The Prevention of Hospital Acquired Pressure Sores Through Communication Improvement and Vigilance of the Healthcare Team

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Background and Significance of Project

Hospital acquired pressure sores are unfortunately, a frequent occurrence for many patients with extended or frequent hospital stays as well as in patients with impaired mobility. These acquired pressure sores can cause further complications such as infection and in severe cases, sepsis, osteomyelitis, or cellulitis (Al Aboud & Manna, 2023). It is especially important to be extremely vigilant in hospital units where the patient is at a higher risk for the development of a hospital acquired pressure injury. For example, on orthopedic floors, many patients are immobile because of impaired musculoskeletal functioning and due to this immobility, the patients are at risk for developing pressure injuries.

The research and interventions presented in this paper are specifically oriented to Yale New Haven Health St. Raphael Campus on the Verdi Fourth Floor East Unit. This unit deals specifically with pre- and post-surgical orthopedic patients who have had joint replacements or revisions as well as patients who have been admitted from the emergency room for various joint fractures. These surgical procedures and fractures involve important joints that allow for movement and independent turning. Due to these joints being affected, many patients have difficulty ambulated or turning themselves. These factors contribute to the frequent development of pressure sores around the coccyx, gluteal cleft, and ankles. Another factor on the unit that contributes to the frequent development of pressure sores is the age demographic on the floor. Many patients are over the age of 60 years old and therefore have thin skin or are incontinent of either bowel movements or urine. When considering these risk factors that are very common on

this unit, it can be concluded that interventions for the development of pressure sores must be thorough and effective.

When analyzing the data collected on hospital acquired pressure injuries for the unit itself, data was found that indicates that the unit may be lacking in effective pressure injury prevention. In the fourth quarter of 2022 there were 7.14 patients on the unit with hospital acquired pressure injuries greater than stage two which was greater than the benchmark of 1.54. Additionally, in the first quarter of 2024, there were 14.29 patients with hospital acquired pressure injuries which again, was greater than the benchmark of 1.5 (Yale New Haven Health St. Raphael Campus, 2023). This data shows that between two quarters, the amount of pressure sores on the unit doubled and the unit did not meet the benchmark numbers. This indicates that there is a strong need for further intervention and review of necessary techniques to prevent these pressure injuries from occurring.

To improve these numbers and to prevent hospital acquired pressure injuries, it was concluded that a tool could be developed to improve communication during hand-offs and shift change report to keep patient care consistent. It was found that 50% of all pressure sores are prevented by evidence-based nursing care (Chung et al., 2023). This nursing care is knowledge based and the nurse must have professional knowledge of how to care for patients to prevent pressure sores. This tool that has been developed will improve the nurse's knowledge by increasing their familiarity with the treatment that has been ordered for the patient and what interventions have already been performed. Additionally, it was discovered that in a study investigating the knowledge base of nurses surrounding the prevention of pressure injuries, most nurses self-reported that their knowledge was "partially adequate" (Balan et al., 2021). Rather than developing an educational tool, it was concluded that our tool would be more successful by

prompting the oncoming nurse to ask questions about patient care during report and allow the nurse to be fully aware of what is being done to treat or prevent pressure sores. This will allow the nurse to be more comfortable with the care being providing regarding pressure sores as well as it will allow the nurse to be more informed and aware of pressure sore prevention. An educational tool, if developed, would be optional and many nurses may not elect to take the time to truly educate themselves. The tool that has been developed is a quick and easy method to increase vigilance and communication surrounding hospital acquired pressure injuries.

Role and Responsibility of the Professional Nurse

Professional nursing interventions are directly correlated with the prevention of hospital acquired pressure injuries. This is because many interventions that can prevent pressure injuries are nurse driven such as offloading, a double skin check, and turning the patient every two hours. Additionally, due to frequent interaction, constant monitoring of the patients, and frequent interventions, nurses are at the forefront of the prevention of hospital acquired pressure injuries. The attitude of the professional nurse towards the prevention of pressure sores also affects the type of care that the patient receives. According to the Theory of Planned Behavior, a person's performance is directly correlated with a person's attitude. For example, if someone has a negative outlook on a subject, they are less likely to take part in positive actions regarding that subject. Studies have shown that nurses have had less than a 75% total attitude score which indicates that the attitude of nurses towards pressure injury prevention are not satisfactory (Rostamvand et al., 2022). This negative attitude can lead to non-compliance with established interventions, decreased awareness of patient skin changes, and a lower interest in learning about interventions. When considering this information about nursing attitude and their vital role in

initiating interventions for pressure sore prevention, it is evident that this issue is directly related to the professional nursing practice.

