbance during Treatment for Alcohol and Substance Abuse Disorders

## PURPOSE

Chronic alcohol and substance abuse cause a decline in cognitive functioning. A cognitive function assessment during initial treatment for substance use disorder is commonly not assessed. The purpose of this DNP project is to determine if the administration of the Montreal Cognitive Assessment (MoCA) tool at baseline and again at 30 days, can identify persons at risk for ongoing cognitive impairment in an outpatient substance abuse treatment program.

## METHODOLOGY

The MoCA was administered to 29 veterans in an Intensive Outpatient Program (IOP) for substance abuse at baseline and again after 30-days of treatment. Scores were recorded for three groups: Alcohol Only ( $n=17$ ), Substances Only ( $n=6$ ) and both Substances and Alcohol ( $n=6$ ). An aggregate pre and post t-test analysis was conducted to determine changes between baseline and 30-day scores. An aggregate linear regression analysis was conducted to determine if there was a significant relationship between these three groups.

## RESULTS

The MoCA tool was successfully implemented in this setting with aggregate baseline mean score of 24.5 (1.88) and 30-day mean score of 26.1 (1.41). A significant increase in overall group scores of 1.65 points after 30 days was confirmed using a paired t-test (95% CI: 1.08 – 2.23  $p < 0.001$ ). Mean score change in MoCA by group indicated modest improvement in cognitive function at 30-days: Alcohol Only (0.7), Substances Only (2.3) and Substances and Alcohol (3.4). An aggregate linear regression analysis detected no significant difference by group ( $p = 0.19$ ). This null finding is likely due to low sample size.

## IMPLICATIONS FOR PRACTICE

This project demonstrates that the MoCA can be used as an effective and time-efficient tool to measure and track the cognitive functioning in persons who abuse alcohol and other substances. The use of the MoCA tool during treatment for alcohol and substance abuse can potentially detect a need for further neurological assessment and interventions to improve outcomes related to cognition during treatment.



## Development of a Clinical Onboarding Program for an Ambulatory Care Setting

### PURPOSE

Pre-licensure nursing curricula focuses primarily on acute care with minimal to no education or training for ambulatory care. Nurse residency programs are also lacking in ambulatory care, and clinical orientation methods in ambulatory care are informal and often learn-as-you-go, leaving clinical employees new to ambulatory care with inadequate preparation for their new role. The purpose of this DNP project was to address this educational gap by designing and developing an onboarding program for clinical staff in an ambulatory urgent care setting.

### METHODOLOGY

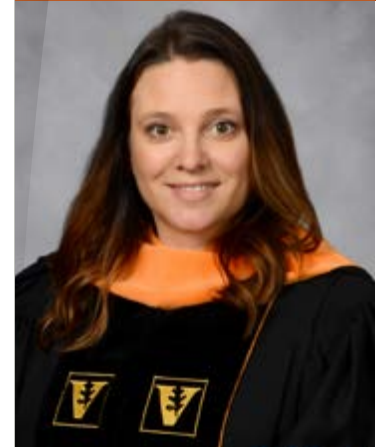
The ADDIE (Analysis, Design, Develop, Implement, Evaluate) Model of instructional design was used to design and develop the clinical onboarding program. This included analysis of what was already available as well as the needs to be met through the program, the design and development of the program, and a plan for implementing and evaluating the program.

### RESULTS

This project developed a ninety-day onboarding program consisting primarily of training materials and preceptorship. Several forms, checklists, and surveys were created as part of this program. The effectiveness of this program will be evaluated by both pre- and post-program implementation staff retention rates and leadership and new hire satisfaction rates.

