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Reducing ED Re-admissions in Post-Op Neuro Patients utilizing a NP Telephone Follow-up Protocol

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“Reducing ED Re-admissions in Post-Op Neuro Patients utilizing a NP Telephone
Follow-up Protocol”

UNIVERSITY OF SAN DIEGO

Hahn School of Nursing and Health Science:

Beyster Institute for Nursing Research

DOCTOR OF NURSING PRACTICE PORTFOLIO

by

Katherine Curran BSN, RN, DNPc

A portfolio presented to the

FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE:

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UNIVERSITY OF SAN DIEGO

In partial fulfillment of the

requirements for the degree

DOCTOR OF NURSING PRACTICE

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Introduction

The healthcare system in the United States is one of the most advanced in world, as it offers innovative treatments, targeted therapies, and ground-breaking research to deliver patients unmatched care. Despite these advancements, patients still return to the emergency department (ED) after discharging. Unclear discharge instructions, medication questions, poor surgical incision management, and uncertainty on follow-up care are common conditions that generate 30-day readmissions. Evidence based research has shown specific interventions that have been successful in eliminating the non-essential emergency department visits. Specifically, patients who undergo craniotomies are at a high risk for returning to the hospital due to the complexity of their care.

Background and Significance

Patients who undergo craniotomies often times present to the emergency department with preventable complications. On average, 1 out of 6 patients who have surgery on their central nervous system are readmitted within 30 days of their procedure (Elsamadicy, Sergesketter, Adogwa, Ongele, & Gottfried, 2018). Several measures to prevent readmissions. However, these measures are not being implemented, resulting in patients returning to the hospital. Authors Dickinson et al., (2015) reviewed readmissions for brain tumor patients and found that 74% of patient admissions were preventable. If answers are known on why readmissions occur, the medical system needs to use preventive evidenced based measures to aid in reducing the return of patients to the hospital. Hospital readmissions under 30 days are an ongoing issue in the United States, leading an annual cost of \$17.4 billion dollars (Dickinson et al., 2015). Readmissions are associated with an increased risk for infection, unnecessary procedures or tests, and

fortuitous hospital visit costs. One study found that postoperative craniotomy patients may generate hospital visits up to \$45,000 (Elsamadicy et al., 2018). Patients do not have the means, time, or resources to waste on preventable problems that can be averted through teaching and appropriate discharge follow-up.

During a hospital stay, the patient is seen by multiple providers such as attending physicians, residents, nurse practitioners, nurses, and social workers. The team of providers may change or add medications that leave patients uncertain on home medication regimens. A retrospective study revealed that only 44% of patients were alerted of changes in their medication regimen prior to their hospital discharge (Unroe et al., 2010). With unclear communication of medications modifications, dose adjustments or duration of the medication, discrepancies occur and errors are made. Jack et al. (2009) suggests, many patients are often left unprepared at discharge; many do not understand their discharge medications and cannot recall their chief diagnoses due to the overwhelming discharge process. Providers have multiple responsibilities and too many patients. Their pressing schedules leads to rushed discharges and unanswered questions. Without clear concise instructions on medications, and the rationale for the therapy, patients are not able to adhere to the pharmacotherapy course. In a study conducted by the University of Texas MD Anderson Cancer Center, at a 72-hour follow up phone call, they identified that 58% of patients had at least one or more medication discrepancies (Patel, Nguyen, Bachler, & Atkinson, 2017). Pharmacotherapy adherence is paramount to patients' successful management of care at home.

At-home success can be attributed to proper medication management, although without proper education patients are left in disarray. The time of discharge is chaotic and

the patients experience an overwhelming amount of new information at the time. Robertson et al. (2018) found that SSI (surgical site infection) rates may be reduced through discharge planning strategies and targeted patient education. If the patient was inadequately engaged or lacked comprehension, it affected the compliance and recognition of complications, placing them at risk for readmission. Feelings of ambiguity limit their ability to retain and comprehend instructions that were reviewed during their hospital stay. They are not able to retain verbal instructions or recall what to do when they have questions. Unroe et al. (2010) found that only 12% of patients in a study review were provided with written instructions of new medications and adjustments. Similarly, Johnson and Sandford (2005) in their systematic review found that providing written information at the time of discharge improved patients level of confidence in discharging home, follow up instructions, feelings of anxiety or stress and reduced their risk of readmission. It is not safe to provide only a verbal dialogue on follow up questions or concerns, especially in regards to patients with brain disorders. It is essential to provide written materials for the patient and their family to review at home. Typically, patients are discharged by residents who have a growing foundation of knowledge, but do not know the capacity of teaching that the patient requires for medication compliance at home.

