Quality Improvement: Reducing Pressure Injury Occurrence

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Quality improvement involves implementing and evaluating changes to improve patient care and safety (QSEN Institute, 2020). Nurses participate in quality improvement by identifying areas where patient care is insufficient and planning and implementing a selected change (QSEN Institute, 2020). In addition, they evaluate how the change affects patient outcomes and employees and share their results (QSEN Institute, 2020). This process allows nurses to improve care standards in areas it lacks, such as preventing pressure injuries/ulcers. Although healthcare organizations have policies and protocols to prevent them, they still affect 7-71.6% of hospitalized patients (Shieh et al., 2018). Pressure injuries are a significant problem because they lengthen patient stays, require additional treatment after discharge, and increase healthcare costs (Shieh et al., 2018). By partaking in quality improvement, healthcare professionals can help reduce the occurrence of this complication.

Literature Review

The national cost of hospital-acquired pressure injuries in the United States

According to Padula and Delarmente (2019), each year, 2.5 million Americans develop a pressure injury (PI) while hospitalized, resulting in physical harm, chronic wounds, and patient deaths. Per the authors, Medicare and Medicaid no longer pay for PI treatment, leaving hospitals financially responsible, which prompted them to determine the annual burden placed on hospitals. Using a Markov model, they analyzed the cost of PIs treatment and its impact on healthcare organizations in the United States. They collected data from hospitalized patients and determined that 8.3 out of one-hundred patients developed a pressure injury, costing the hospital $11,887. This total was due to increased length of stay, wound care, supplies, and staffing. From their data, they hypothesized that the annual cost for this complication in the United States is

approximately $26.8 Billion. These findings highlight the need for healthcare organizations to increase their quality improvement efforts. Like the authors, healthcare professionals must analyze the prevalence of PIs in their institutions (QSEN Institute, 2020). In addition, they must compare their current practices to evidence-based guidelines and implement necessary changes (QSEN Institute, 2020). These actions will improve PI prevention, reducing patient harm and healthcare costs (Padula & Delarmente, 2019).

Effectiveness on hospital-acquired pressure ulcers prevention: A systematic review

Per Gaspar et al. (2019), pressure ulcers are preventable and cause physical and psychosocial problems for patients, increase healthcare costs for patients and hospitals, and indicate a lack of quality care provided. The authors suggest that recognizing common risk factors is the first step in preventing pressure ulcers. These risk factors include immobility, skin moisture, nutritional status, or sensory perception. Working to improve patient safety in the hospital by preventing pressure ulcers, the authors conducted a systemic review that includes findings from twenty-six studies. They found the most effective prevention methods to be frequent repositioning, early ambulation, preventative skin care, and educating healthcare staff. Repositioning and frequent ambulation limit the time and amount of pressure on bony prominences. Preventative skin care protects the integrity of the skin by applying silicon-based skin creams or polyurethane-film dressings prophylactically. Education provides risk assessment tools and evidence-based practice interventions that the healthcare staff can utilize to prevent pressure ulcers. Nurses have the knowledge and experience to formulate interventions, the skills to implement them, and the ability to work with their coworkers to evaluate the effectiveness of patient safety and outcomes (QSEN Institute 2020). Utilizing quality improvement strategies will

increase nurse and patient satisfaction by reducing further complications from pressure ulcers, minimizing the length of stay, and initiating safer policies and procedures.

Pressure ulcer and nutrition

Pressure ulcers are a substantial problem for patients and healthcare organizations. Therefore, examining contributing risk factors and evidence-based practice related to preventing and managing them is vital. According to Mahmoodpoor et al. (2018), hydration and nutritional status play a key role in skin and tissue growth and repair. The authors aimed to examine the evidence on nutrition and hydration status and find interventions to manage, prevent and decrease the cost of pressure ulcers. They found that malnutrition disrupts the proper functioning of the immune system and collagen synthesis, and dehydration disrupts cell metabolism and delays wound healing. In addition, they identified unexpected weight loss, anorexia, inflammation, and dehydration as contributing factors to higher pressure ulcer risk. The authors state that proteins, vitamins A, C, E, and zinc are essential for wound healing. They also recommend that patients consume a balanced diet of adequate protein, fat, and carbohydrates and drink thirty milliliters per kilogram of body weight to prevent pressure ulcers. Nurses can use this knowledge to assess and screen patients for nutrition and hydration deficiencies (QSEN Institute, 2020). They can also use it to collaborate with dieticians and implement necessary interventions to improve patient safety and care by reducing the risk of pressure injuries (QSEN Institute, 2020).

Nurses' knowledge and attitudes towards prevention of pressure ulcers.

The healthcare team plays a significant role in the prevention of pressure injuries. They must implement adequate preventative procedures based on evidence-based practice (Grešš

Halász et al., 2021). However, many nurses have negative attitudes and insufficient knowledge regarding pressure injuries. The authors determined this by assessing the knowledge of 250 nurses regarding the 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%. Only twenty-one nurses passed. The findings of this study indicate that nurses do not learn enough about preventing pressure ulcers during school. The authors suggest a solution to this problem is reviewing and comparing the education curricula at graduate, postgraduate, and specialty levels and ensuring that healthcare staff participates in continuous education. This research demonstrates why healthcare organizations must engage in quality improvement to ensure their employees are up to date on skills and knowledge of healthcare practices (QSEN Institute, 2020). Doing so could also help reduce staff's negative feelings surrounding pressure injuries.

