Complications Caused by Immobility: Quality Improvement

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The nurse spends the most time with patients, so nurses need to understand quality improvement and the part they play in it. *Quality improvement* is a process used in health care to implement change and evaluate those changes with an overall goal of improving patient care and safety (QSEN Institute, 2020). Nurses can participate in quality improvement by identifying areas where patient care is lacking (Knowledge), planning changes to improve care (Knowledge), implementing and evaluating those changes (Skills), and sharing their findings with coworkers to improve the workplace (Attitudes) (QSEN Institute, 2020). Through this process, nurses can improve the standards of care in areas that it lacks, such as preventing hospital-acquired complications in immobile patients (Houser, 2018). This area of care needs reforming because these patients enter the hospital trusting that they will receive treatment for the problem that brought them in and then leave. However, often this is not the case. While hospitalized, many immobile patients experience preventable complications that lengthen their stay and require additional treatment following discharge (Shieh et al., 2018). By participating in quality improvement, nurses can improve the current nursing process for caring for these patients to help them avoid unnecessary complications (Houser, 2018).

Article Summary

Introduction

Each year, 2.5 million individuals develop a pressure ulcer while hospitalized (Shieh et al., 2018). Finding effective methods for reducing this occurrence is a priority for researchers because it would improve patient safety and reduce hospital costs. In the article "Dramatic Reduction in Hospital-Acquired Pressure Injuries Using a Pink Paper Reminder System," the authors implemented a new two-step system for preventing pressure ulcers. The first step of their system, called the Pink-Paper Criteria, involved using an updated version of the Braden Scale, which contained four new risk factors: an albumin level of 3.0 or below, 65 years of age or older, previous pressure ulcers, and at-risk skin due to moisture and wounds. The second step of their system, called the Pink-Paper Reminder System, involved placing a piece of pink paper at the end of patients' beds with a Braden score of 18 or less or 12 or less with two of the additional factors. This paper labeled the individual as high risk for pressure ulcers. It also listed preventative measures that need implementing, including using heel protectors and sacral dressings, assessing the skin under all devices, and turning the patient every two hours. A physician screened the electronic health records of two Kaiser Permanente hospitals daily to identify those that met the Pink-Paper Criteria. After one thousand days of using this new system, pressure ulcer occurrence decreased by 67%. This study addressed and found a solution for a common hospital-acquired complication affecting patients with limited mobility, decreased activity, and increased incontinent episodes, such as immobile patients.

Overview

Immobile patients, while hospitalized, are at severe risk of developing complications such as pressure ulcers (Shieh et al., 2018). If these patients develop a pressure ulcer, it can result in more extended stays, sepsis, admission to long-term care, and even death (Shieh et al., 2018). In the article "Dramatic Reduction in Hospital-Acquired Pressure Injuries Using a Pink Paper

Reminder System," the authors demonstrated quality improvement competence. They identified a significant health care problem and narrowed it down to the most affected population (Knowledge) (QSEN Institute, 2020). They developed a new strategy to address this problem (Knowledge) and put it into action (Skill). They collected and analyzed the data (Skill) and shared their findings with others to help prevent this problem, improve client care and safety, and increase nursing satisfaction. They assessed how their new system affected patients and other staff members, which was well (Attitude). Most importantly, they found a way to improve the nursing process to prevent pressure ulcers in high-risk patients.

Quality Improvement

The Pink-Paper Criteria and Pink-Paper Reminder System would benefit patients and staff in long-term care facilities, medical-surgical units, and intensive-care units (Shieh et al., 2018). These locations need additional measures to prevent hospital-acquired complications in immobile patients such as pressure ulcers because they treat them more often and for more extended periods. The current methods used still result in pressure ulcer formation, which harms the patient and costs the organization between $20,000 and $151,700 to treat each occurrence (Shieh et al., 2018). Implementing this new system would save organizations $11.6 billion a year and improve patient safety by reminding nurses that the patient is at risk for pressure ulcers and requires preventative measures (Shieh et al., 2018). This two-step system would improve patient satisfaction by reducing unnecessary complications such as pain, infection, more extended stays, and treatment following discharge (Shieh et al., 2018). It would also improve nursing satisfaction by providing them additional screening tools to use on their patients to prevent harm, and the signs would help communicate their patient's needs to all staff members (Shieh et al., 2018). Before organizations could use this new system, the quality improvement committee would need

the board to approve it and recruit the help of certain staff members. IT would need to add the criteria to the electronic health record and make the pink-paper signs accessible to staff. The education specialist would need to create learning modules to teach the staff how to use them. Physicians would need teaching about the system to order albumin labs on all patients and order the pressure ulcer preventative measures (Shieh et al., 2018). Once the strategies are in place, case managers need to conduct audits to ensure staff uses them. After using these strategies for some time, the quality improvement committee would assess their effectiveness and identify other areas that would benefit from using them (Houser, 2018).

