Summer 2023

The Use of Two Nurses, Four Eyes on Skin Assessments to Reduce the Incidence of Pressure Injuries in Medical-Surgical Patients

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DNP Manuscript Defense Approval

First Name: * Tiffany Last Name: * Bass

Date: * 07/11/2023

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- ○ Adult-Gerontology Acute Care Nurse Practitioner (Doctor of Nursing Practice)
- ○ Family Nurse Practitioner (Doctor of Nursing Practice)
- ◉ Post-Master's DNP (Doctor of Nursing Practice)

Manuscript Title: * The Use of Two Nurses, Fo

Date of Manuscript Approval: * 07/15/2022

Student Signature	Electronically signed by Tiffany Bass on 07/11/2023 10:26:47 PM
Chair, DNP Manuscript Signature	Electronically signed by Lynnette Djonret-Hall on 07/15/2023 2:27:07 PM
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The Use of Two Nurses, Four Eyes on Skin Assessments to Reduce the Incidence of Pressure Injuries in Medical-Surgical Patients

A DNP Project Submitted to the
Graduate Faculty
Of Jacksonville State University
In Partial Fulfillment of the
Requirements for the Degree of
Doctor of Nursing Practice

By

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Jacksonville, Alabama

August 4, 2023

Abstract

Background: Hospital-acquired pressure injuries (HAPIs) adversely affect at-risk patient populations and hospital settings. HAPIs increase the risk of death in vulnerable patient populations (Wassel et al., 2020). In addition, HAPIs cost healthcare agencies $9 to $11 billion annually (Padula & Pronovost, 2018). Inconsistent completion and documentation of the patient's skin assessments both upon admission and daily throughout their hospital stay are identified barriers to improving patient outcomes. Implementing a Two Nurses, Four Eyes on Skin Assessment model upon admission and daily during the patient's stay will decrease the incidence of hospital-acquired pressure injuries.

Purpose: The purpose of this Doctor of Nursing (DNP) project is to decrease the incidence of hospital-acquired pressure injuries (HAPIs) by implementing a Two Nurses, Four Eyes on Skin Assessment model. The goal is to initiate a Two Nurses completion of the skin assessment within four hours of admission and every day thereafter. The strategy's aim is to identify pressure injuries existing at admission and to discern the early onset of pressure injuries to prevent the development of HAPIs in medical-surgical patients.

Methods: The quality improvement project facilitated a team approach to include a Two Nurses, Four Eyes on Skin Assessment model within four hours of admission and a daily skin assessment during the patient's hospital stay to decrease the incidence of HAPIs in medical-surgical patients.

Results: One hundred fifty-one patients were admitted to the medical-surgical department over an eight-week period. In the post-phase, 11 patients met the inclusion criteria of a Braden Scale score of 12 or less. Within four hours of admission, 100% of the patients had received a Two Nurses, Four Eyes on Skin Assessment. In addition, 100% of the patients received a daily, Two Nurses, Four Eyes on Skin Assessment until discharge. Eighty-five percent (9) of the patients

were identified with a pressure injury on admission. One hundred percent of the patients admitted to the DNP project were discharged without a HAPI, including the nine patients admitted to the medical-surgical department with pre-existing skin breakdown.

Conclusion: Hospital-acquired pressure injuries decreased after implementing a Two Nurses, Four Eyes on Skin Assessment model on a medical-surgical unit. In addition, pre-existing or present-on-admission skin injuries were more frequently identified. Hospital-acquired pressure injuries will likely decrease with continued education and implementation of this evidence-based strategy.

Keywords: pressure injury prevention, pressure injury bundles, Two Nurses assessments, hospital-acquired pressure injuries, Braden Skin Assessment Tool, nosocomial infections, stage three pressure injuries, stage four pressure injuries

Acknowledgments

First and foremost**,** I want to thank God for blessing me to successfully obtain my doctoral degree. I want to thank my wonderful husband, Curtis and my beautiful daughters, Kennedi and Morgan. They support and encourage me to achieve my goals and aspirations. I want to thank my chair and preceptor, Dr. Lynnette Lewis Djonret-Hall and Dr. Joseph Cook. They were supportive, patient, and always available to assist me when needed. I'm incredibly grateful for the faculty members of Jacksonville State University. I will use the knowledge and skills that I obtained to advance the nursing practice. I want to extend a heartfelt thank you to the healthcare team, executive leaders, and stakeholders that supported my DNP project. They made it possible for me to have a successful project and positively impact patient outcomes.

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The Use of Two Nurses, Four Eyes on Skin Assessments to Reduce the Incidence of Pressure Injuries in Medical-Surgical Patients

Hospital-acquired pressure injuries (HAPIs) negatively impact hospital organizations and patient outcomes. Patients with HAPIs experience increased pain, risk of infection, surgery, and a prolonged hospital stay. In addition, HAPIs increase the risk of death in vulnerable patient populations (Wassel et al., 2020). According to the Agency of Healthcare Research and Quality (AHRQ, 2018), pressure ulcers cause the deaths of roughly 60,000 patients every year. HAPIs also increase the financial burden of hospitals, as many organizations have paid exorbitant settlements to patients who developed these injuries while in their care. In fact, the AHRQ (2018) found that over 17,000 lawsuits annually are related to pressure ulcers. Padula and Pronovost (2018) state that HAPIs cost the United States (U.S.) health systems at least $9-$11 billion annually. Therefore, it is vital for the healthcare system to implement proven strategies to prevent HAPIs.

The absence of pressure injuries in hospitalized patients reflects quality nursing care delivery. High-reliability organizations consistently demonstrate the ability to meet or exceed national benchmarks. According to Bonser (2022, para. 2), “A high-reliability organization (HRO) is an organization with predictable and repeatable systems that support consistent operations while catching and correcting potentially catastrophic errors before they happen.” Implementing a standardized Two Nurses, Four Eyes on Skin Assessment model will decrease the incidence of pressure injuries among medical-surgical patients.

The purpose of this project is to improve the incidence of HAPIs in medical-surgical patients admitted at a community-based hospital in Alabama. The organization has seen a significant increase in HAPIs over the last two years. On average, HAPIs occur 10-21 days after

admission to the organization and among patients 50-70 years old. In addition, the hospital's Quality department reported a significant number of patients were found with stages three and four pressure injuries only two to three days after admission. Implementing a Two Nurses, Four Eyes on Skin Assessment model will decrease the incidence of HAPIs at this organization.

Background

Pressure ulcers are a growing problem in healthcare. The AHRQ (2018) estimates that more than 2.5 million U.S. people develop pressure injuries yearly. The community-based hospital in this study has seen a significant increase in the incidence of pressure injuries over the last two years, and, according to the health system's quality scorecard, the organization's pressure injury rate is higher than that of the two other hospitals in the health system. In fact, the hospital's recent quality metric report revealed that the organizational HAPI rate is 124 pressure injuries per 1000 patient days. The national benchmark is 99 pressure injuries per 1000 patient days (AHRQ, 2018).

The organizational HAPI team, departmental managers, and the Quality team are responsible for completing monthly reviews of all HAPIs. A review of 25 patient records over two months by the healthcare team indicated that only 50% of the present-on-admission (POA) and daily skin assessments were completed correctly, and the nursing staff completely omitted 40% of the POA forms. This data shows that the healthcare team often misses POA pressure injuries and the early onset of skin breakdown.

The hospital's current process for admission and daily skin assessments relies solely on the performance of the assigned nurse. The assigned nurse is responsible for completing the skin assessment upon admission and for documenting it within the electronic medical record (EMR). According to the hospital's admission policy, nurses must complete the POA skin assessment

within 24 hours of admission. Having a second nurse assist in completing the admission and the daily skin assessments would improve completion rates and accuracy.

Needs Analysis

HAPIs negatively impact national and local statistics because they increase the risks of infection and of prolonged patient hospitalization, negatively impacting patients' quality of life. Pressure injuries are a hospital safety concern, and organizational strategies and toolkits are vital to decrease pressure injuries in the hospital setting (AHRQ, 2018). However, pressure injuries are easily preventable when evidenced-based practices are successfully implemented to minimize risks. The hospital's healthcare team and senior leaders recognize the missed opportunities and support the DNP project to improve the organization's pressure injury rate.