### IMPLICATIONS FOR PRACTICE

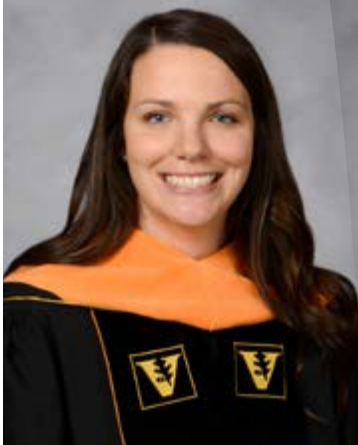
As the setting for healthcare delivery moves more into ambulatory care, there is a growing need for competent clinical staff in ambulatory care. Onboarding for clinical workers in ambulatory care should be consistent and standardized for the ambulatory care specialty, incorporate multiple teaching strategies, ensure the selection of appropriate preceptors, and allow adequate time for completion. The program developed by this project will help to ensure clinical employees new to ambulatory care are properly onboarded for their new role.



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## Targeted Education Intervention for Patients Undergoing Anterior Cervical Discectomy and Fusion

### PURPOSE

The purpose of this DNP project is to provide patients undergoing an ACDF targeted education to improve post-operative pain perception.

### METHODOLOGY

The DNP project was an intervention with follow-up observation. Eight patients undergoing the ACDF procedure in April and May 2019 were selected through inclusion and exclusion criteria and were provided targeted education through phone intervention and contacted two weeks following surgery. Questionnaires were used for data collection during the intervention and two weeks following surgery.

### RESULTS

Data collected was analyzed through descriptive statistics and compared to six patients who did not receive targeted education intervention prior to ACDF surgery in March 2019. It was found that 100% of patients who received targeted education reported adequate pain control following surgery compared to 83.3% of patients who did not receive targeted education reported adequate pain control following surgery.

### IMPLICATIONS FOR PRACTICE

Valuable information about patients' post-operative experience after receiving targeted education in relation to their post-operative pain was obtained during this DNP projection. This project found that patients who receive targeted education prior to surgery reported adequate pain control compared to patients who did not receive targeted education, highlighting the importance of pre-operative education prior to surgery.

## The Impact of Workplace Bullying on Clinical Decision Making in Emergency Departments

### PURPOSE

The purpose of this project was to evaluate how the presence of workplace bullying among health care providers in Emergency Departments impacts clinical decision making.

### METHODOLOGY

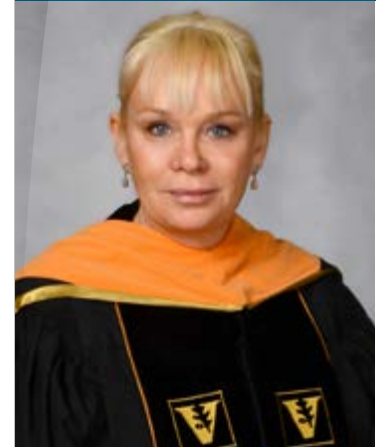
Data were collected using a REDCap electronic survey tool using the Modified Nursing Incivility Scale. Participants were recruited online via an Emergency Nurses link or via Facebook.

### RESULTS

Seventy-four emergency department workers completed the survey. Registered Nurses accounted for 64.9% of the respondents and Advanced Practitioners 28.4%. Just over 37% reported changing their clinical management of patients based on workplace incivility. Over 54% reported delaying or avoiding discussing patient care with another provider based on fear of their responses. It is also important that 95.9% of the respondents reported verbal abuse from a patient and 86.5% reported physical abuse.

### IMPLICATIONS FOR PRACTICE

Emergency Department workers are at risk for physiological, physical and psycho-social harm. As Nurse Practitioners and Advanced Practice Nurses are workers in Emergency department. They are in key positions to actively initiate and engage in the needed research to address this growing problem.



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## Program Evaluation of a Nurse Residency in a Pediatric Hospital

### PURPOSE

Nurse residency programs are designed to assist Newly Licensed Registered Nurses to transition into nursing practice. This project evaluation was aimed at determining, from the participant's perspective, which components of the nurse residency were most effective at supporting them as they transitioned into professional nursing practice.