Written patient education is an invaluable tool when craniotomy patients have questions regarding their incisional care. Health Protection Agency [2012] as cited in Rochan, (2016, p.26), states, "Surgical site infection (SSI) constitutes 15.7% of all healthcare-associated infections." Patients who undergo surgery are five times more likely to be readmitted to the hospital due to a possible surgical site infection (Rochan,

2016). With this in mind, discharging patients home without clear instructions places them at risk for a complications. The need for a written educational handout is imperative for the patient to understand the meaning of a SSI. The lack of clarity and no clear concise description of what classifies as a SSI increase the chance that the patient will go to the emergency department to be evaluated. Anderson et al., (2014, pg.9) writes, “Provide instructions and information to patients prior to surgery describing strategies for reducing SSI risk. Specifically provide preprinted materials to patients.” Knowledge retention is low during admission, as the patient and their caregiver are overwhelmed with understanding medications, discharge instructions, and follow-up appointments. Verbal education in the pre-operative and discharge state, with confirming written educational handouts, establishes a solid foundation for the patient and their support system to better manage their care at home.

Poor identification of SSI places patients at risk for presenting to the ED for an infectious work-up, exposure to radiation for imaging, and wasted resources for the hospital system. The health literacy of the general population of what constitutes an SSI is low. With poor understanding of an infection, the patient resorts to the emergency department for evaluation. The neurosurgery team is the stakeholder in early education, teaching the patient identification of infection and management of surgical site care. The provider who is educating the patient should be mindful of patients’ health literacy needs, ensuring that this proactive information is adopted to meet the individual needs and that it is understandable. Emphasis is placed on encouraging an educational environment that stimulates patients to participate in their surgical care, by getting involved in a discussion. (Tahari et al., 2014). Medical jargon is a barrier that limits the ability of the

patient to comprehend their instructions. Limited comprehension is a common theme when patients are presented with new information. If the discharging team does not explore the patient's comprehension, they are setting the patient and their family up for failure to meet the expectations of managing their incision at home.

The lack of follow up instructions and whom to call is another topic of concern that brings patients back to hospital. The discharge process from the hospital may become overwhelming when obtaining medications from the pharmacy, gathering personal belongings, and organizing transportation home. The focus of whom to call and when to follow up is not a high priority. Patients feel uncertain on the actions to take when there is not a defined provider to contact when they have questions. This results in emergency department visits for management for their symptoms or delay in care when having to see their provider. A control study found that patients who received calls at 24 hours post-operative had their concerns addressed and improved patient reported outcomes (Daniels et al., 2016). Phone calls at established 24-hour and 72-hour benchmarks have shown to lead to more successful management of symptoms. It allows the patient an opportunity to ask questions they may have forgotten to clarify or address issues that were not reviewed at discharge.

Purpose of Project: Description

The proposed evidence based project is aimed at reducing post-craniotomy patients from presenting to the emergency department for suspected incisional related infections after they have been discharged home. The transition of care from the pre-operative setting, time of surgical intervention, and the discharge to home is an overwhelming process for patients and their families. Commonly, patient concerns stem

from poor pre and post-operative expectations, minimal instructions on surgical incision care and not having an established follow up plan. Their uncertainty leads to the emergency department for management and poor patient outcomes.

Through evidence based interventions implemented at pre-op visits, written discharge education on incisional care, and a follow up telephone call at 24 hours with a nurse practitioner student, patients will have managed care in the outpatient setting. Written standardized instructions on identification of surgical infections, historically, has shown to help guide patients in properly monitoring their surgical incision for signs of infection. The phone call at 24 hours allows the neurosurgery team to oversee the patients care and further direct their chief complaints without wasting resources through the emergency department. These interventions will aid in the project's overall goal of eliminating unnecessary and non-essential visits to the emergency department and telephone calls.

Theoretical Model: Iowa Model

The Iowa model developed in the 1990's by Marit Titler, a registered nurse, believed using evidence based medicine drives practice change within an organization. Evidence based medicine is imperative for generating a sustainable practice change. The first step of the Iowa model identifies the problem, in which case the identified problem of high admissions to the ED and phone call to providers (Melnik & Fineout-Overholt, 2015). A team of clinicians and providers gather to analyze and review the literature to determine if the research is strong enough to support the change and priority of the organization. My team is a combination of neurosurgeons, nurse practitioners, nurses, and administrative staff. Phasing into the next step of Titler's model, reviewing and

approving the project in order for implementation into a small pilot study for data collection. Throughout the project, modifications or adjustments were made due to deferment of the implementation start date due to a providers medical needs and patients discharging from the hospital later than expected. Finally, an evaluation period took place once the data collection period was complete. The Iowa model allowed the project to be successfully completed and modified when necessary to fit the needs of patient care. It served as an excellent model to use and validated evidence based project improves patient outcomes.

Proposed Evidence-Based Solutions

Using CINAHL, PubMed, Cochrane, and Medscape a literature search was performed with terms: verbal versus written instructions, patient education incisional care, discharge instructions, 24-hour telephone call, and follow up post-operative. Over 25 articles were reviewed and 9 were selected based on their content. Literature was reviewed on the grade of evidence, ranging from levels 1 to 6, patient age, year of publication, grade of evidence, and participant criteria were considered when reviewing articles.