The DNP student conducted an analysis of the strengths, weaknesses, opportunities, and threats (SWOT) to determine the feasibility of the DNP project. The SWOT analysis evaluates the internal and external threats and attributes of the phenomenon of interest (Teoli et al., 2020). In addition, a SWOT analysis tool "provides an opportunity to better understand an issue within the context of a population and setting prior to developing a project" (Bonnel & Smith, 2018, p.52). Strengths of the DNP project include having an engaged and multi-disciplinary team, active stakeholders, no additional cost to implement the proposed strategies, and the hospital's virtual nurse platform to help support the bedside team with implementing the identified strategies. The weaknesses are related to the limited time to initiate, revise, and assess the project's outcomes. The DNP student must conduct frequent audits and team meetings to ensure accuracy and validate results. Opportunities pertain to limited electronic tools to help facilitate data compilation and auditing. The DNP student will work with the informatics teams to create an audit tool to facilitate information gathering, auditing, and sharing among the healthcare team.

Threats to achieving positive outcomes include the limited number of core staff due to vacancies and the increased volume of high-acuity patients requiring extended admission. Virtual nurses are a component of the hospital staffing model and will assist with supporting the bedside nurses throughout the project. The results of the completed SWOT analysis support the implementation of the DNP project and alert the DNP student of potential barriers. Understanding the barriers allows the DNP student to implement strategies to ensure valid results.

Problem Statement

The purpose of this project was to determine if implementing a Two Nurses, Four Eyes on Skin Assessment model would reduce the incidence of HAPIs versus the current one nurse approach in place. The Wound and Ostomy Team currently reports 15-20 new pressure injuries monthly across all medical-surgical units. The team's goal is to decrease this rate over eight weeks. A significant gap exists in the practice of proper assessment protocols due to the lack of consistent nursing staff, which stems from high nurse turnover rates and vacant positions. The organization's current registered nurse (RN) vacancy rate is 45%. As a result, vacant shifts are supported by travel nurses, and core bedside nurses are constantly required to work extra shifts. These recent trends are contributing to inconsistencies in skin assessments.

The DNP project occurred in the 5 North Medical-Oncology department. According to the hospital's Wound and Ostomy Team, the 5 North Medical-Oncology department has the highest HAPI rate among the medical-surgical departments. The DNP student's strategies include improving standard work by implementing a Two Nurses, Four Eyes on Skin Assessment model for admission and daily skin assessments. According to a survey by the Academy of Medical-Surgical Nurses (2021), the participating unit sustained zero incidences of HAPIs for eight months after implementing a standardized, Two Nurses, Four Eyes on Skin

Assessment model. The Two Nurses assessment strategy improved the identification and treatment of POA pressure ulcers and early skin breakdown in long-term care patients.

The health system has incorporated a virtual nurse platform to help support the frontline nursing staff. The virtual nurse platform is a long-term strategy of the Chief Nursing Officer to help stabilize and support the bedside nurse. As a result, the DNP will include virtual nurses in the Two Nurses, Four Eyes on Skin Assessments as needed. Nurses received education on skin assessments and were provided with a pre-test to verify competency on the strategies. Chart audits were completed weekly and reviewed with the team. A weekly scorecard was implemented, and the results were reported to the healthcare team and the hospital's executives. The following clinical practice question has been formatted into a population, intervention, comparison, and outcomes format.

PICOT Question

In medical-surgical patients, will utilizing a Two Nurses, Four Eyes on Skin Assessment model for admission and daily skin assessments, compared with using a one nurse approach, reduce the incidence of HAPIs over eight weeks?

Aims and Objectives

The aim of the DNP quality improvement project is to implement an evidenced-based project to decrease HAPIs in medical-surgical departments. The medical-surgical nurses will implement a Two Nurses, Four Eyes on Skin Assessment tool to identify present-on-admission skin breakdown within four hours of admission and daily skin assessments to prevent HAPIs. They will demonstrate accurate skin and Braden Scale assessments and successfully document their findings in the electronic medical record. The medical-surgical nurses will demonstrate improved competence of HAPI prevention strategies as a result of ongoing education.

Literature Review

Hospital-acquired pressure injuries (HAPIs) are a growing concern of many healthcare organizations in the U.S. HAPIs negatively impact patients and healthcare organizations. The following literature review was conducted to answer the PICOT question, in medical-surgical patients, will using a Two Nurses, four eyes on skin assessment model for admission and daily skin assessments, compared with a one nurse approach, reduce the incidence of HAPIs over eight weeks? The DNP student used the following search terms: pressure injury prevention, pressure injury bundles, Two Nurses assessments, hospital-acquired pressure injuries, Braden Skin Assessment Tool, nosocomial infections, medical-surgical unit, comorbidities, and pressure injuries in medical-surgical patients. The databases searched were CINIHAL, Cochrane, Google Scholar, and PubMed using master headings and MeSH. The search resulted in an abundance of studies related to reducing pressure injuries. The DNP student used MeSH and the inclusion criteria to include articles published in the last five years, available in full text and abstract, peer-reviewed, and evidence-based to obtain 225 potential sources.

The articles in the literature review were chosen because of their applicability to the DNP project. Research findings demonstrated that comorbidities, such as cardiac, pulmonary, and respiratory diseases, advanced age, and nutritional deficits, increase the risk of HAPIs in patients. In addition, studies indicate that the Braden Scale can be an effective risk assessment tool when partnered with additional preventive measures, such as a skin assessment. The Two Nurses, Four Eyes on Skin Assessment process is highlighted in three peer-reviewed articles as an effective strategy to reduce HAPIs. Nurses must possess the skills and competencies in pressure injury prevention to positively impact patient outcomes. The findings also supported nursing education and provides insight into effective strategies for educating nurses.

Population of Interest and Comorbidities

A one year, national cross-study comprising 15 hospitals, 503 units, and 5,902 participants reported that the risk of HAPIs increased among older medical patients, immobile patients, and obese patients (Tervo-Heikkinen et al., 2022). Comorbidities, advanced age, immobility, and prolonged hospital admission were also found to significantly increase the risk of HAPIs (Tervo-Heikkinen et al., 2022). Specifically, patients with hypertension, diabetes, and renal failure were more likely to exhibit HAPIs, as were those patients diagnosed with genitourinary, respiratory, and circulatory diseases (Tervo-Heikkinen et al., 2022). Jaul et al. (2018) conducted a systematic review to determine if advanced chronic illness increased the risk of HAPIs. Jaul et al. (2018) asserted that patients presenting with chronic cardiovascular and pulmonary diseases and with nutritional insufficiencies were at an increased risk of skin breakdown and delayed wound healing. Compromised patients are at a higher risk for HAPIs, which are sometimes unavoidable due to the advanced disease process (Jaul et al., 2018; Tervo-Heikkinen et al., 2022). An observational study conducted by Stoltenburg et al. (2021) found that surgical patients demonstrated an increased pressure injury rate compared to other specialties. The study was conducted in six medical, surgical, and neurological units among 332 participants. Stoltenburg et al. (2021) reported that the risk of pressure injuries increased among patients with prolonged hospitalization, advanced age, connective tissue diseases, hypertension, and cerebral hemorrhage.

Intervention

Several peer-reviewed academic journals reported that implementing a Two Nurses, Four Eyes on Skin Assessment model in a medical-surgical unit increased confidence in skin assessment, documentation, and care plan development (Academy of Medical-Surgical Nurses,

2021; LeBlanc & Morrow, 2020; Spader, 2018). In addition, the Two Nurses, four eyes on skin assessment strategy improved the identification and treatment of POA pressure ulcers and identified early skin breakdown in long-term care patients. The Two Nurses, four eyes on skin assessment model also improved teamwork and team engagement (LeBlanc & Morrow, 2020). Implementing a Two Nurses, four eyes on skin assessment process on a burn unit reduced the incidence of pressure injuries by 7.32% in burn patients over a four-month timeline (Klecka et al., 2019). Studies indicate that the initiation of a Two Nurses, four eyes on skin assessment within four hours of admission or transfer to a medical-surgical unit facilitates the identification of pressure injuries on admission and expedites the implementation of pressure injury prevention strategies (Medline, 2019).

A risk assessment is vital to decreasing hospital-acquired pressure injuries (Huang et al., 2021; Li et al., 2021). The most effective risk assessment tool accurately identifies those patients at risk for and those patients not at risk for pressure injuries (Huang et al., 2021). An observational study by Li et al. (2021) suggested using a reliable risk assessment tool, such as a Braden Scale, Norton Scale, or Waterlow Tool, to help identify at-risk patients. However, the data supporting the use of risk assessment tools alone was inconclusive. The authors recommended using an admission and a daily skin assessment in combination with the Braden Scale to ensure positive patient outcomes (Li et al., 2021). Conducting comprehensive skin assessments and using the Braden Scale identified pre-existing pressure injuries and discerned patients at risk for pressure injuries (Huang et al., 2021; Li et al., 2021). The findings of these studies support using both the Braden Scale score for inclusion criteria and a Two Nurses, four eyes on skin assessment model to reduce the incidence of pressure injuries in medical-surgical patients.

