



# Optimizing Patient Outcomes: The Role of Medication Administration and Nursing Care: A Systematic Review

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## **Author's contribution**

*The sole author designed, analysed, interpreted and prepared the manuscript.*

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## **ABSTRACT**

By synthesizing the literature and existing research, we explore the key factors of medication management and care and the need to implement relevant strategies. The findings and findings of this study suggest that optimizing patient outcomes requires enhancing the safety and efficacy of drug management, improving the professionalism of care teams, and enhancing collaboration and communication between teams. In summary, the synergy of medication management and care is a key element in optimizing patient outcomes

**Introduction:** The field of medication management involves the precise administration and careful monitoring of medication safety and efficacy, as highlighted by Brummel, Lustig, et al. (2014). On the other hand, nursing is responsible for providing comprehensive care and prioritizing the overall well-being of patients. With this in mind, our study aims to assess the importance of medication management and holistic care in maximizing patient outcomes.

**Methods:** This review used a comprehensive literature review approach. Through systematic search and screening of relevant literature, research and practical experience related to drug management and care in patient outcomes were collected. Through the analysis and synthesis of selected literature, key findings and conclusions were collated

**Results and Findings:** The findings show that medication management and care play an important role in optimizing patient outcomes. Good medication management practices can reduce drug

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misuse and adverse effects, improve medication adherence, and improve patient outcomes. At the same time, nursing teams play a key role in monitoring and evaluating patients' conditions, providing personalized care and education, and promoting patient health and recovery.

**Conclusion:** This study emphasizes the significance of medication management and nursing care in optimizing patient outcomes. In order to achieve favorable patient outcomes, healthcare facilities and care teams should enhance the safety and effectiveness of medication administration, enhance medication education and support for adherence, and foster collaboration among care teams and other healthcare professionals. These endeavors will contribute to enhancing patient satisfaction, reducing complication rates, and delivering superior patient care and treatment outcomes.

*Keywords: Medication management; nursing; patient outcomes; optimization.*

## 1. INTRODUCTION

The objective of medication management is to guarantee the accurate administration of medications to patients while avoiding drug misuse and adverse reactions [1].

One crucial aspect of good medication management is the assurance of treatment outcomes. By practicing accurate prescription and medication dosing, patients can access the appropriate medications for their condition. Proper medication use plays a vital role in controlling disease progression and maximizing treatment effectiveness. Conversely, improper administration of medications, including misuse, misdosing, or negligence, can diminish treatment efficacy or trigger adverse effects. According to the World Health Organization (WHO), drug-induced adverse reactions rank among the leading causes of medical malpractice and adverse outcomes. By emphasizing the importance of proper medication management and care practices, it is possible to reduce the occurrence of adverse drug reactions, thereby enhancing patient safety and treatment outcomes.

Effective drug management plays a crucial role in promoting patient safety, optimizing treatment outcomes, and reducing the occurrence of adverse reactions and drug interactions [2].

One of the primary objectives in drug management is to minimize the occurrence of adverse reactions. Healthcare professionals diligently monitor a patient's medication regimen to promptly identify signs of adverse reactions and implement suitable interventions [3].

Another critical aspect of drug management is improving medication adherence. Medication adherence refers to a patient's compliance with the prescribed medication regimen. By

enhancing medication adherence, patients are more likely to achieve optimal treatment outcomes [4].

These mistakes can have serious consequences, including drug poisoning or treatment failure. By ensuring proper medication dosing and providing dosing guidance, healthcare professionals assist patients in avoiding the risks associated with drug misuse and promote overall patient safety [5].

Regular drug monitoring and evaluation are vital components of comprehensive drug management. By closely monitoring a patient's medication use, healthcare professionals can assess treatment effectiveness, determine the need for dosage adjustments, and identify potential risks of adverse effects. Effective drug management encompasses the reduction of adverse reactions and drug interactions, improved medication adherence, prevention of drug misuse, and diligent drug monitoring and evaluation [6,7].

Nursing plays a crucial role in optimizing patient outcomes by addressing various aspects of care. Caregivers possess the ability to identify patients' needs and offer psychological support, education, and guidance to enhance patients' understanding and management of their illness. Furthermore, nursing includes medication education to improve patient comprehension and adherence to prescribed medications [8].

Caregivers are responsible for monitoring and evaluating patients' physical conditions, vital signs, and any changes in their condition. They provide essential care such as measuring blood pressure, monitoring body temperature and heart rate, and ensuring patients' basic living needs are met. Their role also involves promoting patient safety and recovery, which includes preventing and controlling infections, minimizing

the risk of falls and accidents, and providing the necessary support and education for patients' recovery [9,10].

Medication management and care are interdependent and collectively influence patient outcomes. Nursing staff must have a comprehensive understanding of safe medication use and adverse drug reactions to promptly identify and address any drug-related issues patients may experience. Utilizing electronic health record systems can enhance the accuracy and accessibility of medical data, reducing errors and eliminating the loss of paper records. These systems allow doctors and nurses to effectively track patients' medical records, diagnoses, and treatment information, ultimately improving the precision and efficiency of medical decisions and optimizing patient outcomes [11,12].