The development of pressure sores can also greatly affect patient care and their outlook during their hospital stay. For example, If the patient were to develop a pressure sore this puts them at risk for infection and further impaired skin integrity. These pressure sores may also cause pain and discomfort for the patient which can interfere with their recovery and subsequent discharge. This may also affect patient care outside of the hospital setting. If they are discharged with a pressure injury, the patient must maintain and prevent the pressure injury from getting worse. Caring for a patient with a pressure sore may also place a burden on any caregivers that the patient might have as pressure sore treatment and prevention is intricate and time consuming which the caregiver may not be able to maintain outside of the hospital due to extraneous circumstances.

In addition to pressure sore prevention being heavily dependent on nursing interventions, the importance of this issue can be justified when looking at ethical and legal considerations. Ethically, it is the nurse's responsibility to prevent further injury to patients as well as to maintain their current health. This follows the ethical principle of nonmaleficence which is defined as the ethical principle of do no harm. This principle is important and one that we must adhere to as healthcare professionals. It is important to maintain this principle by preventing further harm to patients. In order to adhere to this ethical principle, it is vital for the nurse to prevent hospital acquired pressure injuries because if they develop, it is causing further harm to patients. This issue can also present a legal conflict because if the pressure injury causes harm to the patient and creates an additional infection or problem that must be treated by the hospital, the patient can sue the hospital for causing them more pain and creating more illness. This instance

is rare; however, it can happen with the financial risk of a 160-bed hospital estimated at 5.97 million dollars (Au & Wang, 2019). To prevent a lawsuit like this, it is important for the professional nurse to be aware of how to prevent pressure injuries during a patient's stay in the hospital and initiate interventions to prevent this issue. It is the nurse's responsibility to be ethical and uphold established practice laws and therefore, it is necessary to prevent hospital acquired pressure injuries to the best of one's ability. It is also vital for a nurse to advocate for one's patient and maintain patient-centered care throughout the patient's hospital stay which can be accomplished with the use of the developed tool and pamphlet to promote interventions of improved communication and increased vigilance.

The design of this tool which can be referenced in **Figure 1**, prompts the nurse to indicate the location of the pressure injury or injuries, the Braden score of the patient, interventions that are being used to prevent or treat pressure injures, if the wound care department has been notified and consulted, as well as a section to document the two nurse skin check that is required for the unit. It is proven that the Braden score is a reliable indicator of the patient's risk to develop pressure injuries which is useful for a nurse to determine if additional interventions must be required for a specific patient. The area for indicating if wound care has been notified and consulted indicates to the nurse that there may be specific instructions that the wound care team has issued and that it is important to look for these in the patient's chart. The interventions section allows for consistency in the patient's treatment which is important when it comes to continuity of care and continuous prevention. The two-nurse skin check prompt on the tool is the most important as it reminds the nurse that the two-nurse skin check is vital and prevents a possible human error by creating an environment in which two nurses have the opportunity to ensure the patient's skin is intact. Overall, this tool incorporates the most important elements of

pressure sore prevention while also allowing the nurse to have detailed information about interventions performed during their shift. This allows for more detailed change of shift reports, as well as improved consistency of patient care.

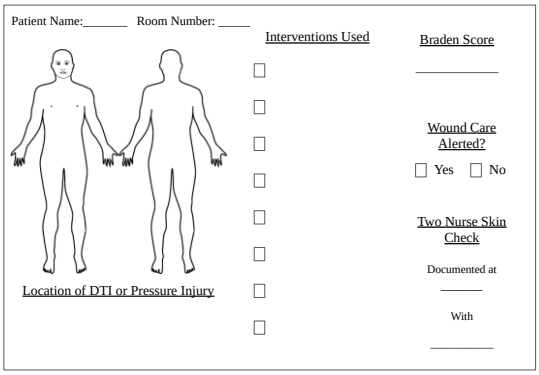

Figure 1 (Baker & Guarente, 2024)

This tool not only helps nurses to communicate and improves vigilance, but it also allows for patient advocacy. By adding the element of wound care notification, it not only allows the nurse to ensure the patient has received the best care possible but also allows the nurse to advocate for the patient. The patient may be unaware that there is a wound care team available who are specially trained to be extremely familiar with pressure sore prevention and treatment. Therefore, they may not ask for a consult and the nurse may overlook this option for the patient. This element reminds the nurse that they have this resource. This tool also allows for patient advocacy by increasing communication about pressure sore prevention. Due to this increased communication, it will prevent patients from being overlooked for prevention practices.