Expanding Nursing Knowledge

Nurses must receive education on pressure injury prevention and skin assessments to ensure the project's success. Kim et al. (2020) reviewed the effectiveness of training programs to improve nurses' ability to manage pressure injuries. The systematic meta-analysis study indicated that nurses who received pressure injury training produced more favorable outcomes than nurses who did not receive training (Kim et al., 2020). Nurses must be competent and trained to achieve positive patient outcomes (Alshahrani et al., 2021). In addition, this systematic study validated the need for pre- and post-testing to ensure competency. A systematic and meta-analysis review by Dalvand et al. (2018) indicated that nurses lack knowledge on pressure injury prevention and that knowledge deficits negatively impacted the nurses' performance. The authors encouraged providing nurses with focused education and training on pressure injury prevention to improve patient outcomes (Dalvand et al., 2018).

Summary

The literature synthesis supports that patients with comorbidities are at a higher risk for pressure injuries. The Two Nurses, Four Eyes on Skin Assessment model is validated in the literature as a valuable tool that decreases pressure injury rates, increases nurse confidence, and improves teamwork. In addition, studies indicate that the Braden Scale effectively identifies patients at risk for pressure injuries. Lastly, nurse education is recognized as an essential component in successfully reducing pressure injuries. The literature review validates that the above strategies are effective and will successfully support the DNP Project.

Theoretical Framework

The DNP student used Dr. Patricia Brenner's high middle range theory, Novice to Expert theory, to guide and support the DNP project. The Novice to Expert theory supports and provides

relevance to the current DNP project. Dr. Brenner's theory provides the foundation to facilitate an environment that fosters collaboration and teamwork. Dr. Brenner's Novice to Expert theory asserts that nurses develop skills and knowledge over time. Dr. Brenner describes this as a nurse "knowing how" without "knowing that" (Murray et al., 2019). Dr. Brenner's theory incorporates five nursing experience levels: novice, advanced beginner, competent, proficient, and expert. In the novice stage, nurses are clinically inexperienced and have no practical background experience. The advanced beginner nurse requires the assistance of experienced nurses for patient care. In the competent stage, nurses develop new clinical skills for managing patient care and begin to incorporate ethical behaviors. At the proficient stage, nurses demonstrate the ability to change situations, displaying professional growth. Brenner's development to the expert stage asserts that nurses expand clinically and ethically as they progress (Murray et al., 2019). Expert nurses, the most accomplished nurses, are commonly leaders with advanced certifications and can implement positive changes in patient care. The expert nurse possesses excellent team-building skills. Each phase builds on the previous stage as the nurse reaches the expertise level. According to Brenner's theory, with education, mentorships, and time to improve practice, nurses can positively impact changes to better patient and team outcomes.

Dr. Patricia Brenner's theory was formulated in 1982 and has proven over time to be valid and reliable. Healthcare systems across the nation have used her theoretical framework. The approach has been instrumental in developing nurse residency programs, improving patient outcomes, and supporting education for novice nurses and nurse leaders (Murray et al., 2019). A study conducted by Dzioba et al. (2022) shows that Dr. Patricia Brenner's Novice to Expert theory successfully prepared nurses for delivering care through telehealth at the height of the

Covid-19 pandemic. Brenner's theory is relevant for today's practice and can successfully guide the DNP student's project.

Dr. Brenner's Novice to Expert theory provides structure and guidelines to support the DNP project. The healthcare team identified knowledge deficits related to a lack of education, teamwork, and standardized practices. The Novice to Expert theory supports the strategy to provide education for the nursing team to address the lack of knowledge related to skin assessments and documentation. Nurses require experience to develop effective nursing practices. The DNP student incorporated in-depth in-services and provided educational opportunities to the assigned population. The nursing team was provided a pre-test to assess competencies, and daily audits were completed to evaluate outcomes. The nursing team members were provided the Pressure Injury Educational Sheet created by the DNP student (Appendix A) that highlights the purpose and strategies of the project. In addition, the nursing team received face-to-face education as needed to ensure the continued growth of the nursing team and positive patient outcomes. Expert nurses possess a broad vision and can initiate changes that encourage teamwork and improve patient outcomes. As the nurse advances from novice to expert, the collaboration will improve among the care team. These strategies are supported by Brenner's theory and will help eliminate the identified deficits in the current clinical practices.

Nursing theory-guided practice helps improve patient outcomes because it allows nurses to articulate what they do for patients and why they do it (Younas & Quennell, 2019). Nursing theories facilitate trusting nurse-patient relationships that improve communication and patient care. The DNP student's project is to improve the incidence of HAPIs in at-risk patients admitted to the medical-surgical departments at a Level Two-Trauma, 492-bed facility in a busy metropolitan area. Chart reviews completed by the healthcare team have identified gaps in

accurately completing the admission and daily skin assessment documentation. The DNP project requires the admission skin assessment to be completed daily and within four hours of hospital admission. The nursing team has communicated that the significant barriers contributing to the gaps in care result from the lack of staff, a lack of education related to skin assessments, and the general lack of teamwork. The DNP student must implement a strategy that will consistently support standardized work practices, ongoing education, and collaboration among the nursing team. As a result, the DNP student implemented a Two Nurses, Four Eyes on Skin Assessment model to answer the PICOT question and determine if the model for admission and daily skin assessments will reduce the incidence of HAPIs in medical-surgical patients, when compared to a one nurse approach, over a period of eight weeks.

Methodology

The DNP project is a quantitative, quality improvement project aimed to decrease the incidence of pressure injuries in medical-surgical patients. The DNP student used the pre-post design. In a pre-post design, observations are made before and after each intervention and implemented over a specified time (Miller et al., 2020). In addition, the pre-post design allows for simplicity in data collection and lower associated costs, and it is less challenging to implement than other designs (Handley et al., 2018). The goal of the project is to reduce the incidence of hospital-acquired pressure injuries (HAPIs) in at-risk patients admitted to the medical-surgical department. The primary intervention of this project is to implement a standardized Two Nurses, Four Eyes on Skin Assessment model to reduce the incidence of HAPIs in medical-surgical patients over eight weeks. This DNP project assumes that the Two Nurses, Four Eyes on Skin Assessment model will reduce the incidence of pressure injuries in medical-surgical patients.

Two nurses conducted a skin assessment within four hours of admission to capture skin breakdown at admission. Two nurses also conducted a daily skin assessment throughout the patient's hospital stay to identify early skin breakdown in long-term patients. Virtual nurses employed by the hospital were permitted to be the second nurse to assist with completing skin assessments. The DNP student used collected, quantitative data to define the participants' inclusive criteria.

In addition, quantitative data was used to evaluate the project's outcomes. The DNP student collaborated with the Nursing Informatics department to create an audit tool to record the data. The audit tool included a list of the patients admitted with a Braden score of 12 or less, the number of patients that developed HAPIs and exhibited POA injuries, and the number of patients that received the initial four-hour admission and daily skin assessments. The data was documented in each patient's EMR to ensure the privacy and security of the patient's health information. The DNP student conducted daily audits using a tool they created to validate the completion of the skin assessments and assess the incidence of HAPIs (Appendix B). Outcomes were measured by evaluating the percentage of diagnosed HAPIs. The audit tool allowed the DNP student to gather data that described the numerical outcome of the intervention. It also enabled the DNP student to make a numerical comparison (Appendix C, D, and E) between the pre-phase data and the post-phase data to discern the impact of the DNP project. The DNP student then analyzed the data to determine if the HAPI rate decreased among the patients assessed by two nurses, versus those patients that were assessed by one nurse.

Setting

The DNP project was implemented in the hospital's 5 North Medical-Surgical/Oncology Unit. Five North is a 36-bed, medical-surgical/oncology department that is staffed with RNs and

patient care technicians. The department ended the fiscal year 2022 with 50 HAPIs, which exceeded the facility's seven remaining medical-surgical departments by greater than 50%.

Population

The population of interest was patients admitted to the 5 North Medical-Surgical/Oncology department from February 2023 – March 2023 with a Braden score of 12 or less. Nurses who worked on the unit during that same period were included in the DNP project. The staff roster during the DNP project consisted of 30 nurses that participated in direct patient care in the department.