1. Educate patients in the pre-surgical setting on expectations before, during and after brain surgery:

Sanger et al. (2014) in a Level II study searched through PubMed found that one of the largest gaps that prevented patients from incisional infections was their lack of knowledge in wound care, self-monitoring and wound monitoring without the supervision of a healthcare provider. Sanger et al. stated, “Engaged patients have demonstrated improved clinical outcomes and emotional health and decreased

healthcare utilization” (p. 10). A systematic review Level I analyzed through PubMed resulted that patients who had a standardized definition of a wound infection were prepared to identify a post discharge infection than who did not have an accurate definition. One study revealed a positive predictive value of only 29% of patients actually having an infection of those who those who suspected they had an infection. These studies show the value and importance of incisional care education from the pre-operative setting to the time of discharge. Experts from the Health Epidemiology suggest, “Provide instructions and information to patients prior to surgery describing strategies for reducing SSI risk. Specifically provide preprinted materials to patients,” (Anderson et al., 2014, p. 15,). Continuous reinforcement and descriptive knowledge on the appearance of infection further instates proper patient identification that an infection may or may not be present.

2. Written educational materials:

Level I cochrane systematic review, patients presented with only verbal information scored 0.79 on a knowledge score of at home care, worrisome signs, and medications. In comparison, patients given written and verbal instructions scored 0.96 in knowledge (Johnson, Sandford, & Tyndall, 2003). Patients will be provided with a standardized handout on management of incisional care at home. This study confirms that education in both verbal and written form aids the patient for better management of their care at home. Written reference materials validates verbal instruction given during the pre and post-operative setting.

3. Timed telephone call at 24 and 72 hours:

Level II Retrospective observational study by Harrison et al., (2014) found within the study of “5,507 eligible patients who received a call and completed the intervention were significantly less likely to be readmitted compared to those who did not 5.8 % vs 8.6 %, $p < 0.01$ ” (p.1589). Patients who did get a phone call went to the emergency department at a rate of 10% versus those who did not get a phone call reported to the ED at a rate of 24% (Dudas, Bookwalter, Kerr, & Pantilat, 2001). Confirming evidence by Daniels et al. (2016) control study, grade level III, revealed in independent t-test patients with a follow up call have less complaints and better outcomes post-operatively at a rate of 0.19 versus 0.28 with those who did not. A phone call creates the opportunity for the patient to express any concerns that may have arisen after arriving at home. The infection rate of an SSI is very high within the first week. If a provider calls the patient early on and questions incision care, the patient will then further clarify if they need assistance or not.

Program Development and Implementation

A pilot study was conducted from January 2018 to March 2018. During the pilot study, a nurse practitioner called patients at 24 hours, after which the nurse practitioner was able to identify specific complications that craniotomy patients were experiencing at home. Persistent concerns were understanding the signs and symptoms of an infection. Collaboration within the multidisciplinary neurosurgery team sought to improve the patient outcomes and reduce emergency department visits by providing a handout on incisional care, timed phone call interventions at 24 and 72 hours and have a follow up appointment in place.

January 2019 the project with new stated above interventions were implemented. During the preoperative appointment, the nurse practitioner reviewed the expectations required of the patient in order to experience the best possible outcome. Expectations were inclusive of what occurs during the process of discharge, medication indications and proper use, possible need for rehab, recovery period, understanding and identifying the need to care for their incision, and understanding various symptoms that require an emergent visit to the hospital.

At the time of discharge, the patient and their caregivers were re-educated on their pre-operative expectations and provided with the phone numbers of the neurosurgery team that would be available to address any questions at home. An administrative team member was given clear instructions to report any patient calls to the nurse practitioner or nurse practitioner student who would be able to call the patient to address the issue. Of the patients that were discharged, the nurse practitioner student called patients at 24 hours. Using the 5 A's model: assess, advise, agree, assist and arrange, the telephone call was conducted to review the patient's at home care regimen. The 5 A's model mimics an interview like questionnaire to evaluate the patient's behavior (Glasgow, 2006).

Assessment aided the nurse practitioner student to evaluate the patient's current needs and determine gaps that required further teaching. The patient would inform the provider about information they wanted to clarify and new concerns that developed after discharging. Advisement directed the patient to change or modify any behaviors that were not beneficial to care of their surgical incision management. The next step agreement: a plan was established . If the patient or caregiver felt uncomfortable with the instructions provided at the hospital, the student reeducated about management of

incision, clarifying medications and follow up appointments. Assisting focused on steps to make the patient feel at ease at home, by providing them with contact information of neurosurgery team, consultation needs, and addressing emotional concerns. The final step arrangement confirmed education that was provided to the patient, concerning symptoms that should warrant an emergency department visit, and follow-up appointment has been made for post-operative evaluation.

1. Assess: How are they feeling after arriving at home? What questions do they have? Any new complications?
2. Advise: Pain control with use of medications, bowel regimen, further evaluation of symptoms if worrisome.
3. Agree: Reaffirm behaviors and management of care, make changes if necessary of patient goals.
4. Assist: Provide clarification of the education that was provided and answer questions, support needs.
5. Arrange: Confirm follow up appointments or need to report to emergency room if symptoms warranted, reiterate to patient they can call at any time for worrisome signs.