When developing a tool for nursing use it is important to consider the financial and political effect the tool may have especially when trying to integrate the tool and promote it for

everyday use. However, this tool will not have a large financial impact or a large impact on the regulatory environment. The practices found in this tool are already required practices on the unit such as the two-nurse skin check. This tool will have little financial impact on the hospital itself because it simply needs to be printed before shifts. The unit already has several provided report sheets available that are already printed, and this tool will simply be integrated with these already provided report sheets. The low financial impact and little impact on hospital policy will make this tool easier to integrate into everyday practice as well as it will make it easier for nurses to adopt this method of skin documentation.

Developmental, Age Appropriate and Culturally Sensitive and Diversity Considerations

The recipients of the intervention are BSN nurses with college educations. These nurses will be of varying ages and experiences but will have a base common knowledge of the prevention of pressure sores due to uniform required education throughout their professional career as well as due to their common baccalaureate degree. Each nurse will have a varying cultural and racial background as well. To maintain equality and fairness in medical treatment, a competency principle was developed for this issue that requires nurses to be capable of treating patients of all ages as well as patients of differing ethnicities. The competency principle is that the nurses will have the ability to identify various pressure injuries regardless of patient age or racial identity. This competency can be applied through the use of the brochure and the tool that was created. The brochure describes why this tool is important and how to use it. Along with these instructions the brochure also contains a QR code with a reliable source that describes staging and identifying pressure injuries in various patients with different skin tones.

The audience, which is defined as all nurses on the unit, come from a mixture of different generations. However, all nurses are within the age group of between twenty and sixty years old.

All nurses are also college graduates and therefore can be expected to understand complex information regarding statistics and research. If the unit was made up of younger generations or nurses with less education such as LPNs or nurses with an associate degree, it would be acceptable to present the information that is less statistical based and more instructional based. This may be said for a unit with more new graduate nurses as well. However, the nurses on the unit are mostly made up of nurses with more than two years of experience. Therefore, it can be surmised that they understand the basics of documentation as well as pressure sore prevention. This is why the brochure, and the tool are focused on describing the importance utilizing the developed tool and why it is important to maintain vigilance and communication.

It is important to acknowledge that many patients come from different socioeconomic backgrounds, as well as many have different racial identities. For some races, it may be difficult to tell if a pressure sore is non-blanching or blanchable. This is important for a nurse to know in order to stage or continue to observe this area of skin to prevent the pressure sore from developing further. This project demonstrates an understanding of this concept by providing a reliable source where nurses can simply scan a QR code and be directed to an educational website in which it details how to identify pressure sores on patients with different racial identities. This project does not discriminate patients based on racial identity by maintaining uniformity regardless of the patient's background or gender by creating a standard in which each patient is evaluated regardless of age, gender, or racial ethnicity.

Patient-Centered Care Principles

This project instrument was created with care concepts in mind that revolve around protecting the patient and their body while they are in the hospital. It is important as nurses that we maintain the patient's safety constantly which includes the prevention of further health

complications. By creating this tool and the pamphlet along with the tool, it allows for nurses to be thorough during their skin assessments as well as to be accurate during the change of shift report. This accuracy and attention to detail can prevent hospital acquired pressure injuries. For example, in one study only 54% of nurses reported carrying out a daily skin assessment on their patient (Oliveira Rebouças et al., 2020). This percentage indicates an increased need of attention to detail as this is a proven method of pressure injury prevention. This is important when considering not only keeping the patient as healthy and as safe as possible but also considering the impact that further medical complications may have on the family or caregiver of these patients. Having a family member in the hospital for any reason can be stressful for family members. Additionally, when the patient is discharged, it is most often the responsibility of the family to care for the patient and take responsibility for rehabilitation. This may include driving the patient back and forth to physical therapy, helping the patient acquire and manage their medications, as well as monitoring the patient to prevent further harm such as a fall at home. It can add to the stress if the patient's caregiver or family members also must treat a patient's hospital acquired pressure sore. To keep the pressure sore from getting worse, the patient must be turned, the wound dressed, and it must be monitored consistently for infection. This is intensive care for a family member who may not have planned for this type of care. This is why this tool is important to implement. Not only does this prevent further harm or medical complications for the patient, but also eliminates caregiver burden before it can occur.