Inclusion/Exclusion Criteria

Inclusion criteria for patients were those individuals admitted to the 5 North Medical-Surgical/Oncology department during the eight-week project period with a Braden Scale score of 12 or less. Patients exhibiting a Braden Scale score greater than 12 were excluded from the study. All licensed nursing staff, including virtual nurses, on the selected inpatient medical-surgical unit was included in the DNP project. The DNP student posted flyers (Appendix F) to advertise in-person meetings in the departmental break room that were held to recruit and educate participants. The exclusion criteria for the staff were all unlicensed nursing personnel.

Ethical Consideration

The DNP student ensured ethical principles were applied to protect all participants in the DNP project. The DNP student attended the Collaborative Institutional Training Initiative (CITI) online course (Appendix G) to ensure an understanding of the importance of protecting human participants in the DNP project. In addition, the DNP student completed the Institutional Review Board (IRB) process for both the university (Appendix H) and the hospital (Appendix I) before implementing the project. There was minimal risk for participants in the project related to

maintaining the confidentiality of the participant's identity and patient information. The DNP student implemented measures to ensure the privacy of all participants. Participants included in the project were randomly assigned a unique number to identify them to ensure their privacy. The patient's data was stored in the patient's EMR. The DNP student worked with the hospital's Informatics and Technology department to create an electronic audit tool that existed in the hospital's intranet server. The use of a unique patient identifier was used to protect the patient's identity and health information. In addition, a personalized username and password were required to access pertinent files.

Consent

Participants were provided with educational materials to explain the identified problem, the current gaps in clinical practice, and the proposed intervention to yield positive outcomes. In addition, the participants received informed consent paperwork (Appendix J) before participating in the DNP project. Participants were fully informed that participating in the DNP project was voluntary. Participants were informed that they could decline participation at any time during the DNP project and would not suffer any retaliation, retribution, or harm. The DNP student followed the organizational and IRB guidelines to ensure ethical compliance for all participants.

Design

The Plan-Do-Study-Act (PDSA) Cycle supported the DNP project. According to Lincoln et al. (2022), the goal of the "Plan" phase is to define the project's goal. The "Do" phase represents the implementation of the plan. The "Study" phase aims to evaluate and determine if the intervention improved outcomes. The "Act" phase facilitates the dissemination of positive findings and results throughout the institution or organization (Lincoln et al., 2022). The PDSA Cycle provided structure and guidance to the DNP project.

In the Plan phase, the DNP student met with the departmental nursing team to inform them of the increasing number of HAPIs in the department and to propose the Two Nurses, Four Eyes on Skin Assessment model to improve patient outcomes. During this phase, the nursing team was at the novice to advanced beginner stage of knowledge and understanding of the DNP project. The DNP student used Dr. Patricia Brenner's Novice to Expert theory to support the planning phase of the DNP project. The nursing team members were informed of the plan to implement the Two Nurses, Four Eyes on Skin Assessment model to decrease HAPIs in the department. The nursing team was encouraged to ask questions to ensure their understanding of the project. In addition, the DNP student collaborated with the Nursing Informatics team to create an audit tool to ensure the accuracy of the information throughout the project. Dr. Brenner's Novice to Expert theory asserts that nurses develop skills and knowledge over time (Murray et al., 2019). As a result, the DNP student collaborated with the hospital educators to create a one sheet educational tool and a pre-survey to validate competency. The participants were provided education and feedback throughout the project to ensure understanding.

The Do phase involves the implementation of the project. The primary intervention of the DNP project is to implement a standardized Two Nurses, Four Eyes on Skin Assessment model to reduce the incidence of HAPIs. Two nurses conducted an admission skin assessment on patients with a Braden Scale score of 12 or less within four hours of admission to capture skin breakdown that is present-on-admission (POA). Two nurses also conducted a daily skin assessment throughout the patient's hospital stay to identify early skin breakdown in long-term patients. The nurses documented the patient's skin assessment and the Braden Scale score in the EMR. To be considered competent, nurses in this phase had to score a minimum of 85% on the post-survey. Nurses in the competent stage developed new clinical skills and began to

incorporate ethical behaviors (Murray et al., 2019). Dr. Brenner's Novice to Expert theory supported the strategy to provide education and pre-post testing for the nursing team to address the lack of knowledge related to skin assessments and documentation.

During the Study phase, the DNP student observed and evaluated outcomes before and after the primary intervention over a period of eight weeks. The DNP student conducted daily audits to validate the completion of the skin assessments and to assess the incidence of HAPIs. The audit tool enabled the DNP student to make a numerical comparison of the impact of the DNP project. The DNP student worked with a statistician to validate the findings throughout the project. At this phase, nurses were considered proficient because of their ability to implement change to improve patient outcomes successfully. According to Murray et al. (2019), proficient nurses demonstrate the ability to change situations, exhibiting professional growth. Proficient nurses possess the skills to provide feedback on any identified barriers impacting the project outcomes (Murray et al., 2019). The DNP student conducted frequent meetings with the healthcare team to review and validate the results of the audits. The healthcare team's feedback and input were crucial to the project's success.

Expert nurses were essential in the Act phase of the DNP project. Expert nurses possess a broad vision and can initiate changes that encourage teamwork and improve patient outcomes (Murray et al., 2019). As the nurses advanced from novice to expert, collaboration improved among the care team. With favorable results and supporting evidence, the intervention could potentially be implemented into practice. The DNP student disseminated the Two Nurses skin assessment model across all the medical-surgical units to standardize practice and ensure quality patient outcomes. The expert nurses were encouraged to participate as HAPI champions to assist with implementing the Two Nurses skin assessment model throughout the organization. These

strategies were supported by Brenner's theory and helped eliminate the identified gaps in the current clinical practices. The benefits of this plan included decreasing the incidence of HAPIs among medical-surgical patients, advancing nursing knowledge of skin assessments, and improving team engagement and collaboration among the healthcare team. The disadvantage of the plan was related to changes in staff. The project's long-term success will require a persistent culture change among team members and physicians. The DNP student will continue to work with the hospital executives, physicians, and team members to help facilitate the transition into practice.

Compensation

Participants were not compensated for participating in the project.

Timeline

The DNP student partnered with Jacksonville State University (JSU) and the community-based hospital to ensure the timely completion of required milestones related to the DNP Project (Appendix K). The student obtained a preceptor, explored the phenomenon of interest for the DNP project, and met with stakeholders during the summer 2022 semester. The DNP project was presented to JSU faculty and the facility stakeholders. Recommendations were provided and incorporated into the DNP project to ensure successful outcomes. The DNP student worked with JSU and the hospital during the summer and fall semesters of 2022 to complete the IRB requirements. In addition, the student collaborated with all stakeholders during the fall 2022 semester to explore the project's objectives, theories, tools, and methodology. The student defined the inclusion and exclusion criteria and the theoretical frameworks during the fall 2022 semester. The DNP student successfully received approval from the Jacksonville State University IRB in October 2022 to proceed with the DNP project. The student implemented the

DNP project in February 2023. The DNP project was implemented over a period of eight weeks. The student partnered with the hospital's quality and informatics teams to review the project's findings. The DNP student disseminated the project's preliminary findings to all stakeholders during the spring semester. In the summer 2023 semester, the student will submit the project's results to JSU and prepare for graduation.

Budget and Resources

No cost was added to the organization or the participants related to the DNP project. The overall budget for the DNP project was $500. The resources utilized in the project were printed materials for recruitment and education, breakfast items for the educational in-services, and a thank you luncheon at the conclusion of the project. Ultimately, the project remained within the estimated budget. See (Appendix L) for an outline of the project's budget.

Evaluation

Statistical Consideration

The DNP student used a binominal test with a pre-post design. Descriptive statistics were used to determine the efficacy of the interventions. The nature of the dependent variable, hospital-acquired pressure injury, is a binominal variable type. In this quality improvement project, the pre-phase and post-phase were compared in terms of the HAPI rates. As a result, the binominal test is the appropriate test statistic. The advantage of the binominal test is that it compares the proportions or rates between two groups. According to the results, the pre-and post-phases were significantly different (Appendix M), with an 85% HAPI rate for the pre-phase and a 0% HAPI rate in the post-phase ($p<0.001$). The p-value represents the likelihood that the test demonstrates statistically significant differences between the pre-and post-phases regarding the HAPI rate (Laerd Statistics, 2020). A statistician validated the results of the DNP project.

Data Maintenance and Security

The method of data recording was obtained through data entry upon completion of daily chart reviews. The patient's information was documented on an audit tool and secured in a locked office. All participants in the project received a unique identification number to protect the patient's health information. All patient information will be destroyed after the project is completed.