Figure 1. 5 A's Behavioral Model

After completion of the 24-hour call, the nurse practitioner student forwarded messages to the established neuroscience nurse practitioner. If necessary, the patient would be reassessed and care managed appropriately in the outpatient setting.

Evaluation of Benchmarks

The measure of success of the EBP project I strove to achieve is to reduce ED visits by 25% and decrease patient calls by 30%. The data was compared to the pilot study that was collected for 3 months. Each patient encounter was documented meticulously with the details of the patients concerns if any, questions that were discussed and advisement if required for the patients' needs. Historically, the patient will present with complications within the first month if any are to arise, which is why education and close follow up are imperative to a favorable project goal.

Cost/Benefit Analysis

The cost benefit of this project provides monetary savings, saved resources, and improved patient outcomes. The average nurse practitioner salary is \$70 dollars an hour. Each call that took place was around 20 minutes. For suspected or complaints of infection, the cost of a CT is \$1,200 (Black et al., 2014). Further work up of infection in the emergency department is inclusive of labs, physician, and nursing care. The monetary value is unidentifiable as each patient has different presenting symptoms. Additionally, the estimated cost value at a minimum for a patient with an SSI is \$7,943 (Shepard et al., 2013). With the combined interventions of education in pre/post-surgical setting, written instructions and 24-hour telephone call, the minimal values of \$9,143 could be deferred.

Results

After completion of data collection from January 2019 to March 2019, a total of eight patients were included. There were two successful patients who received the mentioned interventions and did not have any complications. Three patients were discharged to facilities, in which case their care is dependent upon providers at the rehabilitation center. The remaining two patients did not answer up the phone when the 24-hour phone call was placed. There were limitations from the project due to a project member needing to take an unexpected leave of absence. The number of phone calls were reduced by 66%. Within the sample size, the emergency department admissions were not applicable.

Conclusion and Summary

Craniotomy patients and their caregivers assume a new level of responsibility when they are discharged from the hospital. A new baseline is established for the patient after they have surgery. They consume new medications, assume care of their surgical incision and experience many changes in their work and social life. These changes may impair the patient from comprehending the information they require to be successful in the outpatient setting. Patients commonly will proceed to the emergency department for questions regarding their incisional care. The ED leads to fortuitous costs for hospital systems and patients and their families. Surgical site complaints can be best managed through the outpatient setting and prevented through pre/post-surgical education.

Providing the patient and their caregivers with a well-established foundation of knowledge leads to positive results. Through evidence based practice interventions, written incisional care instructions, a telephone call at 24 hours after discharge, and an established discharge provider has proven to be successful for patient outcomes. The selected EBP interventions have shown to be beneficial to postoperative craniotomy patients

and the hospital system. Utilizing EBP in patient care leads to better outcomes and appropriate management of patient symptoms in the outpatient setting.

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**AACN DNP Essentials/NONPF Competencies/USD DNP Program Outcomes
Exemplars**

AACN DNP Essentials & NONPF Competencies	USD DNP Program Objectives	Exemplars Provide bulleted exemplars that demonstrates achievement of each objective
<p>DNP Essential I: Scientific Underpinnings for Practice</p> <p>NONPF: Scientific Foundation Competencies</p> <p><i>The scientific foundation of nursing practice has expanded and includes a focus on both the natural and social sciences including human biology, genomics, science of therapeutics, psychosocial sciences, as well as the science of complex organizational structures. In addition, philosophical, ethical, and historical issues inherent in the development of science create a context for the application of the natural and social sciences.</i></p>	<p>2. Synthesize nursing and other scientific and ethical theories and concepts to create a foundation for advanced nursing practice.</p>	<p>Fall 2016</p> <ul style="list-style-type: none"> Used Rosswurm & Larrabee model to generate PICO question that used evidence based research synthesis (DNPC611) <p>Spring 2017</p> <ul style="list-style-type: none"> Reflective practice on Carper's Four Fundamental Patterns of Knowing and the incorporation of theory in nursing (DNPC610) <p>Fall 2017</p> <ul style="list-style-type: none"> Evidence Based Practice synthesis in group setting on the ischemic stroke focusing on disease management and prevention (DNPC622). Evidence Based Practice based project on BRCA1/2 and the pathogenesis of the disease (DNPC622). Research article review on various diseases and the pathogenesis (DNPC622). <p>Spring 2018</p> <ul style="list-style-type: none"> Logic Model for project planning of EBP (DNPC686) Iowa Model to guide DNP EBP project (DNPC686)
<p>DNP Essential II: Organizational & System Leadership for Quality</p>	<p>5. Design, implement, and evaluate ethical health care delivery systems and information systems that</p>	<p>Fall 2016</p> <ul style="list-style-type: none"> Reviewed and analyzed evidence based research to determine secondary

