

**Best Practices to Decrease Infusion-Associated Medication Errors: Quality
Improvement**

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Infusion-associated medication errors involve the incorrect administration of fluids through an IV or other routes, including electrolytes, medications, and other products (Wolf & Hughes, 2019). These medication errors can potentially cause the most significant harm (Wolf & Hughes, 2019). This topic is essential because of the permanent injury and death that can occur because of this kind of mistake. Nurses are at a higher risk of being a part of an infusion-associated medication error because of the number of medications they administer and the complexity of the administration process (Wolf & Hughes, 2019). Quality improvement is an overall important topic, especially in nursing. Quality improvement focuses on improving patient care and improving methods to monitor and continuously change patient safety (QSEN Institute, 2020). This article is related to QSEN's quality improvement capabilities. Different approaches became available to ensure dosing mistakes did not occur. Charts and diagrams were beneficial in comparing data among dosing errors (Wolf & Hughes, 2019). These researchers evaluated what healthcare professionals are doing and developed ways to improve patient care (QSEN Institute, 2020).

Article Summary

The further focus should be on medication safety related to infusion administration, prescribing, and preparation. The chosen study teaches healthcare professionals the causes of these medication errors. According to the study, most errors involved improper dosage, mistaken drug choice, knowledge-based mistakes, and memory lapses (Wolf & Hughes, 2019). Nurses and other healthcare professionals benefit from infusion-based medications and intelligent pump

technology education. Identifying mistakes and analyzing best practices will benefit nurse and patient safety (Wolf & Hughes, 2019).

Introduction (note that the key points is flush to the far left)

This article discusses the medication errors that exist within the infusion route. These mistakes led to the identification of various best practices that support patient safety (Wolf & Hughes, 2019). This article highlights why these errors occurred along with staff education for quality improvement (Wolf & Hughes, 2019). This article relates directly to the nursing topic of medication errors chosen by this student. The primary purpose of this article is to inform on the severe risks that exist with infusion medication errors and how to reduce the chances of it happening.

Overview

This article relates to the QSEN competency of quality improvement. Numerous approaches were developed within this study to reduce medication errors. Charts and diagrams were used in this study to compare other types of medication errors (Wolf & Hughes, 2019). These researchers appreciate and value what healthcare professionals do and developed ways to improve patient care (QSEN Institute, 2020). This article discusses best practices to enhance patient safety and ensure that medication errors are prevented in the future, which relates directly to the chosen topic.

Quality Improvement

Different strategies were developed within this article to eliminate infusion-associated medication errors. Policy and procedure changes, along with educational sessions, will assist in preventing these mistakes (Wolf & Hughes, 2019). Best practices included developing a learning

culture and reinforcing the double-check medication process in the hospital. Other strategies included producing ongoing announcements and in-service education on infusion pump safety, medication-specific knowledge, and prescription-improvement methods (Wolf & Hughes, 2019). Resources that must be made available during the implementation process consist of education done by the nurse educator and audits on administering infusion medications. During the pre-implementation phase, a discussion on what resources would be beneficial would have to occur. In the intra-implementation phase, audits and education pieces would occur. The post-implementation phase would see decreased medication errors because of the actions. These changes would have an overall positive effect on patients, staff, and facility finances. By implementing education pieces and reinforcing nursing basics, patient satisfaction and safety would increase, as errors would decrease. These changes would reduce the risk of patients returning to the hospital. Staff members would become more educated by receiving frequent education pieces, which would create more confidence within nursing members. Nurses would have fewer malpractices and event reports related to medication errors, which would improve nurse satisfaction and safety. Facility finances may increase, for more resources would need to be available for changes.

Application to Nursing

Nurses are at the frontline of medication safety because they administer many types of infusions daily. Medication errors are recognized as being the main contributor to patient harm and are preventable (Wolf & Hughes, 2019). There have been several technologies that have been used to address infusion-associated medication errors. Some of these including computerized prescriber order entry, barcode-assisted medication administration, and smart

infusion pumps (Skog et al., 2022). The quality and safety of patient care have increased after use of smart infusion pumps. A particular study had shown that there was a sixteen percent reduction in medication administration errors after use of smart pump interoperability (Skog et al., 2022).

Practice

Preventing patient harm is a nurse's top priority. The best nursing practice for preventing infusion-associated medication errors is the consistent use of smart infusion pumps with dose error reduction software (Wolf & Hughes, 2019). This pump reduces infusion-associated medication errors related to wrong rate, dose, and adverse drug events (Wolf & Hughes, 2019). Recent advances within the nursing field allow the pump to integrate with the patient's electronic health record. It has an auto programming system, which will decrease errors by automatically inputting the order into the pump instead of manually doing it (Wolf & Hughes, 2019). The risk of error declined by ten-point nine percent after six years of this clinical nursing practice (Wolf & Hughes, 2019). Studies have shown reductions in many medication errors involving IV infusion pumps after implementing auto programming (Skog et al., 2022).

Education

Some guidelines exist within the nursing field to ensure patient safety is maintained and prioritized. Returning to the basics of verifying the patient's name and date of birth should be practiced. Conducting a double-check for high-risk medications and repeating verbal orders are pertinent in preventing medication errors (Wolf & Hughes, 2019). Tracing the tube from the patient to the point of origin and back again with every addition of new IV fluids or medications helps prevent errors (Wolf & Hughes, 2019).

Research

It is essential that this topic remains a priority in nursing and that further research has implications. As time goes on, more technology and resources are available to enhance the nursing process and avoid medication errors. Reinforcement of ongoing education sessions for healthcare team members and continuing efforts to maintain a safe culture should remain a priority in future studies (Wolf & Hughes, 2019). Quality improvement initiatives, for example, drug libraries, creating and revising standard infusion procedures and guidelines, are necessary for the continued use of these medications (Wolf & Hughes, 2019). Future research could implement a best practice checklist with tools that help reduce medication errors. This application will guide all nurses to ensure patient safety remains their top priority (Wolf & Hughes, 2019).

Conclusion

The purpose of quality improvement is to continuously improve the quality and safety of health care systems (QSEN Institute, 2020). This article relates to the competency of QSEN quality improvement. Many strategies exist for learning outcomes within the clinical setting involving medication errors (QSEN Institute, 2020). This article discussed ways nurses could reduce the chances of these errors occurring. Charts and diagrams had importance in comparing and viewing data. Quality improvement is an essential part of the daily work of all health professionals (QSEN Institute, 2020). The inappropriate administration of fluids by an IV or other methods, including electrolytes, medicines, and other goods, is known as infusion-associated medication mistakes (Wolf & Hughes, 2019). The most severe harm could result from these pharmaceutical mistakes (Wolf & Hughes, 2019). Due to the potential for death and severe harm from this type of error, this subject is crucial. Nurses have the most responsibility when

dealing with medication errors. Therefore, appropriate education pieces must be made available to ensure patient safety is the top priority.

References

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