Results

Results of Chart Review and Daily Audit

Prior to implementing the Two Nurses, Four Eyes on Skin Assessment model, the medical-surgical nurses received the Pressure Injury Educational Sheet to ensure their understanding of the DNP project. All participants completed a hospital-required, computer-based, learning module on pressure injury prevention prior to implementing the quality improvement project, and they all received a passing score of 85% or higher prior to participating in the DNP project.

Chart audits and reviews indicated that 151 patients were admitted to the medical-surgical department during the eight-week DNP project. Eleven of the 151 patients met the inclusive criteria of a Braden score of 12 or less. Prior to the project's implementation, chart audits revealed that 50% of POA pressure injuries were not captured by the assigned nurse. However, during the post-phase of the project, 100% of the patients received the Two Nurses, Four Eyes on Skin Assessment within four hours of admission (Appendix N), and 82% (9) of the patients were found to have pressure injuries upon admission (Appendix O). Chart audits from the pre-phase indicated that 85% of the patients with a Braden score of 12 or less developed a HAPI, whereas those from the post-phase revealed that 100% of the patients who received a

daily, Two Nurses, Four Eyes on Skin Assessment were discharged without a HAPI, even if they were found to have evidence of skin breakdown upon admission. According to the results, the pre- and post-phases were significantly different from each other: 85% HAPI rate for pre-phase patients, and 0% HAPI rate among the post-phase patients ($p<0.001$). Secondary data also revealed a decrease in the length of stay among the participants in the post-phase. The pre-phase average length of stay was 8.5 days, compared to 7.14 days for the post-phase (Appendix P). Although patients with a Braden score greater than 12 were not included in the study, 35 such patients were also found to have POA pressure injuries.

Discussion

The DNP student identified inconsistencies with the skin assessments and the Braden Scale scores during the early implementation phase. The DNP student partnered with the departmental nurse educator to employ real-time reviews of skin assessments, Braden Scale scores, and documentation in the EMR. Face-to-face education and feedback were provided to the bedside nurses. The nursing team was encouraged to ask questions and share any identified barriers. Staff education and frequent audits continued throughout the DNP project to ensure staff competency and understanding of the strategies. In addition, the DNP student conducted daily rounds to ensure leadership visibility. The DNP student attended the departmental daily safety huddles to answer questions and address any concerns from the team.

The DNP student's goal was to implement a Two Nurses, Four Eyes on Skin Assessment model within four hours of admission to identify pre-existing pressure injuries. In addition, Two Nurses, Four Eyes on Skin Assessments were completed daily to ensure the early identification of patients at risk for skin breakdown. The DNP student wanted to provide nurses with the education needed to accurately complete the skin and Braden Scale assessments and the

corresponding documentation in the EMR. A culture that encourages nurse education, nurse empowerment, and leadership support improves patient outcomes through the advancement of nursing practice.

Implication of Clinical Practice

The quality improvement project's goals were met by demonstrating a significant decrease in HAPIs in at-risk patients in medical-surgical areas. The evidence-based project demonstrated that a Two Nurses, Four Eyes on Skin Assessment, within four hours of admission can contribute to the early identification of POA injuries and can facilitate timely wound and ostomy consults. In addition, the daily, Two Nurses, Four Eyes on Skin Assessment model enables the early identification of at-risk patients and reduces the incidence of HAPIs, especially in medical-surgical patients. The study also indicated that frequent education, leadership visibility, and support are vital to promoting nurse competency and engagement. This creates a culture that encourages the early adoption of evidence-based interventions, increasing nurses' job satisfaction and improving patient outcomes.

The evidence-based project demonstrated positive trends in the reduction of HAPIs. The DNP quality improvement project supports guidelines for decreasing HAPIs in medical-surgical patients. The AHRQ (2018) reports that best practices in preventing HAPIs include standardized workflows and comprehensive skin assessments. Incorporating the Two Nurses, Four Eyes on Skin Assessment model into policy at the facility will enable the early identification, treatment, and prevention of HAPIs. The executive leaders, bedside nurses, and stakeholders have agreed to incorporate the Two Nurses, Four Eyes on Skin Assessment model into the hospital policy. The DNP student will work with the team to facilitate a successful implementation.

Nurses need continued education on pressure injury prevention to improve patient outcomes. Numerous studies have identified gaps in education and the understanding of pressure injury prevention. According to Gasper et al. (2019), nurses who receive education on pressure injury prevention achieve better patient outcomes and demonstrate increased confidence in patient care. The nurses participating in the DNP project received education before the implementation of the project, and yet frequent educational opportunities and validations during the project were still required to ensure staff competency and accuracy. The DNP student recommends implementing a comprehensive pressure injury educational program for all bedside nurses to improve the knowledge deficit and increase staff confidence before implementing the Two Nurses, Four Eyes on Skin Assessment model.

Limitations

There were several identified limitations of the DNP project. The study was conducted over eight weeks, which limited the opportunity to evaluate the Two Nurses, Four Eyes on Skin Assessment model over a longer period of time. In addition, the sample size was small and confined to one department. Lastly, staffing shortages were and continue to be a challenge on the unit. At the time of the study, travel nurses and other contracted staff comprised 60% of the departmental team. To mitigate this limitation, the DNP student completed frequent rounds to encourage and support the staff, provide education, and answer questions as needed.

Dissemination

The organizational executive team, Wound/Ostomy Coordinator, Shared Governance Councils, and the Director of Quality will determine if the results of the collected data support the continued use of the Two Nurses, Four Eyes on Skin Assessment model to reduce HAPIs. If the healthcare team agrees to the workflow change, it is imperative to involve the bedside nurse

in the process to ensure team engagement. In addition, staff education and leadership support and visibility will be required to ensure a successful implementation process.

Sustainability

The Two Nurses, Four Eyes on Skin Assessment model results are favorable. The executive leadership, Wound/Ostomy, and Quality teams support the project. The bedside nurses provided positive feedback related to the project. The nurses found value in the Two Nurses, Four Eyes on Skin Assessment model. The decrease in HAPIs in the unit encouraged the participants, and they requested to continue the Two Nurses Four Eyes on Skin Assessment model after the project's conclusion. The nurses communicated increased teamwork and a better understanding of pressure injury prevention. Unfortunately, staffing shortages remain a potential barrier that could impede their ability to be consistent with the Two Nurses skin assessments. The nurses communicated that leadership support helped to maintain alignment with the project's objectives and demonstrated commitment to improving patient outcomes through change. Including the thoughts and ideas of the bedside nurse increases buy-in and ensures the project’s sustainability.

Plans for Future Scholarship

The Two Nurses, Four Eyes on Skin Assessment model resulted in a decrease of pressure injuries in medical-surgical patients. However, further investigation is needed to validate the effectiveness of the strategies. The DNP student recommends implementing Wound Team Champions on every medical-surgical and intensive care unit, and in the Wound/Ostomy department to assist with implementation of the Two Nurses strategy. In addition, the DNP student recommends involving the departmental educators to assist with the education and

validation of staff competency levels. A multidisciplinary approach and leadership support will facilitate future scholarship and improve patient outcomes.

Conclusion

Hospital-acquired pressure injuries increase the risk of infection, pain, and death in high-risk patients (AHRQ, 2018). In addition, HAPIs increase costs for hospitals across the nation. The quality improvement project demonstrated a reduction of HAPIs in medical-surgical patients. The evidence-based strategy consisting of a Two Nurses, Four Eyes on Skin Assessment positively improves patient outcomes. The nurses in the department demonstrated improved competency related to skin and Braden Scale assessments, team engagement, and documentation in the medical record. In addition, leadership visibility was essential to the success of the project and helped to align and motivate the team. Implementing evidence-based strategies is congruent with the mission of the organization to provide patient-centered care that yields quality patient outcomes.

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Appendix A

Pressure Injury Educational Sheet

ALERT:
Two nurses will complete a skin assessment within four hours of admission and daily. Clearly document any wounds and their characteristics during this time. The quality improvement project timeline is from February 6, 2023 – March 30, 2023.

