

Preventing medication errors in the NICU: Quality Improvement

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Quality improvement is critical in all working areas, especially in nursing practice. Quality improvement helps improve a problem that needs attention to improve the safety and care of patients. There are many ways to improve quality, such as technology-based, continuing education, or developing standard procedures (CMS Institute, 2021). According to QSEN Institute, 2020, quality improvement projects will improve the quality and safety of future nurses by preparing them with knowledge, skills, and attitudes. By providing nurses with training such as continuing education, skills labs, and mentor programs, their knowledge can improve the care given and promote patient safety. As a team working together to improve quality and safety, future nurses can develop a better attitude towards the quality of care by seeing improvement, appreciation, and value in the care given (QSEN Institute, 2020). Medication errors happen in every department of nursing. One area-specific that has a high impact is the Neonatal Intensive Care Unit (NICU). Medication errors can be decreased by working together as a team and developing ways to minimize errors and improve the patient's overall safety. Establishing changes to the department, such as double-checking medications, bar code scanning, pharmacist involvement, further education, and computerized physician orders, can all assist in improving the overall quality improvement in the NICU to reduce medication errors (Rishoej et al., 2018). Improving the quality of care and safety to reduce medication errors in the NICU is a significant area of improvement. The NICU directly cares for preterm and critically ill infants that are at a higher risk for problems associated with medication errors. By exploring current problems and areas that may lack skills and knowledge, decreasing the number of medication errors will benefit the patient and the nurses by improving their knowledge and confidence.

Article Summary

Introduction

Medication errors are increasing in hospitals worldwide, leading to patient harm and, in some cases, death. One department in specific that has an increased potential for harm is the Neonatal Intensive Care Unit (NICU). The NICU cares for premature and ill infants in a fragile stage and needs the most direct and careful care. This study explains why medication errors happen and ways to reduce them.

Overview

Physicians and nurses were interviewed at three different NICUs to discuss why medication errors happen and suggestions on how to prevent them. The QSEN Institute Quality Improvement competency shows ways to improve patients' overall quality and safety by providing patient-centered care, teamwork, collaboration, evidence-based practice, and informatics (QSEN Institute, 2020). Reducing medication errors can range from technical and non-technical elements to help improve the overall safety and quality in the NICU (Rishoej et al., 2018).

Quality Improvement

The setting used in this article involved the inpatient neonatal intensive care unit. During the pre-implementation stage, the author focused on discussing with the physicians and nurses their thoughts on why there were so many medication errors and ways it could improve. During the intra-implementation stage, the author took the data collected from all groups and created

tables to show why errors were happening and ways to improve. Lastly, in the post-implementation stage, the author went through tests to implement in the NICU to help reduce medication errors in the future. The suggestions made by the frontline staff include suggestions that would not cost the department but also those that could cost the department money. Patient satisfaction would increase because there would be fewer harmful and potential side effects done to the patient. Nursing satisfaction would increase due to medication errors being down and patient safety increasing. Overall, reducing medication errors can help improve patient safety and nursing safety by causing less stress on the nurses from incidences by improving the quality and safety of the patient (CMS, 2021).

Application to Nursing

Nursing practices are different in each hospital. During the interview process of this study, the preferred nursing practice to prevent medication errors included technology, double-checking medications, experience, education and training, communication, the role of the parent, and hospital pharmacy services (CMS, 2021). The interview process and studies were performed in three NICUs to test ways to prevent medication errors.

Practice

With technology, medication errors can be decreased by using a computerized physician order entry (CPOE) which provides drug instructions, alerts the physician about double prescriptions occurring, automatic weight calculations, allergy alerts, and uses the brand name for all medications. *Double-checking medication* is a standardized tool that all hospitals use.

Using all rights (right patient, medication, dose, time, and route) when preparing medications will also help reduce medication errors. The double-checking system would add a second set of eyes to check the medications before dosing by adding a second control nurse. The study provided nurse feedback that this would be beneficial for IV doses and unfamiliar drugs but would be time-consuming for routine medications. Providing a designated medication room is beneficial to help prevent interruptions while preparing medications. Continuing education for the staff and family members and practicing good communication are also said to reduce medication errors. The study provided details that educating the caregiver on the patients' clinical problems also helps prevent medication errors (CMS, 2021).

Education

Training and vital skills are an essential part of nursing. Keeping up on new information and doing research when unsure will not only continue the growth of the nurse but will benefit the patient and the family members. With the CPOEs, the education would continue by providing drug information compared to the patient information. Using the double-check system will help prevent medication errors and help errors be recognized easier and prevented in the future (CMS, 2021).

Research

Preventing medication errors is an ongoing process that will continue to need improving. Looking at different NICUs with the different staff members in the profession, age, sex, and education level helped provide feedback on ways to reduce medication errors. Current safety measures are implemented in the nursing practice to help reduce medication errors. Providing additional steps such as CPOE, double-checking medications, communication, continuing

education, and involving the family members can significantly improve the overall quality and safety when giving medications to patients (CMS, 2021).

Conclusion

Quality and safety are areas that continue advancing and improving with the help of research studies such as this one. Continuing education on ways to prevent medication errors in intensive care units such as the NICU and all other departments needs to continue. Gathering feedback from nurses and physicians with over a year of experience can help recognize problems and limitations that are in the process when giving medications. Using the current safety methods when dosing and giving medications to patients, as well as looking into areas of improvement, can reduce the number of medication errors. In the study, adding extra safety steps such as using the CPOE technology, double-checking with another nurse, reviewing the patient information, being familiar with the diagnosis, and providing education and communication can improve the overall quality and safety of medication errors (CMS, 2021). The prevention of medication errors will improve the patient's care and provide overall better care for the unit. A small error can have a considerable outcome when working in a high-risk setting such as the NICU. By taking additional steps to prevent medication errors, the safety of the patients will improve.

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