### METHODOLOGY

This qualitative program evaluation was conducted through focus group methodology. The Nurse Residents were informed that participation was voluntary and that the results would be used to develop future residency programs. Two focus groups were conducted, one for Acute Care and one for Critical Care Nurse Residents. Responses

were recorded through the voice memos feature on password protected iPhones. Focus group transcripts were evaluated for common themes.

### RESULTS

The Nurse Residents identified the cohort as the most valuable part of the Nurse Residency Program. Both groups described their transition into practice as stressful, but the Acute Care Nurse Residents felt supported while the Critical Care Nurse Residents did not feel supported, indicating cultural differences in the practice environments. 100% agreed the Nurse Residency Program could be shortened, 75% suggested adding more hands-on equipment sessions and 100% of the Critical Care Nurse Residents felt the content should be specific to critical care.

### IMPLICATIONS FOR PRACTICE

Addressing the socialization needs of the newly licensed registered nurse is an essential aspect of the residency program. Decreasing the preceptor's patient care responsibilities may help to alleviate stress and allow them to focus on the new nurse's learning needs. Unit culture should be assessed to ensure a healthy work environment before implementing a nurse residency program. The program goals may be achieved in a shorter timeframe.

## Identifying Barriers to Implementation of a Spontaneous Awakening Trial Guideline

### PURPOSE

While the Surgical Trauma Intensive Care Unit (STICU) at a Level 1 Trauma Center in Colorado has a Spontaneous Awakening Trial (SAT) Guideline in place, the guideline is not consistently implemented in daily practice. This study intended to assess the barriers to implementation of the current guideline.

### METHODOLOGY

A survey was administered to 100 STICU staff and faculty including attending physicians, fellow physicians, advanced practice providers (APPs), registered nurses (RN), and respiratory therapists (RT). The survey was adapted with permission from Miller et al. (2012). Attitudes and barriers extracted from the survey were categorized into types

based on the Consolidated Framework for Implementation Research (CFIR) guidelines. Results were then described utilizing quantitative statistics.

### RESULTS

A total of 46 responses were collected (34 RNs, 3 APPs, 2 fellow physicians, 5 attending physicians, 2 RTs). Each profession demonstrated significant variation in how an SAT was performed with both sedation and analgesia. Participants also endorsed lack of consistent assessment for SAT eligibility and performance. Knowledge deficits were demonstrated in exclusion criteria for SAT, end point of SAT, and documentation of SAT. Lack of communication between professions was demonstrated to be a major barrier as well

as expectation of timing of SAT. Each profession shared common goals with purpose of SAT. All professions endorsed willingness to perform SATs.

### IMPLICATIONS FOR PRACTICE

In order to successfully revise the current SAT guideline, it is essential to understand the barriers to implementation of the protocol from a multidisciplinary standpoint. Stakeholders involved in the revision of the protocol to increase adherence to SATs should address these barriers in order to successfully implement this intervention. Additionally, this data can be utilized to create educational initiatives to close knowledge gaps with regard to SATs.



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# Diagnostic Assessment of Autism Spectrum Disorder in an Outpatient Psychiatric Clinic

## PURPOSE

Rates of Autism Spectrum Disorder (ASD) have risen dramatically over the last 20 years resulting in increased demand for ASD assessment. Clinical Practice Guidelines (CPGs) recommend ASD diagnostic assessment by a multidisciplinary team, however, numerous barriers can lead to long wait times for diagnosis and delayed access to services. Use of standardized assessments tools in the diagnosis of ASD can ensure a structured and comprehensive assessment. The purpose of this translation of evidence into practice project was to design and evaluate the acceptability and feasibility of implementing an evidence based diagnostic process incorporating standardized assessment tools for the assessment of ASD in an outpatient psychiatric clinic.

## METHODOLOGY

An evidence-based ASD diagnostic process, that includes standardized assessment tools, was created. Pre- and post-intervention surveys were used to evaluate provider willingness to implement an ASD diagnostic process, perceived barriers and feasibility of implementation at the practice site.

