Reducing Medication Administration Errors

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N434: Evidence-Based Practice

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June 13, 2025

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Quality Improvement (QI) is an ongoing, structured process used in healthcare to improve patient outcomes, safety, and efficiency (Backhouse & Ogunlayi, 2020). Nurses play a key role in QI efforts because they are directly involved in patient care and often notice when something is not working well. In order to lower errors and enhance patient outcomes, QI assists nurses in analyzing current procedures, gathering and assessing data, and putting evidence-based solutions into practice. Houser (2022) asserts that QI helps nurses see issues, create solutions, and assess results based on real data. This tactic encourages nursing practice to adopt a culture of ongoing improvement.

The Quality and Safety Education for Nurses (QSEN) initiative identifies QI as one of the six essential competencies for nurses. QSEN emphasizes that nurses must be able to use QI tools, work collaboratively, and use evidence to improve care delivery. Through QSEN, nursing students and practicing nurses learn how to evaluate patient outcomes, recognize gaps in care, and contribute to safer systems (Backhouse & Ogunlayi, 2020). The framework encourages nurses to actively participate in change and apply QI principles to everyday nursing tasks (Backhouse & Ogunlayi, 2020). One key area where this is especially important is medication administration.

This paper focuses on reducing medication administration errors, a serious issue in nursing and patient safety. Medication errors can occur for many reasons, including distractions, incorrect dosages, or failure to follow the "Five Rights" of medication administration (Ciapponi et al., 2021). Since nurses are responsible for giving medications, they are in the best position to prevent these errors and improve the medication process. Addressing this issue supports QSEN's

mission to enhance quality and safety in nursing care, and it is highly relevant to the work nurses do every day (Ciapponi et al., 2021).

Article Summary

In the article Reducing Healthcare Medication Administration Errors Using a Mixed Intervention Strategy: An Overview, Umoren et al. (2024) explore how using multiple strategies together can reduce the number of medication administration errors in hospitals. The authors conducted a thorough review of various healthcare systems. They found that combining interventions—such as fishbone cause-and-effect analysis, Plan-Do-Study-Act (PDSA) cycles, structured staff education, barcode medication scanning systems, and standardized checklists—was more effective than relying on one method alone. Their research focused on how these strategies work together in real-world clinical settings to improve medication safety and promote a culture of accountability and learning (Umoren et al., 2024).

The article highlights that these interventions are most effective with strong leadership support and interprofessional collaboration. Nurses, pharmacists, and administrators all played important roles in the success of these quality improvement efforts. Umoren et al. also emphasized that reporting systems must be non-punitive to encourage staff to identify and learn from medication errors. Their findings indicate that healthcare organizations that implemented these combined techniques significantly reduced medication administration errors and improved staff confidence when dealing with pharmaceuticals (Umoren et al., 2024). The article aims to show how a systematic, team-based strategy can result in significant and long-term improvements in medication safety.

Overview

The findings from Umoren et al. (2024) are important because they show that a proactive, multi-method quality improvement plan can lead to safer medication administration. The article revealed that using tools like fishbone diagrams helped teams analyze the root causes of errors. Simultaneously, PDSA cycles allowed them to test minor adjustments, track the outcomes, and modify the processes as necessary. Checklists gave nurses a clear framework to make sure they followed the proper procedures, and barcode scanning increased the accuracy of drug delivery. Staff education, including regular training sessions and refreshers, ensured that nurses had the knowledge and skills to safely administer medications and recognize potential risks before they turned into errors (Umoren et al., 2024).

These findings directly impact patient care because reducing medication errors can prevent adverse drug events, reduce hospital stays, and lower the chance of patient harm. They also support a work environment that values learning and safety over punishment (Umoren et al., 2024). Nurses feel more supported and confident when they have clear procedures and the right tools. The research directly relates to the QSEN Quality Improvement competency, which encourages nurses to apply data, work in teams, and continuously evaluate outcomes. The article is a strong example of how QI principles can be successfully used in nursing practice to create safer healthcare systems and better patient outcomes (Umoren et al., 2024).

Quality Improvement

The quality improvement strategies described by Umoren et al. (2024) are adaptable. They can be implemented in many healthcare settings, especially when medication administration is frequent and complex. These include acute care hospitals, medical-surgical units, intensive care units (ICUs), emergency departments, and long-term care facilities. Every

location has its own set of difficulties, but they are all improved by uniform procedures, transparent communication, and regular observation of drug safety procedures. Facilities can begin small with one or two tools and expand on success by incorporating additional tools like checklists, PDSA cycles, and barcode systems because of the flexibility of the mixed intervention strategy (Tu et al., 2023).

To successfully implement this QI model, specific resources would be needed at every process stage. Organizations must collect baseline data on medication error rates during pre-implementation, identify common errors, and assess current workflows (Tu et al., 2023). Staff buy-in is critical, so leadership must communicate the initiative's goals and provide time for staff education. Setting up the necessary technology, including installing barcode scanners and updating electronic medication records. In the implementation phase, nurses, pharmacists, and other team members would actively use the new tools, participate in training sessions, and provide feedback through team huddles or QI meetings (Tu et al., 2023). Support from IT teams and QI leaders is critical for troubleshooting and making timely adjustments. To ensure sustainability, continuous data monitoring, follow-up training, and feedback loops are critical in the post-implementation period. Regular evaluations aid in the identification of new risks while also reinforcing an accountability and learning culture.

The effects of employing these quality improvement measures could be significant. Preventing prescription errors can help reduce the expenses associated with adverse drug events, lengthier hospital stays, and potential lawsuits (Ciapponi et al., 2021). Improving accuracy and workflow efficiency helps reduce drug waste and staff time. Patient satisfaction is likely to improve as patients feel safer and more confident in the care they receive. Nurses may also

experience higher job satisfaction, as fewer errors lead to less stress, greater confidence in their practice, and more substantial support from leadership (Ciapponi et al., 2021).

Most importantly, patient safety is enhanced when evidence-based protocols are in place to prevent errors before they occur. Nurses are less likely to experience moral distress or professional consequences due to preventable mistakes, and institutions are better able to deliver consistent, high-quality care (Ciapponi et al., 2021). Together, these outcomes reflect how QI, when supported by the QSEN framework, can drive meaningful improvements in nursing practice and healthcare delivery.

References

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