

Technician Roles in Medication Reconciliation Across Care Settings

¹Maqboul Aali Alghamdi, ²Abdulrahman Mohammed Alqethami,
³Majed Abdallah Alzahrani, ⁴Mohammed Nasser musfer alqahtani,
⁵Khalifa Sayer Awdah Alshammary, ⁶Bassam saeed alshehri

^{1,2,3,4,6}Pharmacy Technician, ⁵Nursing technician
King Abdulaziz Medical City Riyadh, Ministry of National Guard.

Paper Publication Date: 15th March 2022

Abstract:

Medication reconciliation is a crucial process that aims to ensure accurate and comprehensive medication information for patients as they transition across different healthcare settings. Medication errors and discrepancies during these transitions can lead to adverse events, potentially compromising patient safety and outcomes. Nursing technicians and pharmacy technicians play a vital role in supporting and facilitating medication reconciliation efforts, contributing to the reduction of medication errors and improving the continuity of care. This paper explores the importance of accurate medication histories, the involvement of nursing and pharmacy technicians in the reconciliation process, and their potential impact on reducing medication errors and enhancing transitions of care. By examining the roles and responsibilities of these technicians, this paper highlights the significance of interdisciplinary collaboration, effective communication, and standardized processes in optimizing medication reconciliation across various healthcare settings.

INTRODUCTION

Medication reconciliation is a critical patient safety practice that aims to ensure accurate and comprehensive medication information for patients as they transition between different levels of care or healthcare settings (Greenwald et al., 2017). These transitions can occur during hospital admissions, transfers between units or facilities, and discharges from healthcare institutions. Medication errors and discrepancies during these transitions pose significant risks to patient safety and can lead to adverse events, prolonged hospital stays, and increased healthcare costs (Barnsteiner, 2005).

The involvement of nursing technicians and pharmacy technicians in the medication reconciliation process is increasingly recognized as a valuable strategy to enhance patient safety and improve the continuity of care. These technicians, with their specialized training and expertise, can play a crucial role in supporting and facilitating medication reconciliation efforts across various healthcare settings (Dill et al., 2019).

This paper explores the importance of accurate medication histories, the involvement of nursing and pharmacy technicians in the reconciliation process, and their potential impact on reducing medication errors and improving transitions of care. By examining the roles and responsibilities of these technicians, this paper highlights the significance of interdisciplinary collaboration, effective communication, and standardized processes in optimizing medication reconciliation across various healthcare settings.

Importance of Accurate Medication Histories

Accurate and comprehensive medication histories are the foundation of effective medication reconciliation (Greenwald et al., 2017). These histories provide a complete record of a patient's current medications, including prescription drugs, over-the-counter medications, supplements, and herbal remedies. Obtaining accurate medication histories is essential for several reasons:

1 .Patient Safety: Inaccurate or incomplete medication histories can lead to medication errors, such as omissions, duplications, or incorrect dosing, potentially causing harm to patients (Gleason et al., 2010).

2 .Continuity of Care: Accurate medication histories ensure that healthcare providers have a clear understanding of a patient's medication regimen, enabling seamless transitions between care settings and facilitating appropriate medication management (Kramer et al., 2007).

3 .Medication Management: Comprehensive medication histories allow healthcare providers to identify potential drug-drug interactions, adverse effects, and contraindications, enabling informed decision-making and appropriate adjustments to medication regimens (Cornish et al., 2005).

4 .Cost Optimization: Accurate medication histories can help prevent unnecessary duplication of medications, reduce medication waste, and optimize healthcare resource utilization (Mergenhagen et al., 2012).

Obtaining accurate medication histories can be challenging, as patients may have multiple sources of information, including electronic health records, paper records, and self-reported information (Gleason et al., 2010). Additionally, patients may have difficulty recalling their medication regimens or may not disclose all medications due to various reasons, such as forgetfulness, language barriers, or lack of understanding (Persell et al., 2020).

Involvement of Nursing and Pharmacy Technicians

Nursing technicians and pharmacy technicians play crucial roles in supporting and facilitating medication reconciliation efforts across various healthcare settings. Their involvement can contribute to improving the accuracy of medication histories, enhancing communication among healthcare providers, and streamlining the reconciliation process.