## RESULTS

Results indicated that all clinicians at the practice site strongly supported the use of standardized assessment tools in the evaluation of ASD and were willing to incorporate the proposed ASD diagnostic process utilizing these tools into their current practice. In open-ended questions, all clinicians identified the need to refer to outside clinicians for completion of the standardized

assessment tools as a barrier to incorporating the proposed ASD diagnostic process into their current practice.

## IMPLICATIONS FOR PRACTICE

Lack of clinicians at the practice site trained to complete the identified standardized assessment tools was viewed as a barrier by all the clinicians. This finding supports the need for a clinician at the practice site to become proficient in administration of the identified assessment tools to coordinate and maintain care within the practice.

## Evaluation of an Empowerment Nursing Care Model's Impact on Burnout in Nursing

### PURPOSE

The purpose of this project was to evaluate the impact a newly developed empowerment care delivery model had on nursing burnout, through the all the lenses of the Quadruple Aim. The project examined whether empowerment decreased burnout for nurses and then subsequently did decreasing burnout improve the other three aims: lower cost; improved outcomes; improved patient experience.

### METHODOLOGY

The project design was a program analysis which took place one year after implementation of the empowerment care delivery model. The nurse's burnout was evaluated through the Elements of Joy survey grounded in Maslow's Theory of Human Motivation which included both quantitative and qualitative

data examining burnout as compared to non-intervention peer groups. After the impact of empowerment was noted on burnout, both organizational and patient outcomes were examined as compared to the non-intervention peer group, to determine the impact of burnout on the Quadruple Aim.

### RESULTS

Twenty-four nurses and patient care technicians reported higher Net Promoter Score, lower burnout, and less turnover intent than their non-intervention peer group. In addition, the intervention group scored higher in all 5 domains of Maslow's Hierarchy clearly demonstrating less burnout, more empowerment, and more engagement than their non-intervention peer groups. The decrease in burnout had a positive impact on the organizational and

patient outcomes when evaluated at 6 months and 12 months post implementation. The results demonstrated better performance and outcome results in all 9 areas evaluated as compared to the non-intervention peer group.

### IMPLICATIONS FOR PRACTICE

The program evaluation provided insight and context into the nurses' own journey within today's complex and chaotic practice environment. It is imperative that nurse leaders focus on improving the nurse's own experience with the healthcare system in order to drive healthcare improvement and transformation. A new care delivery model for today's complex environment which focuses on elevating the role of the nurse and nurse empowerment is imperative for decreasing burnout and achieving the Quadruple Aim.



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## Impact of Provider Extragenital STD Knowledge and Comfort Following an Education Intervention

### PURPOSE

This quality improvement project aimed to evaluate levels of provider comfort, confidence, and knowledge of sexually transmitted diseases (STDs) before and after viewing an education module which focused on the national STD screening guidelines, with an emphasis on extragenital STD testing.

### METHODOLOGY

Convenience sample of board-certified nurse practitioners employed within one district of a retail health chain and provide STD testing. After review and approval from Vanderbilt University IRB and an employer-based DNP Committee, participants were recruited via employer-based email. Participants completed a demographic questionnaire and a pre/post survey administered via REDCap and an online education module.

### RESULTS

10/34 (29%) participants completed the demographic questionnaire and the pre/post-survey; data was analyzed via Excel. Participants were mainly employed full-time, MSN educated, aged 30-40 years of age, and female. Aggregate perceived confidence and comfort levels related to sexual health topics increased by 16.15% and knowledge related to current CDC guidelines increased by 8.82% pre/post-survey.

### IMPLICATIONS FOR PRACTICE

Evidenced-based education modules are an effective option to increase provider comfort, confidence, and knowledge levels in the management of extragenital gonorrhea and chlamydia. The data collected from this project has the potential to assist in the development and implementation of protocols to guide processes to include screening for extragenital gonorrhea and chlamydia with STD testing.



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