Through personalized care, positive communication, and compassion, nursing staff can foster patients' trust in the medical team and treatment plan, resulting in increased satisfaction throughout the treatment process [13]. To achieve optimized patient outcomes, healthcare organizations and care teams should implement a range of strategies [14]. Additionally, care teams must continuously enhance their professionalism and remain up-to-date with the latest drug knowledge and practice guidelines to provide high-quality care [15].

For instance, in China, the management of chronic diseases such as diabetes and hypertension presents significant challenges. To optimize disease management and treatment outcomes, China has implemented various chronic disease management programs. These programs combine regular follow-ups, health education, lifestyle interventions, and medication management to empower patients to take control of their condition, improve disease control, prevent complications, and enhance their quality of life.

In the field of oncology treatment, medication management and care are essential for helping patients cope with the adverse effects of chemotherapy. They provide support and education to enhance patient adherence to treatment, reduce unnecessary interruptions or dose adjustments, and maximize treatment outcomes.

## **2. METHODS**

A literature search was conducted on Google Scholar and PubMed databases using the

keywords "midwives child health, Africa responsibilities." The search terms "Drug management," "care, patient outcomes," and "optimization" were also used. The search was limited to full-text articles published in English between 2010 and 2022. A total of 3000 articles were initially identified, and after screening the titles and abstracts, 15 full-text articles were included in this mini-review using a thematic approach.

Inclusion criteria encompassed national working papers, policies, or local studies that specifically discussed or emphasized China's role or responsibility in optimizing patient management.

Exclusion criteria involved studies or policy documents conducted outside of China that were not relevant to the role or responsibility of patient optimization.

## **3. RESULTS**

Effective drug management involves accurate medication selection, precise dose calculation, and appropriate administration routes. By using medications properly and following best dosing practices, the potential risks associated with drug-related errors and complications can be reduced.

Clinical judgment and keen observational skills are essential in promptly identifying and resolving patient discomfort and issues. The healthcare team plays a vital role in educating patients about medications and supporting adherence. By providing comprehensive information about proper medication use, potential side effects, and drug interactions, caregivers help patients understand and comply with their treatment plans.

Effective communication and collaboration among physicians, pharmacists, and other healthcare professionals are crucial for ensuring the correct selection of medications and making necessary adjustments to optimize patient outcomes.

## **4. DISCUSSION**

In this study, we aim to examine the significance and role of medication management and care in maximizing patient outcomes. Previous research by Shaneyfelt, Mayo-Smith et al. [16] and Ma [17] has emphasized the importance of rational drug management in reducing drug misuse,

adverse reactions, and ensuring appropriate treatment outcomes. By adhering to best practice guidelines and implementing standardized drug stewardship processes, healthcare organizations can mitigate patient risks and enhance treatment outcomes.

Nursing plays a crucial role in medication management as part of the care team. Given, Given et al. [18] highlight that the care team is responsible for accurately administering medications, monitoring patient responses and adverse events, and providing education and support. Furthermore, care teams are instrumental in delivering personalized care and education to enhance medication adherence and improve outcomes.

Effective drug administration necessitates collaboration among multiple healthcare professionals, including doctors, pharmacists, nurses, and others. Cushing and Metcalfe (2007) stress the significance of collaboration and effective communication in ensuring patient safety and favorable treatment outcomes. Healthcare organizations should establish interdisciplinary teams that facilitate information sharing, collaborative decision-making, and efficient communication processes, as suggested by Kripalani, Jackson et al. [19].

However, several challenges and barriers hinder the optimization of patient outcomes through medication management and care. One such challenge is the issue of human resources and training. Healthcare facilities need an adequate number of qualified nursing staff and must provide continuous professional training to ensure they possess proficient medication management skills and knowledge. Additionally, Wager, Lee et al. [20] shed light on other barriers that need to be addressed.

In conclusion, understanding the importance of medication management and care in optimizing patient outcomes is essential. By implementing rational drug management practices, involving nursing in medication administration, fostering collaboration and effective communication among healthcare professionals, and addressing existing challenges, healthcare organizations can enhance patient safety and treatment outcomes.

## **5. CONCLUSION**

In conclusion, medication management and care play a critical role in optimizing patient outcomes. Adhering to appropriate routes of administration, dosages, and timing is essential for the safe and

effective delivery of treatment. Increased attentiveness and support from the care team can improve medication adherence among patients. Nurses, in particular, can contribute significantly by providing medication education, addressing inquiries, and offering support to ensure patients understand and adhere to their medication regimens. Building trusting relationships and providing tailored support and education are key to fostering patient engagement in treatment and enhancing self-management skills. Effective medication management and collaborative efforts with the care team are imperative for achieving optimal patient outcomes, including improved satisfaction, reduced complication rates, and enhanced patient care.

## **CONSENT AND ETHICAL APPROVAL**

It is not applicable.

## **COMPETING INTERESTS**

Author has declared that no competing interests exist.

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