<p>Improvement & Systems Thinking</p> <p>NONPF: Leadership Competencies/Health Delivery System Competencies</p> <p><i>Advanced nursing practice includes an organizational and systems leadership component that emphasizes practice, ongoing improvement of health outcomes, and ensuring patient safety. Nurses should be prepared with sophisticated expertise in assessing organizations, identifying system's issues, and facilitating organization-wide changes in practice delivery. This also requires political skills, systems thinking, and the business and financial acumen needed for the analysis of practice quality and costs.</i></p>	<p>meet societal needs and ensure accountability for quality outcomes.</p>	<p>screening for alcoholism (DNPC625)</p> <ul style="list-style-type: none"> • Iowa Model & Mayra Levine's conservation model applied to mock DNP project of "Chlorohexidine and catheter associated bloodstream infection" (DNPC611) <p>Spring 2017</p> <ul style="list-style-type: none"> • Reviewed health policy on End of Life- Death with Dignity Act assessing the implications of act. (DNPC648). <p>Summer 2017</p> <ul style="list-style-type: none"> • Reviewed and analyzed strategic principals for management of hospital for continuous quality improvement in labor & delivery, charting systems and lab review (DNPC 626) • Constructed Driver Diagram for use of chlorohexidine in central line care (DNPC626) • Group case study review on hospital in Florida for CQI projects within organizations (DNPC626) • Developed an executive summary and strategic plan for chlorohexidine in central line care (DNPC626) • Individually demonstrated EBP case study on chlorohexidine in central line care inclusive of abstract, CQI and strategic planning principles (DNP626)
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		<ul style="list-style-type: none"> • Business Innovation Plan on the use of an application to report to providers PFT levels for patients with Asthma (DNPC653). <p>Spring 2018</p> <ul style="list-style-type: none"> • Iowa Model chosen to drive EBP project initiatives (DNPC686)
<p>DNP Essential III: Clinical Scholarship & Analytical Methods for Evidence-Based Practice</p> <p>NONPF: Quality Competencies/Practice Inquiry Competencies</p> <p><i>Scholarship and research are the hallmarks of doctoral education. Although basic research is viewed as the first and most essential form of scholarly activity, an enlarged perspective of scholarship has emerged through alternative paradigms that involve more than discovery of new knowledge. These paradigms recognize: (1) the scholarship of discovery and integration “reflects the investigative and synthesizing traditions of academic life”; (2) scholars give meaning to isolated facts and make connections across disciplines through the scholarship of integration; and (3) the scholar applies knowledge to solve a problem via the scholarship of application that involves the translation of research into</i></p>	<p>4. Incorporate research into practice through critical appraisal of existing evidence, evaluating practice outcomes, and developing evidence-based practice guidelines.</p>	<p>Fall 2016</p> <ul style="list-style-type: none"> • Critically reviewed and analyzed evidence based research on “Chlorohexidine and Catheter Associated Bloodstream Infections” (DNPC611) • Analyzed and critiqued research articles based on evidence based medicine in Clinical Grand Rounds on the pathophysiology of various diseases (APNC520) <p>Fall 2016</p> <ul style="list-style-type: none"> • Analyzed research on secondary screening for alcoholism (DNPC625) <p>Spring 2017</p> <ul style="list-style-type: none"> • Developed evidence-based research brochure focusing on Complementary and Alternative Medicine and Therapies: Omega3’s/Fish Oil (APNC523) <p>Fall 2017</p> <ul style="list-style-type: none"> • Evidence Based Practice synthesis in group setting on the ischemic stroke focusing on disease management and prevention (DNPC622). • Evidence Based Practice based project on BRCA1/2 and the pathogenesis of the disease (DNPC622).

<p><i>practice and dissemination and integration of new knowledge.</i></p>		<ul style="list-style-type: none"> • Research article review on various diseases and the pathogenesis (DNPC622). <p>Fall 2018</p> <ul style="list-style-type: none"> • Researched and synthesized evidence for EBP scholarly project (DNPC630)
<p>DNP Essential IV: Information Systems/Technology & Patient Care Technology for Improvement & Transformation of Health Care</p> <p>NONPF: Technology & Information Literacy Competencies</p> <p><i>DNP graduates are distinguished by their abilities to use information systems/technology to support and improve patient care and health care systems, and provide leadership within healthcare systems and/or academic settings. Knowledge and skills related to information systems/technology and patient care technology prepare the DNP graduates apply new knowledge, manage individual and aggregate level information, and assess the efficacy of patient care technology appropriate to a specialized area of practice along with the design, selection, and use of information systems/technology to evaluate programs of care, outcomes of care, and care</i></p>	<p>7. Incorporate ethical, regulatory, and legal guidelines in the delivery of health care and the selection, use, and evaluation of information systems and patient care technology.</p>	<p>Fall 2016</p> <ul style="list-style-type: none"> • Obtained Biomedical Research Human Certification – Basic Course through CITI (DNPC625) <p>Spring 2017</p> <ul style="list-style-type: none"> • Completed data basis analysis on the smoking incidence of adults in the United States using common database software that analyzes and extracts data (HCIN540) <p>Fall 2017</p> <ul style="list-style-type: none"> • Generated genogram pedigree through software online program (DNPC622). <p>Spring 2018</p> <ul style="list-style-type: none"> • Obtained UCSD IRB approval for DNP scholarly project <p>Summer 2018</p> <ul style="list-style-type: none"> • Obtained USD IRB approval for DNP scholarly project

