



NURSES AND PHARMACEUTICAL CARE: INTERPROFESSIONAL, EVIDENCE-BASED WORKING TO IMPROVE PATIENT CARE AND OUTCOMES

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Abstract:

Background: Pharmaceutical care plays a critical role in optimizing patient outcomes by focusing on medication use and health improvement. Interprofessional collaboration among healthcare stakeholders is essential for effective pharmaceutical care delivery. Nurses and pharmacists are key players in this process, contributing to patient care through various roles and responsibilities. However, there are reported deficiencies in nurses' competencies in pharmaceutical care, underscoring the need for enhanced education and training in this domain.

Objective: This review aims to assess the current level of collaboration between nurses and pharmacists in providing pharmaceutical care, evaluate the impact of interprofessional, evidence-based collaboration on patient care and outcomes, and provide recommendations for enhancing collaboration between these professionals to improve patient care quality and outcomes.

Conclusion: Optimizing pharmaceutical care through interprofessional collaboration between nurses and pharmacists is vital for enhancing patient outcomes and ensuring safe medication use. While nurses play a significant role in pharmaceutical care, there are identified gaps in their competencies, emphasizing the importance of improved education and training. Pharmacists also play a crucial role in enhancing pharmaceutical care by ensuring medication safety and efficacy. To strengthen integrated, evidence-based pharmaceutical care, clear communication among healthcare professionals, ongoing research on interprofessional collaboration, and the development of collaborative frameworks are essential. By addressing barriers and focusing on facilitators of high-quality interprofessional pharmaceutical care, healthcare providers can work together to enhance care quality, patient outcomes, and the overall healthcare experience.

Keywords: nursing, pharmaceutical care, interprofessional collaboration

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Introduction:

Prescribed and purchased medications play a crucial role in patient care [1]. Ensuring that each patient's pharmacotherapy regimen is optimized and tailored to their specific needs, balancing therapeutic benefits with minimal adverse effects, can present challenges. Pharmaceutical care, which emphasizes the optimization of medication usage and the enhancement of health outcomes [1], requires a concerted effort from patients, informal caregivers, a diverse team of healthcare professionals, and healthcare system administrators. It is essential for all stakeholders to collaborate, show mutual respect, and agree on their respective responsibilities throughout the intricate process of pharmaceutical care to fully leverage the benefits of modern medicine.

Pharmaceutical care is defined as the responsible provision of pharmacotherapy to achieve specific outcomes that enhance a patient's quality of life [2]. These outcomes, as identified in core outcome sets, include various factors such as drug-related hospital admissions, drug misuse, medication appropriateness, drug interactions, quality of life, pain management, adverse reactions, falls, medication complexity, mortality, and side effects [3]. The resolution emphasizes the implementation of pharmaceutical care for the betterment of patients and healthcare services. Patients, along with their families or friends, are not only essential partners in care but also play a crucial role in setting care goals in consultation with healthcare providers. Their involvement is key to evaluating care and achieving desired outcomes.

The resolution highlights opportunities to enhance pharmaceutical care through interprofessional and patient-centered approaches. It recognizes the significance of an integrated interprofessional and multidisciplinary approach in improving care quality and patient outcomes. According to the World Health Organization (WHO), integrated health services involve the coordinated delivery of a range of healthcare services to meet individuals' needs across various care levels and settings [4]. Person-centered care is fundamental to integrated care, focusing on individual needs and preferences. This approach influences the regulatory and decision-making aspects of safe medication use at the clinical level [5]. Person-centered care emphasizes goal-oriented care, prioritizing the person over the patient or disease, and promoting equality in the provider-patient relationship. It considers the individual's needs within the broader context of family and community, empowering individuals to participate in decision-making and care management [5].

Effective integrated care relies on robust interprofessional collaboration. Healthcare providers must work together with shared person-centered goals, respecting each other's expertise and contributions, to deliver high-quality pharmaceutical care [6]. This collaborative approach necessitates regular communication between patients and providers, patient education, monitoring, and personalized care interventions. Medication adjustments should align with patients' care objectives and contextual factors such as patient capabilities, treatment expectations, financial considerations, informal care support, and beliefs about medications.

Objectives:

The main objectives of this review are:

1. To assess the current level of collaboration between nurses and pharmacists in providing pharmaceutical care to patients.
2. To evaluate the impact of interprofessional, evidence-based working between nurses and pharmacists on patient care and outcomes.
3. To make recommendations for improving collaboration between nurses and pharmacists to enhance patient care and outcomes.

Nurses' Contribution to Interprofessional Pharmaceutical Care:

According to the World Health Organization (WHO), nursing involves providing independent and collaborative care to individuals of all ages, families, groups, and communities, whether they are sick or healthy, in various settings. Nurses are instrumental in promoting health, preventing illness, and caring for those who are ill, disabled, or at the end of life. They often go unrecognized for their vital role in healthcare facilities and emergency responses, being at the forefront of disease prevention and primary healthcare delivery. Nurses are typically the first to identify health emergencies and play a crucial role in health promotion, disease prevention, treatment, and rehabilitation [7].

In the realm of pharmaceutical care, nurses contribute significantly on a daily basis. Aligned with the WHO's stance on nursing and healthcare more broadly, nurses in pharmaceutical care provide both independent and collaborative care on the front lines, engaging in activities such as health promotion, illness prevention, treatment, and rehabilitation for diverse populations. They actively assist patients in managing their medications, monitoring their effects as well as any adverse reactions, and preventing drug-related

issues, such as verifying medications prior to administration [8].