This project instrument was designed to impact the patient and the family positively. Not only does this tool help nurses to prevent hospital acquired pressure injuries, but it also promotes continuity of care. It is important for a patient and their family to feel as if they can trust their nurse and their healthcare team. If those on their healthcare team or the oncoming nurse seem to

be not as informed or neglect to treat current pressure injuries or participate in the prevention of pressure injuries due to lack of vigilance, it can affect not only the patient's health but their attitude as well. By presenting a strong, united healthcare team with nurses who appear informed and up to date on the patient care, it improves the nurses' rapport and can improve patient attitude because they are being cared by trusted individuals. Abrupt changes in the any patient's healthcare treatment can also cause confusion and refusal in situations where it is not necessary. For example, if the nurse treats a patient's pressure injury differently and the patient is not comfortable with the new regime it may cause them to be standoffish or reluctant to participate in their care. However, if transitions or changes of care are communicated with the oncoming nurse as well as with the patient during bedside report, it will not only help the patient and family to feel included in their care, but it can also help the patient and the family to be informed and educated about the interventions that are being performed.

Professional Nursing Competencies: Inter-professional Collaboration, Quality Improvement, Safety, and Informatics

The project instrument was created with teamwork and collaboration in mind by encouraging the tool to be used throughout the day in preparation for change of shift report which not only requires teamwork but also collaboration between other nurses. This tool enhances the communication of the nursing unit while also encouraging teamwork by including the option of a wound care team consultation. This project instrument was specifically made to improve the quality of care on the floor by encouraging pressure injury prevention as well as keeping in mind necessary safety principles such as the two-nurse skin check and performed ordered interventions for the patient. This topic also considers the informatics of the floor. Data shows that between Q4 in 2022 and Q1 in 2023, the amount of pressure sores doubled on the unit

(Yale New Haven Health St. Raphael Campus, 2023). By utilizing the informatics of the hospital including data reports from previous quarters, it was evident that an instrument like the one created was needed.

The management of pressure injuries and the prevention of hospital acquired pressure sores involves many team members including the patient care technician or certified nursing assistant, the nurse, the nurse practitioner, or physician assistant, and possibly the doctor. It is important to keep in mind that these interventions are nurse driven, however the nurse interacts with each one of these professions. The nurse can delegate to the PCT to turn their patient every two hours as well as the nurse also must be vigilant and update the healthcare provider. Prevention and treatment of pressure injuries also involve multiple specialties such as wound care. These nurses have detailed knowledge of pressure injuries and the best way to treat them. This is important in pressure sore prevention and intervention because the earlier it is recognized, the easier it is to treat. This is why it was decided to create a tool to enhance communication and to improve collaboration between these many professions. Along with collaboration, another priority of patient care is safety. It is vital that a patient's safety is always maintained regardless of their situation or condition.

Overall, this project improves patient safety by working to eliminate the possible development of infections such as cellulitis or septicemia by preventing the development of hospital acquired pressure injuries (Al Aboud & Manna, 2023). This project will improve on patient safety by decreasing the number of hospital acquired pressure injuries developed on the unit. This project will also encourage interprofessional collaboration by allowing for space to indicate if wound care has been consulted, as well as the tool aids in communication which takes place between many different professions on the unit.

The learning needs of the nurses on the unit include an emphasis on the importance of communication, continuation of care, additional instruction on the methods of interventions for pressure sores, and an emphasis on the importance of constant vigilance to prevent the development of pressure injuries. These learning needs correlate directly to our desired quality improvement outcomes. These quality improvement outcomes include increased communication between the nurses on the unit about pressure sore prevention, as well as a decreased number of hospital acquired pressure injuries. For nurses to meet these quality improvement outcomes pressure sore prevention must become a priority of the nurses on this unit. Tactics to prevent these injuries include increasing communication, learning additional prevention methods, as well as being consistently aware of the goal to prevent pressure injuries. For example, in a quality improvement study, by introducing a pressure sore prevention bundle to a unit, pressure injury prevention knowledge increased from an 88% score on a pretest to a score of 93.75% (Kennedy, 2023). Even though this study involved implementing a care bundle and our goal was to increase communication and vigilance the study still shows that by educating nurses about prevention, their knowledge and use of preventions increases. By introducing this communication tool, we attempt to do the same by increasing communication, awareness, and alert nurses to possible need for further education about prevention techniques.

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