Reduction in Medication Errors and Adverse Events: Quality Improvement

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Safety and effective treatment are ideals of the healthcare system in that nurses strive to provide the best care to their patients. *Quality improvement* is a healthcare goal guided by data analysis to facilitate the advancement of safety and efficiency in nursing practice. The progress towards this objective is attained through the awareness of changing information pertaining to the healthcare setting to make changes in care processes (QSEN Institute, 2020). Evaluating previous information reduces errors in future approaches to care and improves outcomes. Certain areas require further review and education to help improve safety for clients, one of which is medication administration because of the high potential for errors and adverse effects.

Article Summary

Medication errors remain a prominent issue in nursing care. It is the nurse's responsibility to ensure that they give the correct medication at the right time with an accurate dosage to the proper patient. A study was performed to examine the factors contributing to medication administration errors, specifically in an ICU. This setting is the focus of the study because patients admitted into an ICU tend to have more severe conditions that could result in more significant consequences.

Introduction

The article calls attention to the use of pharmacotherapy as a valuable resource for treating patients but also underlines how misuse can lead to the risk of harm. Because of this risk, the study aims to investigate the most significant contributors to administration errors. The

evidence of the study will be used to educate nurses on the relevant factors and develop strategies to avoid mistakes (Escrivá Gracia et al., 2019).

Overview

The article discusses how it analyzed the types of drugs and drug interactions involved the most in medication errors. Preparation of insulin, administration of heparin, dilution of noradrenaline, and infusion speed of potassium chloride were the most common problems. The average patient has been prescribed nearly 14 medications, and there were instances where the transcribed prescriptions were incorrectly documented, which could cause issues with drug interactions. Drug management relating to high-risk medications and the routes of administration were also reviewed to find that about three out of four medication errors were given intravenously, with NG tubes also being a high-risk route (Escrivá Gracia et al., 2019).

Quality Improvement

The article relates to the QSEN competency concerning quality control because it prioritizes finding the underlying causes of a significant problem within the nursing profession. The research does so by gathering data and forming a conclusion on quality improvement to ensure the safety of clinical practice to protect patients. Data supports that the quality of care processes is affected by knowledge of the medications and how they are administered, so they use this information to design a better system. Nurses at the facility of the study were questioned on whether they participated in continuing pharmacology education; 25% claimed that they did not, while the other 75% claimed they took training courses (Escrivá Gracia et al., 2019). Because of this, it is worth implementing more resources into education about drugs, what constitutes a medication error, and how to properly report one to respond accordingly to a patient. Another important source of errors that should be addressed is the documentation of prescriptions that used unclear abbreviations or were missing important information, such as the

dosage that delayed administration (Escrivá Gracia et al., 2019). Incorporating quality improvement changes into the education that nurses receive so they can be mindful of errors and the responsibility of reporting them would help to improve patient safety. The resources in place for documentation may also need changes in facilities such as the one in this study to prevent errors. Service organization was a cause for concern with high nurse-to-patient ratios, inadequate access to information, and the level of training for new nurses were mentioned in the qualitative portion of the mixed study (Escrivá Gracia et al., 2019). *Nurse satisfaction* is an aspect that should be addressed to decrease stressful environments that could contribute to medication errors.

Application to Nursing

Medications are common in clinical settings and can lead to severe consequences. The quantitative study performed on ICU nurses highlights the associated factors such as drug management relating to polypharmacy, high-risk medications, and routes of administration. The circumstances that lead to medication errors have preventable causes and demand a need for change to improve the quality of care. Therefore, evidence from recent studies supports the progress in several aspects of nursing relating to current practices, education, and research to benefit patients.

Practice

Medication errors are generally due to a mistake with the wrong drug, dosage, rate, administration time, or poor patient monitoring. A problem with the prescription was also a common reason (Alrabadi et al., 2021). The ideal nursing practice for medication administration is to eliminate the risk of adverse reactions by using the "rights" to identify the correct drug, patient, dose, route, and time. This verification is especially vital for patients prescribed many

medications that can have interactions. If there is a discrepancy in the prescription for a medication, then the provider should be contacted to get clarification. The patient should be educated on the drug they are being given to avoid confusion and get an early indication of whether they may have an adverse reaction. After administration, monitoring the patient is essential to detect an adverse reaction and act promptly to help them from further harm.

Education

Education about the issue of medication errors is centered around correctly reading a prescription, going through the essential details, accurate dosage calculation, and confirming them with the patient's identification. A major cause of medication errors is a knowledge deficit concerning drug-drug interactions (Alrabadi et al., 2021). This point was also apparent in the quantitative study with patients with an increased quantity of prescribed medications or ones considered high-risk drugs. As a result, nurses are to be educated on high-risk medications to be aware of the possibility that a patient would have an adverse reaction and how to recognize detrimental effects that would require reporting an error. There is always the chance of medication errors, so nurses must know how to facilitate error recovery. This action entails that a nurse is educated on how to notice the characteristics of a medication error, how to report it, and what interventions to perform to keep the patient from having severe health effects.

Research

Priorities of further studies are centered around reducing medication errors and combatting the known factors that lead to incidents. Research has shown that education leads to a decrease in the risk of medication errors. About 55-65% of nurses hold a baccalaureate degree, and the Institute of Medicine says a goal is to bring that total to 80% in the future (Audet et al., 2018). There is a considerable correlation between human error and adverse drug interactions.

For that reason, nursing informatics could apply to this matter by using better documentation, communication, and monitoring of clients to improve patient outcomes.

Conclusion

The nursing profession revolves around providing care for the most efficient and safe patient-centered care. The QSEN competency of quality improvement lays out a framework that intends to advance future nursing practices. These standards are set by promoting education to develop skills and ideal approaches to healthcare processes (Backhouse & Ogunlayi, 2020). Quantitative analysis and other research methods assist in quality improvement with evidence supporting changes to care that allow nurses to adapt to the ever-changing healthcare environment. When giving patients medications, mistakes are common due to a lack of clinical knowledge or attention to detail. Medication administration is supposed to treat patients so they can maintain their health. It is only suitable for nurses to utilize the quality improvement framework to reduce the risk of adverse reactions. The significance of medication errors is emphasized by the effects they can have on patients that may prolong their care or even lead to death. Due to this reason, nurses must practice correct medication administration and have the ability to respond to an error.

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