Implementing a pressure injury prevention bundle to decrease hospital-acquired pressure injuries in an adult critical care unit: An evidence-based, pilot initiative

Pressure injuries increase mortality and morbidity rates, resulting in approximately 60,000 patient deaths annually (Rivera et al., 2020). This injury is preventable if healthcare professionals take appropriate measures and adhere to protocols (Rivera et al., 2020). The authors aimed to reduce pressure injuries by introducing new preventative measures in a hospital that did not have them. They implemented a bundle that included valid pressure ulcer assessments, sitting regimens, mattresses, turning, incontinence management, skincare, and utilizing the Braden score. Their bundle reduced the occurrence of hospital-acquired pressure ulcers by 63%. Per the authors, staff education is crucial to ensure adherence to this method. They suggest placing the pressure injury prevention bundle and turning clocks in all rooms to

allow accessibility and point of reference. The authors participated in quality improvement by developing and implementing a new bundle to address a healthcare problem and analyzing its effect on patient outcomes (QSEN Institute, 2020). They also shared their research findings to help others reduce pressure injuries (QSEN Institute, 2020).

Case Study

Shieh et al. (2018) conducted a quality improvement project at two Kaiser Permanente hospitals in Orange County, California. Their goal was to introduce a new cost-effective process to reduce pressure ulcers due to their high prevalence among hospitalized patients and adverse health outcomes. The first step of their system, called the Pink-Paper Criteria, involved using an updated version of the Braden Scale, containing 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 involved placing a piece of pink paper containing "Skin at Risk" at the end of patients' beds with a Braden score of less than 18 or 12 or with two of the additional factors. The paper also displayed preventative measures for staff, including using heel protectors and sacral dressings, assessing the skin under all devices, and turning the patient every two hours. After one thousand days of using this approach, they reduced pressure ulcer occurrence by sixty-seven percent across the two hospitals. Patients did not mind the process, and nurses, physicians, and administrative staff tolerated it well. This two-step process is a low-cost way to improve patient satisfaction by reducing unnecessary complications such as pain, infection, and extended stays. It would also improve nursing satisfaction by providing them with additional screening tools to use on their patients and a way to communicate their patient's needs to all staff members.

Synthesis

Practice:

No medical professional spends as much time with the patient as the nurse does. Nurses are the key to providing quality improvement measures to prevent complications, such as pressure injuries. According to Padula and Black (2018), preventing this complication includes performing risk assessments, skin assessments, and interventions to protect the skin and reduce the pressure placed on bony areas. The risk assessment should be done within 8 hours of admission and at least once per shift using an assessment tool such as the Braden scale. Skin assessments involve examining the skin's color, moisture level, temperature, and integrity and require assessing a minimum of once per shift. When caring for high-risk patients, specific interventions are necessary to protect their skin and reduce the 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 two to four hours, elevating bony areas using pillows or suspension devices, covering bony areas and the skin under medical devices with a five-layer foam dressing, and using specialized mattresses to offload pressure.

Education:

The most effective way to prevent pressure ulcers in high-risk patients is to keep the nursing staff updated on the current clinical guidelines (Porter-Armstrong et al., 2018). Each hospital has policies and procedures regarding pressure ulcer prevention. Englewood Hospital and Medical Center (EHMC) educates its staff using learning modules, lectures, and visual aids (Spader, 2018a). The modules and lectures cover the hospital's skin-integrity policy using the National Pressure Ulcer Advisory Panel guidelines. The policy includes utilizing the Braden Scale, the stages of pressure ulcers, and which topical ointments, support surfaces, and mattresses staff need to use for each pressure ulcer stage. Visual aids provide continuous

education to staff while they work. In addition to these educational tools, the staff completes pressure ulcer learning modules every three months. Keeping nursing staff updated on effective pressure ulcer prevention improves patient care.

Research:

While hospitalized, the nursing staff is responsible for preventing pressure ulcer development in these patients. One way to do that is by communicating the length of time the patient has been in the department, specific positioning, and any alterations in skin color observed (Spader, 2018b). Another way is involving nursing staff in research (Spader, 2018b). For example, the author had forty healthcare members test out mattresses with and without an overlay. The staff saw the difference in the mattress with the overlay, became more invested, and asked more questions. These findings indicate that the key to reducing pressure ulcers is to engage healthcare professionals, increase their knowledge, and improve interprofessional communication. Further research is needed to develop additional motivational, learning, and communication tools hospitals can use to address this problem.

Conclusion

Healthcare institutions have protocols and policies for preventing hospitalized patients from developing pressure injuries. However, even with these in place, 2.5 million Americans a year develop them, resulting in physical harm and a financial burden (Padula & Delarmente, 2019; Shieh et al., 2018). Participating in quality improvement is necessary to develop new interventions and guidelines to reduce their occurrence.

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