Application to Nursing Practice

Nursing staff plays a vital role in preventing complications, such as pressure ulcers in immobile patients. According to Padula and Black (2018), the current guidelines for preventing this complication include performing risk assessments, skin assessments, and patient-specific interventions to protect the skin and reduce the amount of pressure placed on bony areas. Nurses must perform a risk assessment within 8 hours of admitting a patient and at least once per shift using a tool such as the Braden scale. The Braden scale determines a patient's risk of developing pressure ulcers based on their physical activity abilities, nutritional status, sensory perception, and moisture level. A patient's Braden score determines which interventions the nurse must implement. Skin assessments which involve examining the color, moisture level, temperature, and integrity of the skin, must be done a minimum of once a shift. If the patient is bedridden or incontinent, this assessment is done regularly throughout the shift to detect skin changes early. When caring for high-risk patients, specific interventions are required to protect their skin and reduce the amount of pressure placed on bony areas such as the elbows, sacrum, and heels. These interventions include keeping the patient dry, applying moisturizers and barrier creams,

repositioning the patient every 2-4 hours, elevating bony areas using pillows or suspension devices, covering bony areas and the skin under medical devices with a 5-layer foam dressing, and using specialized mattresses to offload pressure. The National Pressure Ulcer Advisory Panel developed these current measures for nursing staff to help patients avoid developing pressure ulcers while hospitalized (Padula & Black, 2018).

Education

The most effective way to prevent pressure ulcers in high-risk patients, such as immobile ones, is to keep nursing staff updated on the current clinical guidelines (Porter-Armstrong et al., 2018). A literary search for a standard way to educate staff about pressure ulcer prevention yielded no results, concluding that there is no mandated way to do so. From experience, hospitals educate new staff about their specific policies and protocols for preventing pressure ulcers during orientation. The article "Preventing Pressure Injuries in Medical-Surgical Patients" explains how Englewood Hospital and Medical Center (EHMC) educates its staff, as explained by Jill Cox, its wound care nurse. Cox educates the staff through learning modules, lectures, and visual aids. The modules and lectures cover the hospital's skin-integrity policy, which implements the National Pressure Ulcer Advisory Panel guidelines. This policy includes performing a risk assessment each shift using the Braden scale, interventions for preventing pressure ulcers, pressure ulcer stages, and the topical ointments, support surfaces, and mattresses staff need to use for each pressure ulcer stage. Visual aids quickly provide continuous education to staff while they are working. Examples of some of the signs Cox posts include the stages of pressure ulcers and the correct beds for each one. In addition to these educational tools, the staff at EHMC must complete pressure ulcer learning modules every three months. Keeping nursing staff updated on effective pressure ulcer prevention improves patient care (Spader, 2018).

Research

Immobility is the most significant risk factor for developing pressure ulcers because of the inability to change positions (Shieh et al., 2018). While hospitalized, the nursing staff is responsible for preventing pressure ulcer development in these patients (Shieh et al., 2018). However, according to Grešš halász et al. (2021), many nurses lack sufficient knowledge to do so. These authors determined this from the results of previous studies and a 26-question quiz they created. Two hundred twenty-five nurses took this quiz which covered the cause of pressure ulcers, classification of pressure ulcers, nutrition, risk assessment, and reducing the amount and time of pressure and friction on the skin. The minimum score needed to pass this quiz was 60%. The average quiz score was 45.5%, and only twenty-one nurses passed. Most nurses who took the quiz learned about pressure ulcers during nursing school, but 20% covered this topic again during continued education. The findings of this study indicate that nurses do not learn enough about preventing pressure ulcers during school or continued education. Further research is needed to identify additional learning tools hospitals can use to increase the nursing staff's knowledge about preventing pressure ulcers which will improve patient outcomes.

Conclusion

Hospitals have protocols and policies to prevent immobile patients from developing hospital-acquired complications such as pressure ulcers. However, even with these in place, 7-71.6% of these patients develop one, predisposing them to longer stays, sepsis, admission into long-term care, and death (Grešš halász et al., 2021; Shieh et al., 2018). How do hospitals decrease this risk when they are already implementing the best methods supported by research? The answer is through quality improvement. *Quality improvement* is a process used to improve patient care and

safety (QSEN Institute, 2020). Nurses spend the most time with patients, allowing them to see what measures work and which do not. They can come up with new interventions to reduce pressure ulcers (Knowledge), put them into practice (Skills), evaluate their effectiveness (Skills), and consider how they affect patients and coworkers (Attitudes) (QSEN Institute, 2020). Through this process, nurses can help hospitalized patients avoid unnecessary complications and obtain new data that can help develop future policies and protocols.

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