1. Perform hand hygiene before patient contact. Don appropriate personal protective equipment (PPE) based on the patient's need for isolation precautions or the risk of exposure to bodily fluids.
2. Introduce yourself to the patient.
3. Verify the correct patient using two identifiers.
4. Provide privacy for the patient.
5. Identify any patient characteristics that may be risk factors for pressure injury formation.
6. Perform the Braden Risk Assessment within four hours of admission to the department. Obtain the risk score and evaluate its meaning based on the patient's characteristics.
7. For patients with a Braden Score of 12 or less, two nurses will be responsible for completing a thorough admission and daily skin assessment within four hours of admission. The nurses will document the finding in the patient's electronic medical record (EMR). Assess the condition of the patient's skin over pressure points (Figure 1).
    a. Inspect for skin discoloration (e.g., redness in light-tone skin; purplish or bluish color in darkly pigmented skin) and tissue consistency (e.g., firm or boggy feel), and palpate for abnormal sensations.
    b. Palpate the discolored area for blanching.
    c. Inspect for pallor and mottling.
    d. Inspect for absence of superficial skin layers.
    e. Palpate for skin temperature differences (e.g., warmth or coolness).
8. Assess the patient for additional areas of potential pressure.
    a. Nares: nasogastric (NG) tube, oxygen cannula
    b. Tongue and lips: oral airway, endotracheal tube

c. Ears: oxygen cannula, pillow

d. Drainage tubes

e. Wound drainage

f. Indwelling urinary drainage catheter

g. Under orthopedic and positioning devices

9. Assess the patient's and the family's understanding of the risks for the development of pressure injuries.

10. When completing the skin assessment, observe for skin discoloration in any area that was under pressure when changing the patient's position. Use natural or halogen light sources when assessing for discoloration on a patient with darkly pigmented skin. **Avoid using fluorescent lighting because it gives a bluish tint to skin that interferes with accurate assessment of skin coloring.**

    a. A patient with light skin may have redness from initial flushing.

    b. A patient with darkly pigmented skin does not always have visible blanching; localized heat, edema, and changes in tissue consistency in relation to surrounding tissue (e.g., induration [hardness]) are important indicators of early pressure damage to the skin in individuals with darker skin tone. Please document in findings in the EMR. Consult the Wound and Ostomy Team.

11. Palpate any area of discoloration or mottling that was under pressure when changing the patient's position. Assess whether the involved area blanches with palpation or remains discolored or red. **Nonblanchable erythema or skin temperature changes may be an important early indicator of a stage 1 pressure injury. Do not massage any red or discolored pressure points**. Please document in findings in the EMR. Consult the Wound and Ostomy Team**.**

12. Apply a prophylactic dressing (e.g., polyurethane foam) to bony prominences (e.g., heels, sacrum) for the prevention of pressure injuries in areas frequently exposed to friction and shear.

13. Report to the practitioner the need for additional consultations (e.g., wound care specialist, dietitian) for the high-risk patient per the organization's practice.

14. **Document the Two Nurses skin assessment on the log provided and place it on the patient's chart. Please turn the form in to the Manager or Charge Nurse at discharge.**

Appendix B

Two Nurses, Four Eyes on Skin Assessment Model Audit Tool

Patient Identifier ____________________ __________________________

Admission Date ____________________ Time _______________________

Date/Time of Admission Skin Assessment ________________________________

- **Was the POA Skin Assessment completed within four hours of admission Y/N _______**
- **Nurse Initial _________ Nurse Initial ___________**

Date	Was the daily skin assessment completed by two nurses? Yes/No	Was any skin breakdown identified? Yes/No	Has the Wound and Ostomy Team been consulted? Yes/No	1st Nurse Initials	2nd Nurse Initials
Date:					
7a					
7p					
Date:					
7a					
7p					
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7a					
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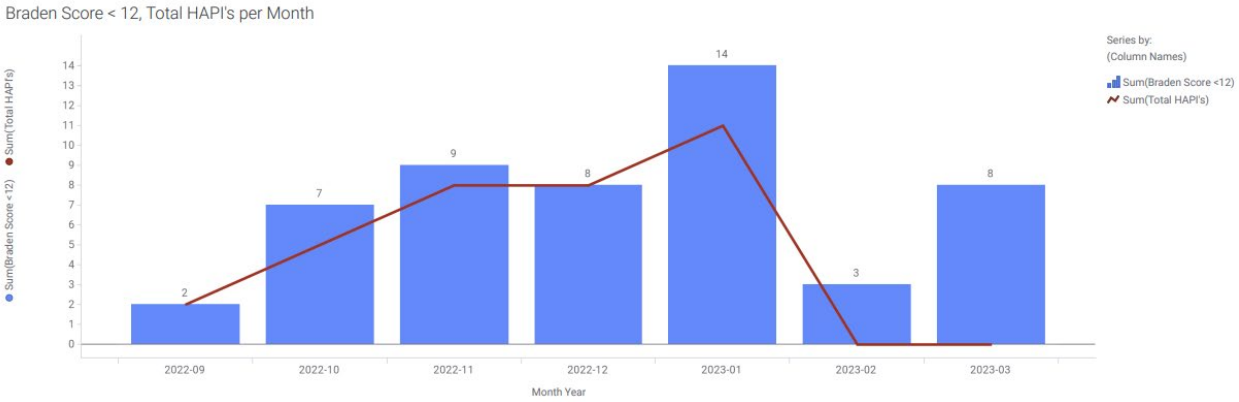
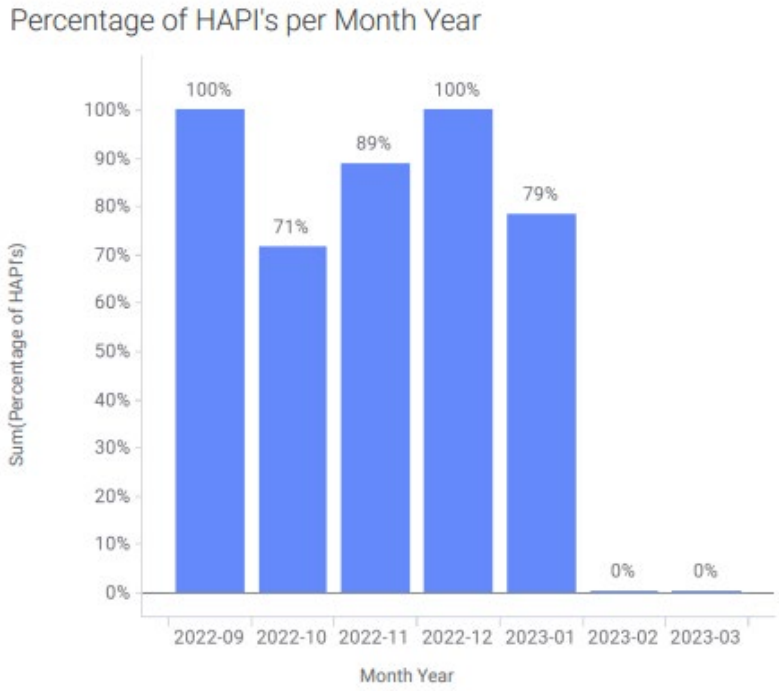
Appendix C