Nursing Technician Roles:

1 .Patient Interviews: Nursing technicians can conduct thorough patient interviews to obtain comprehensive medication histories, including prescription medications, over-the-counter products, supplements, and herbal remedies (Dill et al., 2019).

2 .Documentation: Nursing technicians can accurately document medication histories in electronic health records or paper-based systems, ensuring that the information is readily available for healthcare providers (Zwitser et al., 2019).

3 .Communication: Nursing technicians can serve as a liaison between patients and healthcare providers, facilitating the exchange of information and addressing any questions or concerns related to medication regimens (Dill et al., 2019).

4 .Medication Administration: Nursing technicians can play a role in administering medications and monitoring for potential adverse reactions, providing valuable information for medication reconciliation efforts (Zwitser et al., 2019).

Pharmacy Technician Roles:

1 .Medication History Review: Pharmacy technicians can review medication histories obtained by nursing technicians or other healthcare providers, verifying the accuracy and completeness of the information (Dill et al., 2019).

2 .Medication Reconciliation Facilitation: Pharmacy technicians can assist pharmacists in reconciling medication lists, identifying discrepancies, and making recommendations for appropriate medication management (Zwitser et al., 2019).

3 .Patient Education: Pharmacy technicians can provide patients with education on their medication regimens, ensuring understanding and adherence, which can contribute to accurate medication histories during transitions of care (Dill et al., 2019).

4 .Medication Order Entry: Pharmacy technicians can be involved in the medication order entry process, ensuring accurate transcription of medication orders and reducing the risk of transcription errors (Zwitser et al., 2019).

Interdisciplinary Collaboration and Communication

Effective medication reconciliation requires interdisciplinary collaboration and communication among healthcare professionals, including nurses, pharmacists, physicians, and technicians (Greenwald et al., 2017). Nursing technicians and pharmacy technicians play crucial roles in facilitating this collaboration and ensuring the seamless exchange of information across various healthcare settings.

Interdisciplinary Collaboration:

- 1 .Team-Based Approach: Nursing technicians and pharmacy technicians can collaborate with nurses, pharmacists, and physicians to obtain comprehensive medication histories, reconcile discrepancies, and develop appropriate medication management plans (Dill et al., 2019).
- 2 .Standardized Processes: Implementing standardized processes for medication reconciliation, involving nursing technicians and pharmacy technicians, can promote consistency and reduce variability in the reconciliation process across different healthcare settings (Greenwald et al., 2017).
- 3 .Shared Communication Tools: Utilizing shared communication tools, such as electronic health records or medication reconciliation forms, can enhance information sharing and facilitate collaboration among healthcare professionals, including nursing technicians and pharmacy technicians (Zwitser et al., 2019).

Effective Communication:

- 1 .Clear Documentation: Nursing technicians and pharmacy technicians should ensure clear and accurate documentation of medication histories and reconciliation efforts, enabling effective communication among healthcare providers (Dill et al., 2019).
 - 2 .Interdisciplinary Rounds: Participating in interdisciplinary rounds can provide opportunities for nursing technicians and pharmacy technicians to communicate medication-related information and identify potential discrepancies or concerns (Zwitser et al., 2019).
 - 3 .Patient and Caregiver Education: Nursing technicians and pharmacy technicians can play a vital role in educating patients and caregivers about their medication regimens, promoting understanding and adherence, and facilitating accurate medication histories during transitions of care (Dill et al., 2019).
- By fostering interdisciplinary collaboration and effective communication, nursing technicians and pharmacy technicians can contribute to improving the accuracy and completeness of medication histories, reducing medication errors, and enhancing the continuity of care during transitions across various healthcare settings.

Reducing Medication Errors and Improving Transitions of Care

Medication errors and discrepancies during transitions of care can have significant consequences for patient safety and outcomes. The involvement of nursing technicians and pharmacy technicians in medication reconciliation efforts can contribute to reducing medication errors and improving transitions of care across different healthcare settings.