<p><i>systems. Information systems/technology provide a mechanism to apply budget and productivity tools, practice information systems and decision supports, and web-based learning or intervention tools to support and improve patient care.</i></p>		
<p>DNP Essential V: Health Care Policy for Advocacy in Health Care</p> <p>NONPF: Policy Competencies</p> <p><i>Health care policy, whether created through governmental actions, institutional decision-making, or organizational standards, creates a framework that can facilitate or impede the delivery of health care services or the ability of the provider to engage in practice to address health care needs. Engagement in the process of policy development is central to creating a health care system that meets the needs of its constituents. Political activism and a commitment to policy development are central elements of DNP practice.</i></p>	<p>3. Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</p>	<p>Spring 2017</p> <ul style="list-style-type: none"> • Presentation the critically reviewed the policy of the 21st Century Cures Act (DNPC648) • Constructed policy brief on 21st Century Cures Act H.R. 6 instated in 2016 to support modernization of research through the FDA and CDC (DNPC648) • Composed scholarly health policy paper, “The 21st Century Cures Act” (DNPC648) <p>Fall 2018</p> <ul style="list-style-type: none"> • Acceptance of scholarly EBP project to CANP (DNPC630)
<p>DNP Essential VI: Interprofessional Collaboration for Improving Patient &</p>	<p>1. Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory</p>	<p>Fall 2017</p> <ul style="list-style-type: none"> • Student nurse practitioner at Minute Clinic Rosecrans with nurse

<p>Population Health Outcomes</p> <p>NONPF: Leadership Competencies</p> <p><i>Today's complex, multi-tiered health care environment depends on the contributions of highly skilled and knowledgeable individuals from multiple professions. In order to accomplish the IOM mandate for safe, timely, effective, efficient, equitable, and patient-centered care in this environment, health care professionals must function as highly collaborative teams. DNPs have advanced preparation in the interprofessional dimension of health care that enable them to facilitate collaborative team functioning and overcome impediments to interprofessional practice. DNP graduates have preparation in methods of effective team leadership and are prepared to play a central role in establishing interprofessional teams, participating in the work of the team, and assuming leadership of the team when appropriate.</i></p>	<p>parameters in designing, implementing, and evaluating evidenced-based, culturally competent therapeutic interventions for individuals or aggregates.</p> <p>3. Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</p>	<p>practitioner Randi Pucely (DNPC602).</p> <ul style="list-style-type: none"> Interviewed and summarized health promotion paper on individual patient (APNC602). <p>Spring 2018</p> <ul style="list-style-type: none"> Sigma Theta Tau Membership <p><u>Student Nurse Practitioner (DNPC630)</u></p> <ul style="list-style-type: none"> Sharp Urgent Care with Azi Shirazi MD (DNPC630) Neuroscience brain tumors UCSD (DNPC630) Literature review of EBP project and shared with clinicians (DNPC630) <p>Summer 2018</p> <p><u>Student Nurse Practitioner</u></p> <ul style="list-style-type: none"> Naval Base Urgent Care with nurse practitioner Carrie Randle (DNPC630) Family Medicine UCSD with Suraj Achar MD (DNPC630) Sharp Procedural Clinic with Patrick Sweet MD (DNPC630) <p>Fall 2018</p> <p><u>Student Nurse Practitioner</u></p> <ul style="list-style-type: none"> Naval Base Urgent Care with nurse practitioner Carrie Randle (DNPC630) Family and Sports Medicine UCSD Suraj Achar MD (DNPC630) Rady's Sports Clinic Rady's children clinic Suraj Achar MD (DNPC630). Acceptance of scholarly EBP project to CANP (DNPC630)
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		<p>Spring 2019</p> <ul style="list-style-type: none"> Initiated DNP EBP project into neuroscience clinical setting with multidisciplinary team (DNPC630). <p><u>Student Nurse Practitioner</u></p> <ul style="list-style-type: none"> Palliative Care Sharp Health Mackenzie Cypher NP (DNPC630) Emergency Room UCSD Amanda Nasser NP/ Valerie Waters NP (DNPC630) Trauma and Burn UCSD Kevin Maxwell DNP (DNPC630) EBP manuscript: Reducing ED Re-admissions in Post-Op Neuro Patients utilizing a NP Telephone Follow-up Protocol (DNPC630) CANP poster presentation of EBP project
<p>DNP Essential VII: Clinical Prevention & Population Health for Improving Nation's Health</p> <p>NONPF: Leadership Competencies</p> <p><i>Consistent with national calls for action and with the longstanding focus on health promotion and disease prevention in nursing, the DNP graduate has a foundation in clinical prevention and population health. This foundation enables DNP graduates to analyze epidemiological, biostatistical, occupational, and environmental data in</i></p>	<p>6. Employ a population health focus in the design, implementation, and evaluation of health care delivery systems that address primary, secondary, and tertiary levels of prevention.</p>	<p>Fall 2016</p> <ul style="list-style-type: none"> Accessed the implications of screening for alcoholism (DNPC625) <p>Fall 2017</p> <ul style="list-style-type: none"> Attended CANP meeting on hemophilia <p>Spring 2019</p> <ul style="list-style-type: none"> EBP manuscript: Reducing ED Re-admissions in Post-Op Neuro Patients utilizing a NP Telephone Follow-up Protocol CANP poster presentation of EBP project Attended CANP meeting on meningococcal disease