Reduction in Total HAPIs at 5 North Analysis



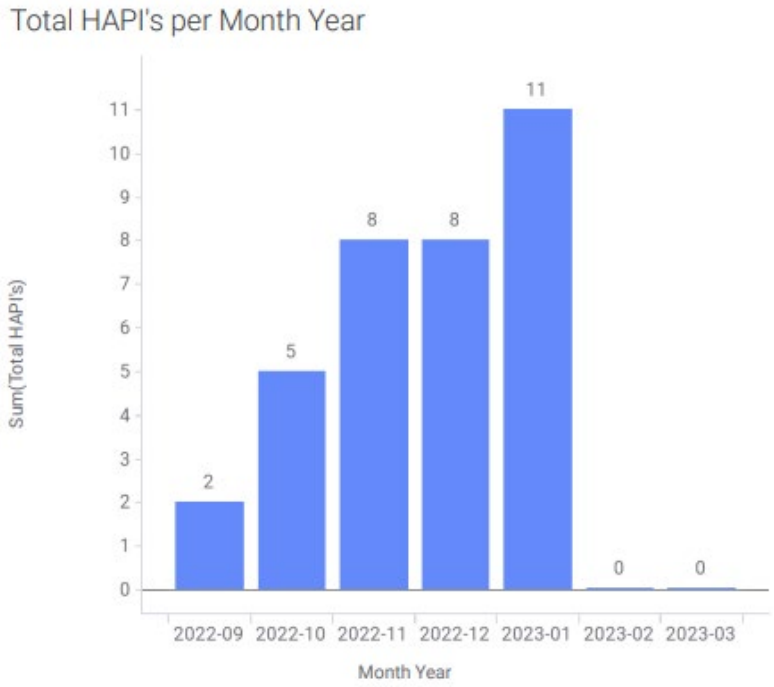
Appendix D

Percentage of HAPIs per Month Year at 5 North



Appendix E

Total HAPIs per Month Year at 5 North



Appendix F

Educational Session Recruiting Flyer

PRESSURE INJURY PREVENTION

A TEAM EFFORT

TOGETHER WE CAN STOP PRESSURE INJURIES

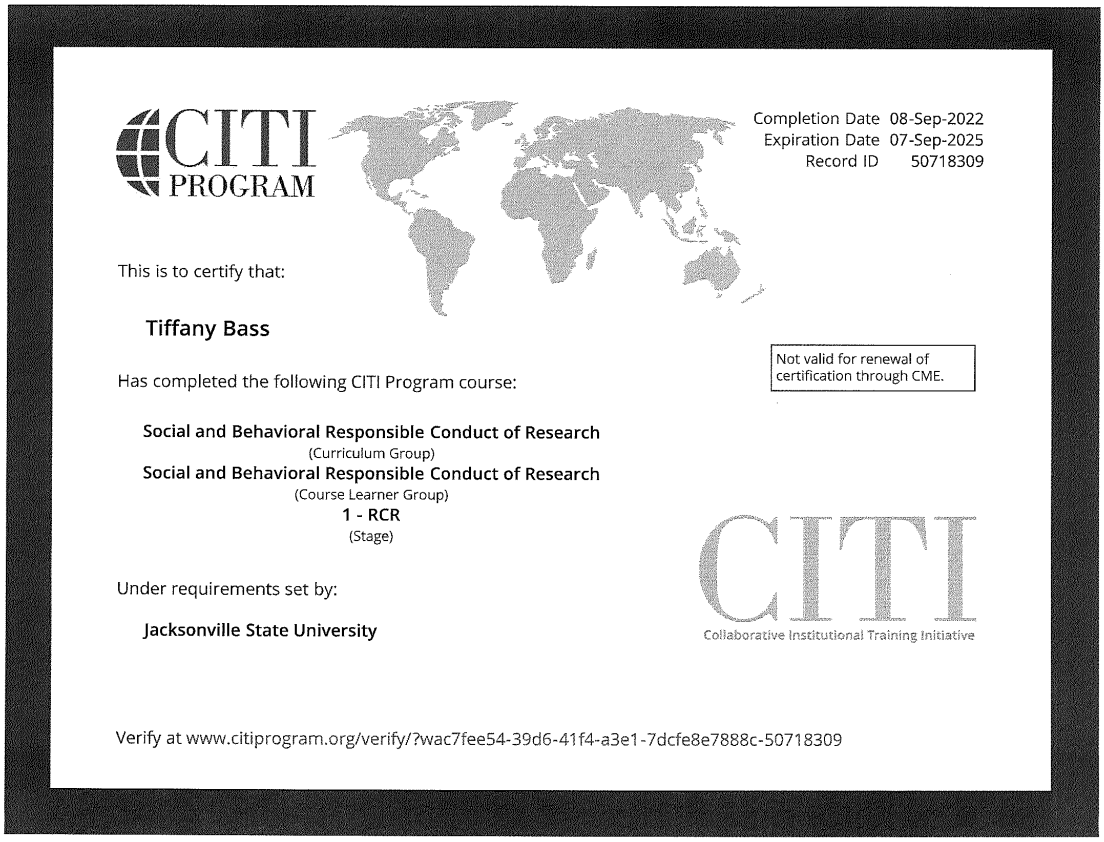
DATES:

IN PERSON MEETING (COFFEE AND MUFFINS PROVIDED)
TUESDAY, JANUARY 24, 2023
TIME: 7:00A- 8:00A
WHERE: 5 NORTH'S BREAKROOM
WHO: ALL 5 NORTH LICENSED STAFF

WEDNESDAY, FEBRUARY 1, 2023
TIME: 1:00-2:00
WHERE: ZOOM MEETING
Join Zoom Meeting
https://us02web.zoom.us/j/86439533552?pwd=czJxZUhTSHFlMWR6bjBKYUZ6amF4UT09
WHO: ALL 5 NORTH LICENSED STAFF
FACILITATOR: TIFFANY BASS, JSU- DNP STUDENT

Appendix G

CITI Training



CITI PROGRAM

Completion Date 08-Sep-2022
Expiration Date 07-Sep-2025
Record ID 50718309

This is to certify that:

Tiffany Bass

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

Social and Behavioral Responsible Conduct of Research
(Curriculum Group)
Social and Behavioral Responsible Conduct of Research
(Course Learner Group)
1 - RCR
(Stage)

Under requirements set by:

Jacksonville State University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?wac7fee54-39d6-41f4-a3e1-7dcfe8e7888c-50718309

Appendix H

JSU IRB Approval Letter

Institutional Review Board for the Protection of Human Subjects in Research
249 Angle Hall
700 Pelham Road North
Jacksonville, AL 36265-1602

November 1, 2022

Tiffany Bass
Jacksonville State University
Jacksonville, AL 36265

Dear Tiffany:

Your protocol for the project titled "The Use of Two Nurses, Four Eyes on Skin Assessments to Reduce the Incidence of Pressure Injuries in Medical-Surgical Patients" protocol number 11012022-03 has been granted exemption by the JSU Institutional Review Board for the Protection of Human Subjects in Research (IRB).

If your research deviates from that listed in the protocol, please notify me immediately. One year from the date of this approval letter, please send me a progress report of your research project.

Best wishes for a successful research project.

Sincerely,

Jennifer Mead
Senior Human Protections Administrator, Institutional Review Board

Appendix I

Baptist Health IRC Approval Letter

Baptist Health
Institutional Review Committee

Attn: Melissa Oates, IRC Liaison
2105 E. South Blvd.
Montgomery, AL 36116
334-747-2988

Tiffany Bass, MSN, RN, DNP Student
c/o 2015 East South Blvd.
Montgomery, AL 36116

RE: *"The Use of Two Nurses, Four Eyes on Skin Assessments to Reduce the Incidence of Pressure Injuries in Medical / Surgical Patients"*

Dear Mrs. Bass,

This letter will serve to confirm that the Baptist Institutional Review Committee acknowledges receipt of study proposal on November 14, 2022 requesting expedited review / approval.

The DNP project is to improve the incidence of hospital acquired pressure injuries (HAPI) in at - risk patients admitted to the medical / surgical departments at Baptist Medical Center South. The project will also seek to require the admission skin assessment to be completed within four (4) hours of admission. The evidence based project will decrease the incidence HAPIs and improve patient outcomes.

After IRC review, the above mentioned study was **approved** for a period of one (1) year.

Approval Date: November 16, 2022
Expiration Date: November 16, 2023

It is your responsibility to request review and renewal of study prior to the expiration date, if such an extension is desired.

If you have any questions regarding this approval, please contact me at moates@baptistfirst.org.

Sincerely,

Melissa B. Oates

Melissa B. Oates
IRC Liaison
Baptist Health Institutional Review Committee

Appendix J

Informed Consent for Participation

Study Title: The Use of Two Nurses, Four Eyes on Skin Assessments to Reduce the Incidence of Pressure Injuries in Medical-Surgical Patients

Principal Investigator: Tiffany Bass, MSN, RN

This consent form is part of an informed consent process for a DNP student project, and it will provide information that will help you decide whether you wish to volunteer for this project. It will help you to understand what the study is about and what will happen during the project.

If you have questions at any time during the project, you should feel free to ask them and expect answers that you understand entirely. After all your questions have been answered, you may complete the attached survey and participate in the educational session if you still wish to participate in the project.

You are not giving up any of your legal rights by volunteering for this research project. You reserve the right to withdraw from the DNP project at any time during the project without retaliation, retribution, and termination.

What is the purpose of this study?

This project addresses the increased number of hospital-acquired pressure injuries (HAPIs) in medical-surgical patients. This project plans to improve skin assessments which will reduce the incidence of HAPIs.

The study will run for two months with approximately 30-50 participants. There will be a 30-minute educational session to accommodate staff schedules. The educational session will incorporate education on the various stages of pressure injuries, the Braden Scale, and the Two Nurses skin assessment process. A post-test will be provided to the participants after the educational session to assess learning.

Participants will be provided updates of any significant or new findings throughout the study.

What will I be asked to do if I choose to be in this study?

Two nurses will complete an admission skin assessment within four hours of admission on patients with a Braden Scale of 12 or less admitted to 5 North. In addition, two nurses will conduct a daily skin assessment on patients admitted to 5 North with a Braden Scale of 12 or less. Participants will be asked to document the patient's data in the electronic medical record.

Participants will be asked to participate in an educational session on skin assessments, and appropriate documentation will be provided to the virtual nurses and the staff on the selected medical-surgical unit.