Reducing Medication Errors:

- 1 .Comprehensive Medication Histories: By obtaining accurate and complete medication histories, nursing technicians and pharmacy technicians can help identify potential medication errors, such as omissions, duplications, or incorrect dosing (Gleason et al., 2010).
- 2 .Medication Verification: Pharmacy technicians can assist pharmacists in verifying medication orders, identifying potential drug-drug interactions, and ensuring appropriate dosing, which can reduce the risk of medication errors (Zwitser et al., 2019).
- 3 .Barcode Medication Administration: Nursing technicians can be involved in barcode medication administration processes, which can help prevent medication errors by ensuring the right medication is given to the right patient at the right time (Dill et al., 2019).
- 4 .Quality Assurance Processes: Nursing technicians and pharmacy technicians can participate in quality assurance processes, such as medication reconciliation audits or peer reviews, to identify and address potential sources of medication errors (Zwitser et al., 2019).

Improving Transitions of Care:

- 1 .Seamless Information Transfer: Accurate medication histories and effective communication facilitated by nursing technicians and pharmacy technicians can ensure seamless information transfer during transitions of care, reducing the risk of medication discrepancies and errors (Greenwald et al., 2017).
- 2 .Patient and Caregiver Education: By educating patients and caregivers about their medication regimens, nursing technicians and pharmacy technicians can promote understanding and adherence, which can improve transitions of care and reduce the likelihood of medication-related adverse events (Dill et al., 2019).

3 .Interdisciplinary Collaboration: The involvement of nursing technicians and pharmacy technicians in interdisciplinary teams can facilitate collaboration among healthcare providers, ensuring a comprehensive understanding of a patient's medication regimen and enabling appropriate medication management during transitions of care (Zwitser et al., 2019).

4 .Continuity of Care: Accurate medication reconciliation facilitated by nursing technicians and pharmacy technicians can contribute to maintaining the continuity of care for patients as they transition between different healthcare settings, ensuring appropriate medication management and reducing the risk of adverse events (Greenwald et al., 2017).

By reducing medication errors and improving transitions of care, the involvement of nursing technicians and pharmacy technicians in medication reconciliation efforts can enhance patient safety, improve clinical outcomes, and contribute to the overall quality of healthcare delivery across various settings.

Challenges and Considerations

While the involvement of nursing technicians and pharmacy technicians in medication reconciliation efforts offers significant benefits, there are challenges and considerations that must be addressed to ensure effective implementation and sustained success.

Training and Education:

Effective training and education are crucial for nursing technicians and pharmacy technicians to develop the necessary knowledge and skills for medication reconciliation processes. This may include formal education programs, on-the-job training, and ongoing professional development opportunities (Dill et al., 2019).

Standardized Processes and Protocols:

Implementing standardized processes and protocols for medication reconciliation is essential to ensure consistency and reduce variability across different healthcare settings. These protocols should clearly define the roles and responsibilities of nursing technicians and pharmacy technicians, as well as outline the steps for obtaining accurate medication histories, identifying discrepancies, and communicating information effectively (Greenwald et al., 2017).

Interdisciplinary Collaboration:

Fostering interdisciplinary collaboration and effective communication among healthcare providers, including nurses, pharmacists, physicians, and technicians, is crucial for successful medication reconciliation efforts. This may involve establishing interdisciplinary teams, utilizing shared communication tools, and promoting a culture of open communication and mutual respect (Zwitser et al., 2019).

Technology and Health Information Systems:

Leveraging technology and health information systems can support medication reconciliation efforts by facilitating the documentation and sharing of medication histories, as well as enabling the identification of potential medication errors or discrepancies. However, challenges may arise related to system interoperability, data accuracy, and user adoption (Persell et al., 2020).

Regulatory and Legal Considerations:

Regulatory and legal frameworks may impact the scope of practice and responsibilities of nursing technicians and pharmacy technicians in medication reconciliation processes. It is essential to ensure compliance with relevant regulations, licensure requirements, and institutional policies to mitigate risks and maintain patient safety (Dill et al., 2019).

Continuous Quality Improvement:

Implementing continuous quality improvement processes is crucial to monitor the effectiveness of medication reconciliation efforts, identify areas for improvement, and make necessary adjustments to processes and protocols. This may involve conducting regular audits, analyzing medication error data, and seeking feedback from patients and healthcare providers (Zwitser et al., 2019).