<p><i>the development, implementation, and evaluation of clinical prevention and population.</i></p>		
<p>DNP Essential VIII: Advanced Nursing Practice</p> <p>NONPF: Independent Practice/Ethics Competencies</p> <p><i>The increased knowledge and sophistication of healthcare has resulted in the growth of specialization in nursing in order to ensure competence in these highly complex areas of practice. The reality of the growth of specialization in nursing practice is that no individual can master all advanced roles and the requisite knowledge for enacting these roles. DNP programs provide preparation within distinct specialties that require expertise, advanced knowledge, and mastery in one area of nursing practice. A DNP graduate is prepared to practice in an area of specialization within the larger domain of nursing.</i></p>	<p>1. Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidence-based, culturally competent therapeutic interventions for individuals or aggregates.</p>	<p>Fall 2017</p> <ul style="list-style-type: none"> • <u>Student nurse practitioner (DNPC630)</u> • Minute Clinic Rosecrans with nurse practitioner Randi Pucely • Interviewed and summarized health promotion paper on individual patient (APNC602). • Complete and demonstrate physical exam competencies in skills lab (APNC521). <p>January 2018</p> <ul style="list-style-type: none"> • Sigma Theta Tau Membership <p>Spring 2018</p> <p><u>Student Nurse Practitioner</u></p> <ul style="list-style-type: none"> • Sharp Urgent Care with Azi Shirazi MD (DNPC630) • Neuroscience brain tumors UCSD Homira Feely (DNPC630) <p>Summer 2018</p> <p><u>Student Nurse Practitioner</u></p> <ul style="list-style-type: none"> • Naval Base Urgent Care with nurse practitioner Carrie Randle (DNPC630) • Family Medicine UCSD with Suraj Achar MD (DNPC630) • Sharp Procedural Clinic with Patrick Sweet MD (DNPC630) <p>Fall 2018</p> <p><u>Student Nurse Practitioner</u></p>

		<ul style="list-style-type: none"> • Naval Base Urgent Care with nurse practitioner Carrie Randle (DNPC630) • Family and Sports Medicine UCSD Suraj Achar MD (DNPC630) • Rady's Sports Clinic Rady's children clinic Suraj Achar MD(DNPC630) <p>Spring 2019</p> <p><u>Student Nurse Practitioner</u></p> <ul style="list-style-type: none"> • Palliative Care UCSD Arlene Cramer NP (DNPC630) • Palliative Care Sharp Health Mackenzie Cypher NP (DNPC630) • Emergency Room UCSD Valerie Waters NP/ Amanda Nassar NP(DNPC630) • Trauma and Burn UCSD Kevin Maxwell DNP (DNPC630) • Completion of DNP manuscript (DNP630)
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Abstract

Reducing ED Re-admissions in Post-Op Neuro Patients utilizing a NP Telephone Follow-up Protocol

Background

Post craniotomy patients discharging from the hospital to home, commonly present to the emergency department (ED) with incisional concerns. Complaints stem from minimal post-op education, poor incision management, and lack of knowledge relational to infection. Unanswered questions prior to discharge lead to unnecessary ED visits, anxious calls after discharge, and poor patient satisfaction. ED admissions lead to fortuitous costs that can be prevented through evidenced based interventions.

Purpose/Aim

Post craniotomy patients at a large hospital system in Southern California will have decreased ED visits correlated to their incision and phone calls, as a result of education and follow up phone calls.

Description of the Innovation

A small team of healthcare providers led by an advanced practice nurse will: (a) educate patients in the pre-surgical setting on expectations before, during and after brain surgery; (b) written education materials on infection symptoms; and (c) making telephone calls to patients at 24 and 72-hours post discharge. Phone call conversations are guided by an evidenced-based standardized questionnaire while employing the 5 A's Behavior Change Model.

Outcomes

The goal is to achieve a 25% reduction in patients' post-discharge ED visits and 30% reduction in patients' calls during the three-month project period, compared to the three months prior to implication of project.

Implications

Improved pre-operative education along with well-timed post-discharge phone calls will reduce ED visits, patients' calls, and improve satisfaction. The monetary costs will be monumental to the hospital and resources will be better used.

Poster of Project

Stakeholders Presentation

Background and Significance

- Hospital readmissions under 30 days are an ongoing issue in the United States, leading to annual cost of \$17.4 billion dollars (Dickinson et al., 2015).
- 1 out of 6 patients who have surgery on their central nervous system are readmitted within 30 days of their procedure (Elsamadicy et al., 2018).
- Surgical site infections on average cost \$7,493 a day (Shepard et al, 2013).