All individuals agreeing to participate in the DNP project will be given a unique identifier to maintain confidentiality. All efforts will be made to protect and maintain anonymity for all staff

who choose not to participate in the DNP project. There will be approximately 30-50 participants.

What are the possible risks or discomforts that I might experience?

No expected harm can occur from participating in this study. Participation in this project is entirely voluntary. Participants may withdraw from the DNP project at any time during the project without retribution, retaliation, or termination.

Will it cost me anything to participate?

Participation in this project is of no cost to you.

How will my confidentiality and privacy rights be protected?

All efforts will be made to keep your personal information in your research record confidential, but total confidentiality cannot be guaranteed. Participants will not be identified by name.

What will happen if I do not participate or decide to leave the study?

Participation in this project is voluntary. You may choose not to participate or change your mind at any time. In that case, your relationship with the study staff will not be modified, and you may do so without penalty and without loss of benefits to which you are otherwise entitled.

You may also withdraw your consent for the use of data already collected about you, but you must do this in writing to Tiffany Bass at jsu0229p@stu.jsu.edu.

Who do I contact for any questions about this study?

If you have any questions about taking part in this DNP project, you can contact the principal investigator:

Tiffany Bass, MSN, RN
jsu0229p@stu.jsu.edu

I have read this form, and the research study has been explained to me. I have been allowed to ask questions, and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form after I sign it.

Printed Name of Subject	Signature of Subject	Date
Printed Name of Investigator	Signature of Investigator	Date

***Participants will receive a copy of this consent upon signing**

Appendix K

Simplified Project Timeline

Task	May 2022	June 2022	July 2022	Aug. 2022	Sept. 2022	Oct. 2022	Nov. 2022	Dec. 2022
Obtained Preceptor	X							
Met with Preceptor to Discuss DNP Project		X						
Received Approval of Problem by Stakeholders		X						
First Stakeholder Meeting		X						
Second Stakeholder Meeting			X					
Complete IRB Process							x	

Appendix L

DNP Project Budget

ITEM	BUDGET	ACTUAL COST
Printed Material	$100	$75
Refreshments for Recruitment Breakfast and Education	$50	$50
Thank You Luncheon	$350	$375
Total	$500	$500

Appendix M

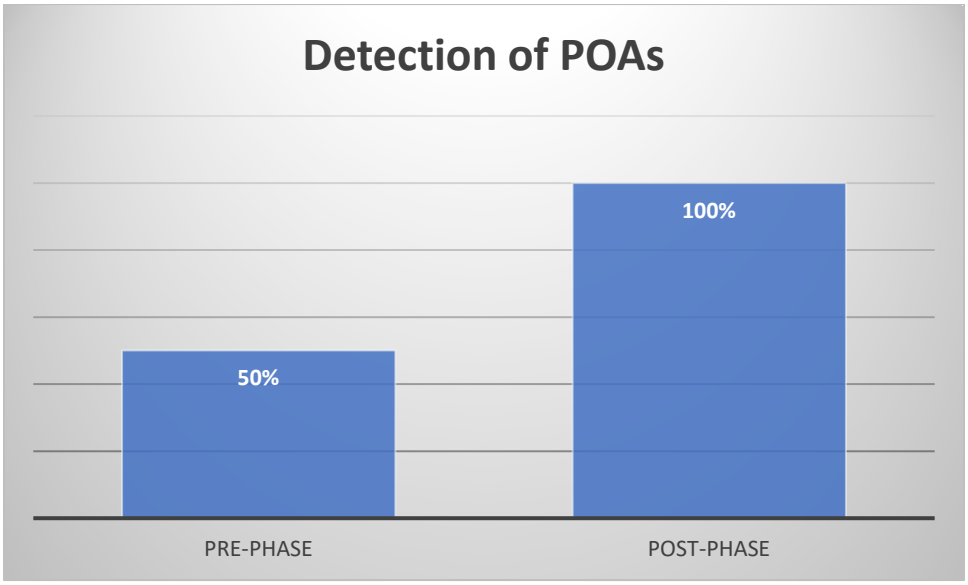
Binomial Test

		Yes	No	Proportion w/ HAPIS	Proportion w/ HAPIS Pre-phase	P-value
HAPIS Status	Post-Phase	0	11	0%	85%	<.001*

*p<0.001 which is statistically significant

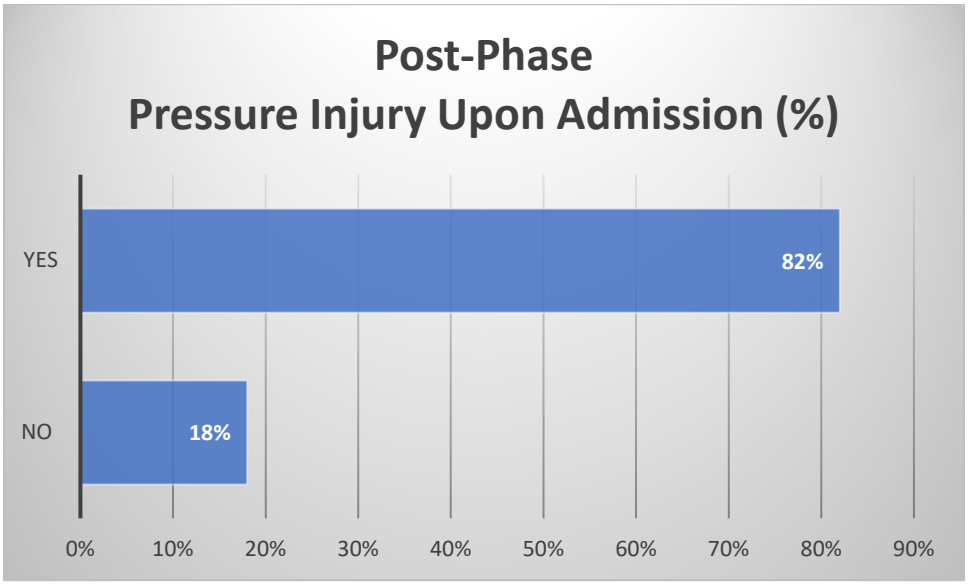
Appendix N

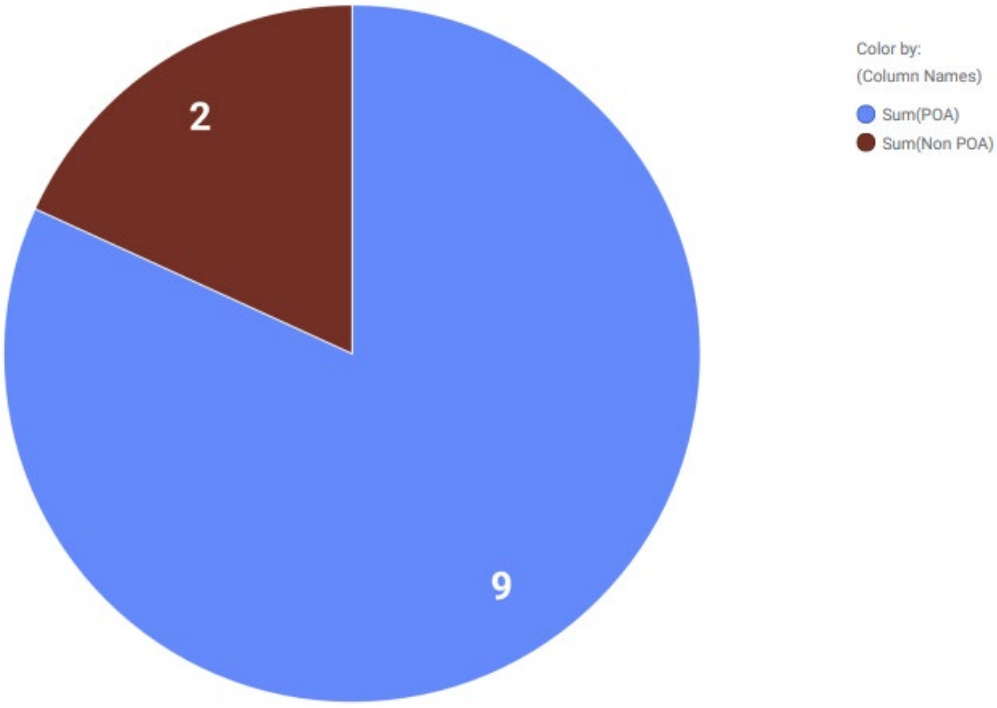
Detection of POAs at 5 North



Appendix O

Post-Phase Pressure Injury Present-on-Admission (POA) Results





Appendix P

Length of Stay Graph