The involvement of nurses in pharmaceutical care has been shown to have a positive impact on the quality of care provided. In settings like nursing homes and community care, nurses' observations have led to a marked improvement in the identification and resolution of drug-related problems. Through the use of Pharmanurse software, nurses identified 821 adverse drug reactions, which were subsequently confirmed by physicians, among 60% of 418 nursing home residents. These observations directly led to 214 medication changes to address patient issues. Following the integration of the software into a multidisciplinary platform for optimizing medication use (OptiMEDs), there was a 26% decrease in the use of potentially inappropriate medications among residents. Nurses' interventions in outpatient consultations, such as identifying discrepancies in medical records, allergies, or intolerances, and providing patient education upon discharge, have demonstrated their contributions to the effectiveness, safety, and efficiency of pharmaceutical care [9].

Nurses play various roles within interprofessional teams, including caring for and advocating on behalf of patients, supporting and educating them throughout their healthcare journey, and implementing healthcare interventions. Across Europe, nurse education levels vary based on legal frameworks, with responsibilities ranging from medication administration to prescribing. Pharmaceutical care is typically integrated into multidisciplinary treatment approaches. Nurses, based on their positions and roles within these teams, are crucial in ensuring patient safety in pharmaceutical care [11].

The shift towards person- and people-centered care places increased demands on healthcare providers to engage in regular communication with patients, provide patient education, and monitor and tailor care accordingly. Patients under nursing care often have more interactions with nurses than with other healthcare providers. Nurses possess the skills and opportunities to act as the eyes and ears of the multidisciplinary team, interacting with patients, understanding their needs, monitoring therapeutic outcomes, and sharing these insights with the interprofessional team. By doing so, nurses not only enhance nursing care but also provide valuable data for physicians and pharmacists to improve medical and pharmaceutical care. Therefore, aspects of pharmaceutical care such as interdisciplinary communication, patient support throughout the medication process, and ongoing

monitoring for benefits or adverse effects should be shared with nurses to solidify their roles as key providers of pharmaceutical care [12].

Nurse Education in Pharmaceutical Care:

In various nursing undergraduate programs across Europe, students receive comprehensive theoretical knowledge and practical training, including medication administration. The educational approach typically involves a combination of simulation exercises and online learning modules, with a focus on medication safety during administration. While efforts are made to address medication error prevention, there is limited emphasis on prescribing practices and patient monitoring for adverse reactions. This structured educational environment allows nurses to hone their medication administration skills in a controlled setting, away from the complexities of real-world clinical scenarios [13].

Literature highlights deficiencies in nurses' competencies related to pharmaceutical care, a trend observed not only among nurses but also among other healthcare professionals like midwives, physicians, and pharmacists. Introducing interdisciplinary courses that cover topics such as pharmaceutical care can create opportunities for collaboration among healthcare professionals, fostering shared objectives and strategies to enhance patient safety [14]. Consequently, there is a growing need for a well-defined framework outlining the collective responsibilities of healthcare providers in pharmaceutical care to strengthen educational preparedness. The European DeMoPhaC project has laid the groundwork by establishing initial models delineating nurses' roles and duties in pharmaceutical care, providing valuable guidance [15].

The role of pharmacist in improving the pharmaceutical care:

Pharmacists play a pivotal role in advancing pharmaceutical care by ensuring the safe and effective utilization of medications. Equipped with specialized knowledge in pharmacology and medication management, pharmacists collaborate closely with patients, healthcare teams, and other professionals to optimize medication therapy and improve health outcomes. Their responsibilities encompass tasks such as medication reconciliation to guarantee patients receive the correct drugs at the appropriate dosages and intervals [16]. Beyond this, pharmacists offer crucial patient education on medication usage, including potential side effects and drug interactions. They are also tasked with

monitoring patients' medication regimens to promptly address any emerging issues. Through interdisciplinary collaboration, pharmacists contribute significantly to enhancing patient care quality and achieving favorable health outcomes, underscoring their vital role in promoting pharmaceutical care and patient well-being [17].

Advices to Strengthen Integrated, Evidence-Based Pharmaceutical Care:

The provision of integrated, evidence-based pharmaceutical care is influenced by numerous factors, emphasizing the importance of clear communication by nurses regarding their contributions to this integrated care model. Nurses must expand the existing evidence base on their role in enhancing clinical practices to support interprofessional collaboration, a cornerstone of high-quality, patient-centered care and positive patient outcomes. Research efforts should concentrate on identifying facilitators of effective interprofessional pharmaceutical care [18] and overcoming barriers to its implementation. A collaborative framework involving all healthcare disciplines involved in pharmaceutical care should be developed to ensure optimal care quality and patient outcomes, considering contextual elements like expertise, treatment availability, and costs. Leveraging insights from implementation science models like the Context-Intervention-Context-Intervention (CICI) framework can enhance the practicality of such frameworks and address implementation challenges effectively [19].

Conclusion:

In conclusion, the optimization of pharmaceutical care through interprofessional collaboration between nurses and pharmacists is crucial for enhancing patient outcomes and ensuring the safe and effective use of medications. Nurses play a significant role in pharmaceutical care by providing autonomous and collaborative care, monitoring medication effects, and detecting drug-related problems. However, there are reported shortcomings in nurses' competences in pharmaceutical care, highlighting the need for improved education and training in this area. Pharmacists also play a vital role in improving pharmaceutical care by ensuring medication safety and effectiveness, educating patients, and monitoring medication regimens. To strengthen integrated, evidence-based pharmaceutical care, clear communication among healthcare professionals, ongoing research on interprofessional collaboration, and the development of collaborative frameworks are

essential. By focusing on facilitators of high-quality interprofessional pharmaceutical care and addressing barriers to implementation, healthcare providers can work together to optimize care quality, patient outcomes, and the overall healthcare experience.

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