Studies showed:

- Pt's lack understanding of incisional care and signs of infection
- Poor discharge instructions
- Lack follow-up instructions and discharge providers

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Pilot Study Results

Purpose/Aim

NP led post-discharge follow-up calls;

- To prevent unnecessary ED visits.
- Reduce incision related infections
- Reduce telephone calls post discharge

Pilot Project Plan Process

Review of Pilot Project Results

- NP education in pre-surgical setting
- Discharge phone call at 24 hours
- Where do we improve?
- UCSD IRB Approved HRRP# 171798
- USD IRB Approved 2019-24

Phase Two of the Project

Focused Interventions

- 1.) Educate patients in the pre-surgical setting on expectations before, during and after brain surgery
- 2.) Written education materials on infection symptoms
- 3.) Making telephone calls to patients at 24 hours

Framework/EBP Iowa Model

Framework for Telephone Call

The 5 A's of Behavioural Change

- 1.) Level of knowledge
- 2.) Provide feedback
- 3.) Development of a plan
- 4.) Provide additional resources if needed
- 5.) Follow up

Synopsis of the Evidence

- Patient engagement and educational understanding of SSI better improved the rate of identification and management (Tartari et al., 2017)
- Systematic review, patients presented with only verbal information scored .79 on a knowledge score of at home care, worrisome signs and medications (Johnson, Sandford, & Tyndall, 2003)
- Harrison et.al, (2014) found within the study of “5,507 eligible patients who received a call and completed the intervention were significantly less likely to be readmitted compared to those who did not 5.8 % vs 8.6 %

Timeline

Phase One

Pilot Study: December 2017-February 2018

Review of Pilot Project: Fall 2018

Phase Two

Data Collection: January 2019-March 2019

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Results

8 Identifiable patients

- (2)- successful calls and follow up
- (3)- Discharged to facilities
- (3)- Did not pick up telephone call

Cost-Benefit Analysis

- NP call averaged around 20 minutes.
- On average NP salary is \$72/hr.
- At minimum SSI cost \$7,733 (Shepard, et al).
- CT if suspected infection around \$1,200

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Conclusions

Pilot Results

- 20% reduction in patients' unnecessary post-discharge E.R. visits after discharge.
- 25% reduction in patient initiated calls after discharge.

Project Results

- 66% reduction in phone calls
- ED admissions not applicable

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Implications for Clinical Practice

- Reduce patient admissions to the emergency room
- Decrease patient and hospital associated costs
- Improve patient education on identifying incisional infections
- Establish coordinated care with patient to improve quality of care

Educational Material Developed

Wound care

- ☐ You may typically shower and shampoo your hair starting 3 days after surgery or as noted otherwise by your doctor. **You MUST wash your hair regularly at least every two days. Daily is the best.**
- ☐ Let shampoo and water run off your wound. You may use your normal shampoo. Use conditioner if necessary.
- ☐ Gently rub shampoo and water over wound with the pads of your fingers cleaning it really well. No nails. **Keep the wound clean with shampoo is very important to decrease the risk of infection.**
- ☐ Gently pat wound dry with a towel. No rubbing. It is okay to use a blow dryer if necessary being careful over the wound not to heat it.
- ☐ Once hair is dry, be sure to keep it off the wound at all times. You may need to pin it up or place it in a ponytail.
- ☐ Make sure your pillowcase is clean.
- ☐ Be sure to keep your pets away from your wound.
- ☐ Call the office immediately if you notice any changes in your wound, (swelling, redness, drainage that is yellow/pus, fever greater than >100.4) or any clear fluid is draining from your wound, nose or down the back of your throat.

Activity

- ☐ Walking around is encouraged, as much as possible. Increase your distance and pace every day. You will fatigue easily- this is normal. The only way to get back into shape is to exercise your way back. Be sure to use assistive devices if your balance is unsteady or if you are at risk of falling.
- ☐ No driving until you are cleared by your surgeon.
- ☐ Avoid any activity that increases the pressure inside your head (no straining for a bowel movement, no bending over with your head below your heart, avoid lifting excessive weight etc.) for 3 weeks.

Citi Certification

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)

COMPLETION REPORT - PART 1 OF 2 COURSEWORK REQUIREMENTS*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

Name: Katherine Curran (ID: 5787609)
Email: katherinecurran@sandiego.edu
Institution Affiliation: University of San Diego (ID: 1652)
Institution Unit: Nursing

Curriculum Group: Biomedical Research - Basic/Refresher
Course Learner Group: Same as Curriculum Group
Stage: Stage 1 - Basic Course
Description: Choose this group to satisfy CITI training requirements for Investigators and staff involved primarily in biomedical research with human subjects.

Report ID: 20764373
Completion Date: 06-Sep-2016
Expiration Date: 06-Sep-2019
Minimum Passing: 80
Reported Score*: 90

REQUIRED AND ELECTIVE MODULES ONLY	DATE COMPLETED	SCORE
Belmont Report and CITI Course Introduction (ID: 1127)	06-Sep-2016	3/3 (100%)
History and Ethics of Human Subjects Research (ID: 498)	06-Sep-2016	6/7 (86%)

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

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