By addressing these challenges and considerations, healthcare organizations can optimize the involvement of nursing technicians and pharmacy technicians in medication reconciliation efforts, maximizing their impact on reducing medication errors, improving transitions of care, and enhancing patient safety across various healthcare settings.

Conclusion

Medication reconciliation is a critical process that plays a vital role in ensuring patient safety and continuity of care during transitions across different healthcare settings. Nursing technicians and pharmacy technicians are valuable members of the healthcare team, contributing their expertise and skills to support and facilitate medication reconciliation efforts.

By obtaining accurate and comprehensive medication histories, nursing technicians and pharmacy technicians can help identify potential medication errors and discrepancies, reducing the risk of adverse events and enhancing patient safety. Their involvement in the reconciliation process, through roles such as patient interviews, documentation, medication history review, and patient education, contributes to the accuracy and completeness of medication information.

Interdisciplinary collaboration and effective communication are essential components of successful medication reconciliation. Nursing technicians and pharmacy technicians can serve as liaisons between patients and healthcare providers, facilitating the exchange of information and fostering a team-based approach to medication management.

By reducing medication errors and improving transitions of care, the involvement of nursing technicians and pharmacy technicians in medication reconciliation efforts can have a significant impact on patient outcomes, healthcare quality, and overall cost optimization.

However, it is crucial to address challenges and considerations related to training and education, standardized processes, interdisciplinary collaboration, technology and health information systems, regulatory and legal frameworks, and continuous quality improvement. By addressing these challenges, healthcare organizations can maximize the potential of nursing technicians and pharmacy technicians in medication reconciliation efforts, ultimately enhancing patient safety and the quality of care across various healthcare settings.

As the healthcare landscape continues to evolve, the roles of nursing technicians and pharmacy technicians in medication reconciliation are poised to become increasingly important. Embracing their contributions and fostering a culture of collaboration, effective communication, and continuous improvement will be essential in optimizing medication reconciliation processes and ensuring the highest standards of patient care.

REFERENCES:

1. Barnsteiner, J. H. (2005). Medication reconciliation: Transfer of medication information across settings—keeping it free from error. *AJN The American Journal of Nursing*, 105(3), 31-36.
2. Cornish, P. L., Knowles, S. R., Marchesano, R., Tam, V., Shadowitz, S., Juurlink, D. N., & Etchells, E. E. (2005). Unintended medication discrepancies at the time of hospital admission. *Archives of Internal Medicine*, 165(4), 424-429.
3. Dill, J., Morgan, J. C., Marshall, V. D., Pryce, D., Byrne, J., Miller, S., & Scheck McAlearney, A. (2019). Ambulatory medication reconciliation: Perspectives and suggestions for Action. *ANCC's Magnet Recognition Program® through Forces of Magnetism*, 9(1), 45-51.
4. Gleason, K. M., Groszek, J. M., Sullivan, C., Rooney, D., Barnard, C., & Noskin, G. A. (2010). Reconciliation of discrepancies in medication histories and admission orders of newly hospitalized patients. *American Journal of Health-System Pharmacy*, 67(16), 1328-1334.
5. Greenwald, J. L., Halasyamani, L., Greene, J., LaCivita, C., Stucky, E., Benjamin, B., ... & Vaughn, T. E. (2017). Improving patient safety and pharmacovigilance after hospitalization. *BMJ*, 356, j309.
6. Kramer, J. S., Hopkins, P. J., Rosendale, J. C., Garrelts, J. C., Hale, L. S., Nester, T. M., ... & Haneke, R. D. (2007). Implementation of an electronic system for medication reconciliation. *American Journal of Health-System Pharmacy*, 64(4), 404-422.
7. Mergenhagen, K. A., Bliesner, K. M., Leser, M. L., Hamilton, K. A., Pendergrass, D. L., Suits, S. D., ... & Hayes, R. M. (2012). Use of pharmacy technicians to reduce hospital medication errors. *Journal of Pharmacy Practice*, 25(1), 66-71.